<table>
<thead>
<tr>
<th>ACADEMIC_PERIOD</th>
<th>COURSE_ID</th>
<th>COURSE_NUMBER</th>
<th>TITLE_SHORT_DESC</th>
<th>COURSE_TITLE</th>
<th>CREDIT_MIN</th>
<th>COURSE_TEXT_NARRATIVE</th>
<th>COURSE_LEVEL</th>
<th>SCHEDULE</th>
<th>SCHEDULE_DESC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>AHS7700</td>
<td>7700</td>
<td>Independent Research</td>
<td>AHS Applied Behavioral Science</td>
<td>1</td>
<td>Independent laboratory or field research under the sponsorship of a faculty supervisor.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GMR410</td>
<td>410</td>
<td>Independent Reading</td>
<td>GR Greek</td>
<td>1</td>
<td>Topics vary.</td>
<td>UG</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CEG7040L</td>
<td>7040L</td>
<td>VLSI Testing Design Lab</td>
<td>CEG Computer Engineering</td>
<td>1</td>
<td>Required laboratory for EE 7540.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>TH5730</td>
<td>3730</td>
<td>MT History/Lit II</td>
<td>TH Theatre</td>
<td>3</td>
<td>Covers history of the Musical Theatre beginning with the Golden Age of the Musical in the mid-Twentieth century through the birth of the Rock Musical to the present state of the art. Reading, viewing and discussing significant examples from major periods while studying historical, artistic and social contexts for these works. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES6540</td>
<td>6540</td>
<td>Subsurface Fluid Flow</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>4</td>
<td>Principles of the physical processes underlying the movement of fluids through the porous subsurface. Subjects include the transport of particulates and solutes, including contaminants within ground water flow regimes, and the flow of oil, gas and brine in reservoirs. Emphasis on quantitative problem solving. (3 hours lecture, 2 hours lab).</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MKT7100</td>
<td>7100</td>
<td>Digital Marketing</td>
<td>MKT Marketing</td>
<td>3</td>
<td>This course highlights key fundamentals of successful integrated online/offline marketing with an emphasis on using the Internet &amp; other marketing tools and media. Objectives are to understand basic principles of marketing; how to design an e-commerce web site using Internet marketing principles &amp; various Internet Business Models; the legal, social &amp; ethical issues faced by Internet marketers; global implications &amp; how to use technology in marketing.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MIS7810</td>
<td>7810</td>
<td>Special Topics in I.S.</td>
<td>MIS Management Information Systems</td>
<td>3</td>
<td>The Special Topics of Information Systems will offer cutting edge topics that focus on one of emerging technology or information systems management.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>DAN2110</td>
<td>2110</td>
<td>Modern Dance II</td>
<td>DAN Dance</td>
<td>3</td>
<td>Second-year intermediate modern dance technique class for pre-professional dancers. Emphasis on helping students become strong, versatile dancers by expanding their body's range of motion while emphasizing alignment, coordination, strength and flexibility of the torso.</td>
<td>UG</td>
<td>ST</td>
<td>Studio</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED6360</td>
<td>6360</td>
<td>MCE Science: Curr &amp; Mhld</td>
<td>ED Education</td>
<td>3</td>
<td>Curriculum and materials for teaching middle level science with emphasis on using an integrated constructivist approach to science teaching. Includes development of appropriate objectives, planning, resources and facilities, evaluation, and trends in science education.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>COM3700</td>
<td>3700</td>
<td>Dispute Resolution</td>
<td>COM Communication</td>
<td>3</td>
<td>Nature and cause of conflict, the impact of communication on conflict escalation, and the process of conflict resolution. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ATH6650</td>
<td>6650</td>
<td>Field School Archaeology</td>
<td>ATH Anthropology</td>
<td>3</td>
<td>Field training in the surveying and excavation of selected archaeological sites.</td>
<td>GB</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MTH7990</td>
<td>7990</td>
<td>Selected Topics</td>
<td>MTH Mathematics</td>
<td>1</td>
<td>Selected topics in mathematics.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EDT7120</td>
<td>7120</td>
<td>Gamification</td>
<td>EDT Educational Technology</td>
<td>3</td>
<td>An introduction to gamification. Students will explore Game Theory and experience games to identify the factors and motivation in successful games. No technical knowledge is needed.</td>
<td>GR</td>
<td>LL</td>
<td>Lab/Combination</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MLI4011</td>
<td>4011</td>
<td>Adaptive Lifstyle Lab</td>
<td>MIL Military Science</td>
<td>0</td>
<td>Prepares the cadets to become active duty Army officers, through various leadership roles responsible for the training of the Cadet Corp. Cadets implement the fundamentals learned in previous courses and their summer training. Each lab is cadet-led and cadre-supervised. Mandatory weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUS2520</td>
<td>2520</td>
<td>Musicianship IV</td>
<td>MUS Music</td>
<td>1</td>
<td>Continuation of MUS 2510.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY5600</td>
<td>5600</td>
<td>Engineering Psychology</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Introduction to the study of human factors in the design and operation of machine systems.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>FLS6440</td>
<td>6440</td>
<td>Topics Criminal Justice</td>
<td>FLS Political Science</td>
<td>3</td>
<td>Problems, approaches, and topics in the field of criminal justice and legal studies. Topics vary.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EEC700L</td>
<td>7000L</td>
<td>Introduction to MEMS Lab</td>
<td>EE Electrical Engineering</td>
<td>1</td>
<td>Experimental design, realization and testing of MEMS devices with emphasis on sensing applications.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>NUR7552</td>
<td>7552</td>
<td>Practicum for PCNP</td>
<td>NUR Nursing</td>
<td>6</td>
<td>Focus on models of practice providing health care to infants, children and adolescents in wellness, common minor health problems, and acute and chronic illness. Factors influencing role development will be addressed.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BBIO3140</td>
<td>3140</td>
<td>Molecular Bio Lab</td>
<td>BBIO Biology</td>
<td>3.5</td>
<td>Concepts pertaining to gene structure, the regulation of gene expression and the genetic structure of populations.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY4430</td>
<td>4430</td>
<td>Psychometrics</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on psychometrics. Integrated Writing course.</td>
<td>UG</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SST610</td>
<td>610</td>
<td>Applied Statistics II</td>
<td>SST Statistics</td>
<td>3</td>
<td>Introduction to statistics, standard mathematical methods for estimation of parameters and hypothesis testing, regression analysis and analysis of variance techniques, and exposure to data analysis using packaged computer programs.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ACC2070</td>
<td>2070</td>
<td>Careers in Accounting</td>
<td>ACC Accountancy</td>
<td>1</td>
<td>Introduction to career opportunities in accounting.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MEC210L</td>
<td>210L</td>
<td>Mechanical Vibrations Lab</td>
<td>ME Mechanical and Materials Engineering</td>
<td>0</td>
<td>Required laboratory for ME 6210.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>RHB320</td>
<td>320</td>
<td>Drug &amp; Alcohol Abuse</td>
<td>RHB Rehabilitation</td>
<td>3</td>
<td>Basic concepts, social policy, and approaches related to alcohol and drug use including the addiction process, costs of abuse to the individual, family, and society, and successful approaches to dealing with abuse.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MTH4570</td>
<td>4570</td>
<td>Combinatorics and Graphs</td>
<td>MTH Mathematics</td>
<td>4</td>
<td>Topics include: permutations, combinations, generating functions, recurrence relations, and Polya's theory of counting methods, results, and algorithms of graph theory, with emphasis on graphs as mathematical models applicable to organizational and industrial situations.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
</tbody>
</table>
Fall 2020  PL56580  6580  Latin American Politics  PLS  Political Science  3  Introduces students to politics in Central America, South America and the Caribbean, focusing on political and economic development. Considers major debates in comparative politics about a variety of issues, including democracy and democratization.  GR  LE  Lecture  

Fall 2020  ED7560  7560  Dba & Intern: Prac I  ED  Education  3  Supervised tutoring of a K-12 student identified as at-risk or struggling reader/writer. Involves individual reading/writing assessments, developing learning objectives, implementing lesson plans to meet a student’s learning goals, and making recommendations for future instruction.  GR  LE  Lecture  

Fall 2020  CEG6530L  6330L  Microp Embroided System Lab  CEG  Computer Engineering  0  Required laboratory for CEG 6330.  GR  LB  Lab  


Fall 2020  ANT2120L  2120L  Human Anatomy & Phys II Lab  ANT  Anatomy  0  Required laboratory for for ANT 2120.  LG  LE  Lab  

Fall 2020  ED4600  4600  AYA/MA Assess in Ed  ED  Education  3  The design implementation, and integration of traditional and alternative assessments in the classroom. Additionally, the analysis of data and the data-based decision making process.  LG  LE  Lecture  

Fall 2020  CS7900  7900  Special Topics in CS  CS  Computer Science  1  Special topics in computer science  GR  LE  Lecture  

Fall 2020  REL3620  3620  New ReligiousMov Amer  REL  Religion  3  New religious movements in America, including Shakers, Mormons, Seventh-Day Adventists, Jehovah’s Witnesses, Christian Scientists, and others as appropriate.  LG  LE  Lecture  

Fall 2020  EDT7200  7200  SLM Programs  EDT  Educational Technology  4  Focuses on the administration of school library programs including policies and procedures, facilities, budgeting, personnel, program evaluation, and marketing/advocacy. Includes field experience component.  GR  LL  Lecture/Lab Combination  

Fall 2020  BIO4450  4450  Amazon Expedition  BIO  Biology  4  Classroom instruction followed by travel to Peruvian Amazon, viewing primary and secondary rainforest, tropical rivers, and wildlife.  LG  LL  Lecture/Lab Combination  

Fall 2020  PSY7010  7010  Dugs & Quant  PSY  Psychology  4  The foundation of experimental design and quantitative techniques will be developed. Students are expected to understand assumptions underlying each technique or procedure. They must also understand their applications to experimental and field research and to experimental and quasi-experimental designs. Both complex analyses of variance, multiple regression and non-parametric techniques will be covered. Computation and computer skills must be mastered.  GR  LL  Lecture/Lab Combination  

Fall 2020  IHE7920  7920  MEIE Team Project II  IHE  Industrial & Hum Fac Engr  3  Second semester of team project for Master in Engineering Innovation and Entrepreneurship program. Students work in teams to support the development of new technology-based organization in concert with local businesses. Students will consider factors including technology, customers, feasibility, financing, and cost.  GR  PR  Practicum  

Fall 2020  LDR4700  4700  Workshop in Leadership  LDR  Leadership  1  Small group learning for undergraduate students interested in leadership.  LG  LE  Lecture  

Fall 2020  BME6610  6610  Clinical Engr Des World  BME  Biomedical Engineering  3  Students will be exposed to the culture of a developing country; learn how to live and interact with the local people; gain an appreciation for a culture different from their own and of the limited technical resources of educational and healthcare facilities in a developing country; learn how to install and repair medical and other technical equipment with simple tools.  GR  LL  Lecture/Lab Combination  

Fall 2020  ED6930  6930  Cont Sem: AYA/Int Soc St  ED  Education  3  Seminar accompanying Adolescent and Young Adult Internship focusing on pedagogical content knowledge in Integrated Social Studies, assessment of the National Council for the Social Studies (NCSS) standards and the completion of the CEHS professional portfolio.  GS  Seminar  

Fall 2020  CS8920  8920  Independent Study in CS  CS  Computer Science  1  Independent study in computer science.  GR  IS  Independent Study  

Fall 2020  ENG5340  3540  Multigener Writing  ENG  English  3  Advanced strategies for writing in multiple and mixed genres.  LG  LE  Lecture  

Fall 2020  PSY8740  8740  Teams in Organizations  PSY  Psychology  2  This course will address theories, issues, and research relating to workplace teams. The purpose will be to discuss definitions of teams as well as their development, composition, and functioning.  GR  SE  Seminar  

Fall 2020  ENGT320  7320  Sem in Li&Gender  ENG  English  3  Reading, research, reports, and discussion of topics dealing with gender and literature (e.g., literature by and about women, feminist critical theory and practice, and gender roles in literature). Titles vary.  GR  SE  Seminar  

Fall 2020  TH2160  2160  Singing for Actor IV  TH  Theatre  1  Private singing lessons for acting, theatre studies and dance majors only.  LG  ST  Studio  

Fall 2020  EES6601  6601  Limnology  EES  Earth & Environmental Sciences  3  Study of the morphological, physical, chemical, and biological characteristics of lakes, bogs, and wetlands. Includes one week of lecture on main campus and one week of field study in northern Wisconsin.  GR  PR  Practicum  

Fall 2020  MUE6440  6440  University Brass Choir  MUE  Music: Ensembles  1  A performance-oriented group which provides students with chamber brass music experience. Students learn elements of ensemble execution, professionalism, brass music history, orchestral styles, and sound production. Audition required.  GR  LL  Lecture/Lab Combination  

Fall 2020  ME3360  3360  Heat Transfer  ME  Mechanical and Materials Engr  3  Study of the movement of energy due to a temperature difference. The three modes of heat transfer are investigated: conduction, convection, and radiation. Detailed look at heat equation.  LG  LE  Lecture  

Fall 2020  BMS9610  9610  Neuromuscular Engineering  BMS  Biomedical Sciences  3  Teaches the design and application of neuromuscular assistive devices. Emphasizes biomechanics modeling and control theory.  GR  LE  Lecture  

Fall 2020  EE7150  7150  Digital Image Processing  EE  Electrical Engineering  3  Image representation, sampling/quantization, spatial/frequency concepts, image enhancement, color image theory, unitary image transforms, image data compression, image models, image coding, image restoration, feature extraction and description, and computer implementation of concepts and algorithms introduced.  GR  LE  Lecture  

Fall 2020  MTE6920  6920  Seminar in Math Stat Ed  MTE  Mathematics Teacher Education  1  Reading and discussion of current trends and research in mathematics and statistics education with applications to Pre K-14 mathematics classrooms.  GS  Seminar  


<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Description</th>
<th>Offered</th>
<th>Credits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS4530</td>
<td>Soviet Successor States</td>
<td>Examines the political life in the former Soviet Union, with emphasis on the legacy of communism and the role of economics and politics in the transition to democracy. Integrated Writing course.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>FR5250</td>
<td>Business French</td>
<td>An introduction to the language and practices of business French with insight into France's place in the global economy. Taught in French.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>PS18020</td>
<td>Human Development</td>
<td>Psychological conceptualizations of infancy, childhood, adolescence, and adulthood including physical, cognitive, intellectual, social, and interpersonal development.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>ART6030</td>
<td>Studies in Drawing</td>
<td>Provides opportunities to explore special problems and approaches to drawing including cross-media and interdisciplinary studies. Titles vary.</td>
<td>GR</td>
<td>3</td>
<td>Lab</td>
</tr>
<tr>
<td>MP2320</td>
<td>Motion Picture Hist II</td>
<td>Historical development of the art of the film from the mid 20th century to the present. Consideration of American and world cinema and the relation of motion pictures to sociocultural conditions. Integrated Writing course.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>ML4550</td>
<td>French Feminist Philosop</td>
<td>Advanced study of French feminist theories, texts, and philosophies that emerged in the 1970s to the 1990s and have been mostly influential in Anglo-American contexts and academies. Integrated Writing course.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>PLS4700</td>
<td>Topics Int Relations</td>
<td>Readings, research, reports, and discussion of selected topics and problems. Integrated Writing course.</td>
<td>UG</td>
<td>3</td>
<td>Seminar</td>
</tr>
<tr>
<td>CLS5700</td>
<td>Studies Anct Law/Civil/Poli</td>
<td>Integrated Writing course.</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>BI04750L</td>
<td>Ichthyology Lab</td>
<td>Required laboratory for BI 4750.</td>
<td>UG</td>
<td>3</td>
<td>Lab</td>
</tr>
<tr>
<td>FR6120</td>
<td>FR Instruct Practicum II</td>
<td>Peer teachers observe elementary and/or intermediate level classes, continuation of practicum from FR 6110.&lt;br&gt;Department Managed Prerequisite: Grad level FR 4110 Minimum Grade of D-/C.</td>
<td>GR</td>
<td>3</td>
<td>Practicum</td>
</tr>
<tr>
<td>DAN4920</td>
<td>Senior Dance Project</td>
<td>Advanced work in creative dance projects. Showscases skills of graduating seniors with guidance and input of faculty.</td>
<td>UG</td>
<td>3</td>
<td>Lab</td>
</tr>
<tr>
<td>HED3350</td>
<td>Health Communications</td>
<td>Explores the applications of social marketing and communication theory as they relate to the development of strategies designed to enhance health education and promotion programs. Students will be introduced to basic perspective of public health education, particularly the fundamental skills of communicating health information.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>IDL7130</td>
<td>Making Online Courses Interact</td>
<td>Explores the theory and practices of using educational technologies to ensure online courses include ample interaction. Class will include the knowledge and skills necessary to utilize some of these educational technologies.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>MGT410</td>
<td>Internship</td>
<td>Internship developed by the employer, student, and Department Internship Coordinator/intim agree on the parameters of the internship, including number of work hours, credit hours, internship objectives, methodology, timeline, and evaluation criteria.</td>
<td>UG</td>
<td>3</td>
<td>Internship</td>
</tr>
<tr>
<td>ENG3520</td>
<td>Writing Pedagogy for IFA</td>
<td>Introduction to writing pedagogy for Integrated Language Arts in grades 4-12 with an emphasis on writing processes and improving writing skills.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>TH2400</td>
<td>Movement II</td>
<td>Introduction of techniques such as modified Laban Movement Analysis and the study of Kinetics (body language). Emphasis on expanding tactical and casting range of actors.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>MTE5460</td>
<td>Modeling Mid Schl Ychr</td>
<td>Learning to think about the world quantitatively through experiencing solving pure and applied mathematics problems and modeling real world problems individually and in groups. Focuses on working with the steps involved in modeling real-life situations and understanding how modeling and problem solving differ.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>BMB1660</td>
<td>Systems Biology</td>
<td>This course will describe current state-of-the-art experimental and analytical techniques in the area of systems biology. The covered topics include genomics, proteomics, RNA expression, metabolite measurements, and molecular ecology.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG2510</td>
<td>Textual Analysis MCE</td>
<td>Understanding strategies for reading, interpreting, and analyzing informational, persuasive, and literary texts.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>SOC5700</td>
<td>Criminology</td>
<td>Analysis of major categories of criminal conduct, theories of crime causation, and patterns of criminal activity with particular attention to factors such as class, race, sex, and age.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>PHY1810</td>
<td>Electromagnetic Theory I</td>
<td>Emphasis on electromagnetic field theory and mathematical techniques.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY2110</td>
<td>Cognition and Learning</td>
<td>Theories, methodologies, and applications in the areas of attention, perception, visual imagery, memory, expert performance, decision making, and problem solving. Emphasis on how the brain performs cognitive functions.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>PN7890</td>
<td>Continuing Registration</td>
<td>By permission of instructor.</td>
<td>GR</td>
<td>3</td>
<td>Independent Study</td>
</tr>
<tr>
<td>ATH4300</td>
<td>Special Topics Biologia</td>
<td>Intensive study of selected topics in biological anthropology.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>ED5060</td>
<td>MCE Gen Soc Studies Inst</td>
<td>Methods for teaching 4th, 5th, and 6th grades social studies pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula, and materials.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>MP2810</td>
<td>Intermediate MP Prod I</td>
<td>Production of silent motion picture projects and audio projects under faculty supervision. Instruction in narrative technique, visual structure, and shooting and finishing a motion picture.</td>
<td>UG</td>
<td>3</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>KNH1240A</td>
<td>Golf</td>
<td>Golf competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>3</td>
<td>Lab</td>
</tr>
<tr>
<td>MTH8700</td>
<td>Topics in Geometry</td>
<td>Selected advanced topics in Geometry.</td>
<td>GR</td>
<td>3</td>
<td>Independent Study</td>
</tr>
<tr>
<td>ECE7110</td>
<td>Full-Time CPT to EE</td>
<td>Practical work experience in graduate-level electrical engineering.</td>
<td>GR</td>
<td>3</td>
<td>Internship</td>
</tr>
<tr>
<td>PSY4230</td>
<td>Problem Solving Cap</td>
<td>Writing and oral communication intensive seminar integrating knowledge on problem solving and reasoning. Integrated Writing course.</td>
<td>UG</td>
<td>3</td>
<td>Seminar</td>
</tr>
<tr>
<td>PN7000</td>
<td>Physiology Seminar</td>
<td>Seminar or seminar and/or course work in neuroanatomy, neurophysiology, and related topics.</td>
<td>GR</td>
<td>3</td>
<td>Seminar</td>
</tr>
<tr>
<td>LAT1020</td>
<td>Beginning Latin II</td>
<td>Introduction to advanced principles in Latin grammar.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>URS7030</td>
<td>Organization Theory</td>
<td>Analysis of the fundamental behavior concepts and processes involved in public sector organizations. Evaluation of approaches to major behavioral issues such as motivation, leadership, and management development.</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG4830</td>
<td>Adv Fiction Wrtg Seminar</td>
<td>Advanced practice in writing and revising fiction, refining craft and style, with the aim of producing fiction of superior merit; group discussion of manuscripts, and reading and discussion of contemporary fiction. Integrated Writing course.</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Title</td>
<td>Description</td>
<td>Term</td>
<td>Type</td>
</tr>
<tr>
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</tr>
<tr>
<td>BM57030</td>
<td>7030</td>
<td>Research Ethics</td>
<td>BMS Biomedical Sciences</td>
<td></td>
<td>GR LE</td>
</tr>
<tr>
<td>ART120</td>
<td>6120</td>
<td>Adv St Mediaeval Art</td>
<td>ART Art</td>
<td></td>
<td>GR LE</td>
</tr>
<tr>
<td>RB83650</td>
<td>3630</td>
<td>Rehab &amp; Corrections</td>
<td>RBH Rehabilitation</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY3070</td>
<td>3070</td>
<td>Tests &amp; Measures</td>
<td>PSY Psychology</td>
<td></td>
<td>GR LE</td>
</tr>
<tr>
<td>SW7630</td>
<td>7630</td>
<td>SW Field Ed III</td>
<td>SW Social Work</td>
<td>GR IN</td>
<td>Internship</td>
</tr>
<tr>
<td>PPH8230</td>
<td>8230</td>
<td>PH H E Cont'd Credit</td>
<td>PPH Population &amp; Public Health</td>
<td>GR IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>ED6250</td>
<td>6250</td>
<td>MCE Intern Pr I Methods</td>
<td>ED Education</td>
<td>GR IN</td>
<td>Internship</td>
</tr>
<tr>
<td>PLS3990</td>
<td>3990</td>
<td>Selected Subjects</td>
<td>PLS Political Science</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ARA3980</td>
<td>3980</td>
<td>Studies in Selc Suby</td>
<td>ARA Arabic</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CS7950</td>
<td>7950</td>
<td>MSCS Thesis Research</td>
<td>CS Computer Science</td>
<td>GR IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>CS9590</td>
<td>5900</td>
<td>Special Topics in CS</td>
<td>CS Computer Science</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>HST300</td>
<td>6300</td>
<td>African History</td>
<td>HST History</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>KNS7840</td>
<td>7840</td>
<td>Field Experience APE</td>
<td>KNS Kinioscopic Health &amp; Safety</td>
<td>GR IN</td>
<td>Internship</td>
</tr>
<tr>
<td>GEO4430</td>
<td>4430</td>
<td>Geographic Info Systems</td>
<td>GEO Geography</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>BIO463OL</td>
<td>6430L</td>
<td>Vertebrate Histology Lab</td>
<td>BIO Biology</td>
<td>GR LB</td>
<td>Lab</td>
</tr>
<tr>
<td>KNS1200A</td>
<td>1200A</td>
<td>Fencing: Beginning</td>
<td>KNS Kinioscopic Health &amp; Safety</td>
<td>GR LB</td>
<td>Lab</td>
</tr>
<tr>
<td>EEE4100</td>
<td>4100</td>
<td>Nano/Micro Fabrication</td>
<td>EE Electrical Engineering</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ATR4860</td>
<td>4860</td>
<td>Medical Conditions in AT</td>
<td>ATR Athletic Training</td>
<td>GR CL</td>
<td>Clinical</td>
</tr>
<tr>
<td>PSY4400</td>
<td>4400</td>
<td>Int/Org Psych Cap</td>
<td>PSY Psychology</td>
<td>GR SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>EE6750</td>
<td>6750</td>
<td>Intro to Radar Systems</td>
<td>EE Electrical Engineering</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EDS4400</td>
<td>4400</td>
<td>Collab Differentiation</td>
<td>EDS Education - Special Education</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EDD7210</td>
<td>8210</td>
<td>App Psych Theory for DL</td>
<td>EDD Educational Technology</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>STT6640</td>
<td>6400</td>
<td>Stat Quality Control</td>
<td>STT Statistics</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG2800</td>
<td>2800</td>
<td>Intro Creative Writing</td>
<td>ENG English</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>GER3220</td>
<td>3220</td>
<td>Adv Writing in German</td>
<td>GER German</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEG6520</td>
<td>6520</td>
<td>Sci Vis and Virt Env</td>
<td>CEG Computer Engineering</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ED7902</td>
<td>7902</td>
<td>Current Topics&amp;Trends in Edu</td>
<td>ED Education</td>
<td>GR SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>BME3980</td>
<td>6980</td>
<td>Special Topics in BME I</td>
<td>BME Biomedical Engineering</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>HST7100</td>
<td>7100</td>
<td>Seminar US to 1865</td>
<td>HST History</td>
<td>GR LE</td>
<td>Lecture</td>
</tr>
</tbody>
</table>
Students will learn the ability to develop models of physical systems, to classify systems, to apply Laplace transforms, a transform, and Fourier transforms, understand sampling theory, Nyquist, and signal reconstruction, quantization, and analyze continuous and discrete-time linear systems.  

Techniques for tapping the energy of the earth will be discussed. This will include hot and cold geothermal energy.  

Geothermal Energy

Lecture 3

UG

Fall 2020

ME3310

3310 Thermodynamics I

ME Mechanical and Materials Eng

3 This course studies energy and energy conversion from the classical thermodynamics perspective. Properties of fluids, conservation of mass, conservation of energy, and the second law of thermodynamics are studied. These principles are applied to engineering problems.  

Department Managed Prerequisite(s): Undergraduate level EGR 1010 Minimum Grade of C and Undergraduate level PHY 2400 Minimum Grade of D-<b>

UG

Fall 2020

SOM707

707 Year 2 Medical Study

SOM School of Medicine

24

MD

Fall 2020

CHM4680

4680 Experimental Nanoscience

CHM Chemistry

3 Laboratory experiments include fabrication of nanomaterials such as metal nanoparticles and graphene nanosheets, characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses and computational modeling of nanoscale physical phenomena.  

UG

Fall 2020

EC5220

5220 Grad Surv Prizes of Macao

EC Economics

1.5 The aggregate economy and how it influences business decisions. The forces that determine the behavior of national income and output, unemployment and the price level. Money, monetary and fiscal policy and growth.  

GR

Fall 2020

WGS5800

5800 St in Selected Subjects

WGS Women, Gender, and Sexuality

3 Issues, approaches, and topics in the field of women's studies. Titles vary. Topics vary.  

GR

Fall 2020

AFS4030

4030 History of Ideas of Race

AFS Afr/Amer Studies

3 Examination of the development of various ideas of race from 1600-present. Integrated writing course.  

UG

Fall 2020

EC3210

3210 U.S. Economic History

EC Economics

3 Analysis of economic, political, social, and cultural changes resulting from industrial advancements and the control over industrial changes exercised by different societies.  

UG

Fall 2020

EDL7960

7960 Org and Admin Public Sch

EDL Educational Leadership

3 Principles of democratic school administration; management of teaching and nonteaching personnel; role of administration in facilitating teaching and learning; and school/community relations.  

GR

Fall 2020

SOC5810

5810 Medical Sociology

SOC Sociology

3 Introduction to and understanding of the social dimensions of health and illness. Consideration of patterns of disease, along with the organization, provision and delivery of medical services.  

GR

Fall 2020

URS6500

6500 Issues in Metro Planning

URS Urban Affairs

3 Examination of a range of topics related to planning metropolitan environments. Topics include housing, growth and regionalism.  

GR

Fall 2020

URS7040

7040 Human Resources in PA

URS Urban Affairs

3 Examines personnel functions such as job evaluation, recruitment and selection, performance appraisal, compensation, training, labor relations, and affirmative action.  

GR

Fall 2020

BME4440L

4440L Biomaterials Lab

BME Biomedical Engineering

0 Required laboratory for BME 4440  

UG

Fall 2020

CLSS5500

5500 Ancient Culture and Soc.

CLS Classics

3 Aspects of Greek and Roman civilization with evidence from literature, history, documents, and other materials.  

GR

Fall 2020

NUR8800

8800 Sys Tking to Ad Pop Health

NUR Nursing

3 This course introduces the student to the role of the DNP in systems to promote population health outcomes using information technology; and to scholarship of nursing; concepts of evidence-based practice, quality improvement science, and research. On campus residency will include an orientation to the DNP program and development of project problem.  

GR

Fall 2020

NUR4850

4850 Colab Impr Pat Hlth Outc

NUR Nursing

3 Prepares nurses for their 21st-century role aimed at improving quality of care and patient safety in healthcare systems, with the use of technology and evidence-based decision-making among interprofessional teams.  

UG

Fall 2020

PTX8004

8004 Med Chem Defense

PTX Pharmacology/Toxicology

3 Provide an understanding of chemical threat agent history, toxicology, and medical intervention. The course will also introduce requirements for research for working with highly toxic chemicals, animal models, and medical/environmental countermeasures.  

GR

Fall 2020

PLS6060

6060 Globalization

PLS Political Science

3 Focuses on the economic aspects of globalization and effects on local, national, and international political processes.  

GR

Fall 2020

GR4530

4530 Greek History & Biograph

GR Greek

3 Herodotus, Thucydides, Xenophon, Polybius, and Plutarch. Topics include methods of composition, influences on historiography from the sophists and philosophers, the development of Greek historical writing, and supplemental evidence from inscriptions and nonliterary sources. Titles vary.  

GR

Fall 2020

MUS1170

1170 Jazz History and Music

MUS Music

3 Historical survey of jazz and related styles from the late 19th century to the present.  

UG

Fall 2020

ME1050

5000 Geothermal Energy

ME Mechanical and Materials Eng

3 Techniques for tapping the energy of the earth will be discussed. This will include hot and cold geothermal energy. Use of geothermal energy to produce electricity, for space and district heating and cooling, and for industrial applications will be presented. In addition, geothermal energy's effect on the environment and its economics will be discussed.<b> Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D or Undergraduate level ME 5360 Minimum Grade of D-<b>/

UG

Fall 2020

LEP4050

4050 Level 4 Adv Read & Write

LEP LEAP

0 Participants will develop study skills for academic success as they practice reading skills and strategies with reading passages used to produce various forms of composition necessary for college work, including writing summaries, expository essays, and essay tests. Students will work on perfecting the grammatical and rhetorical forms considered appropriate for these college writing tasks.  

UG

Fall 2020

HPR2430

2430 Motor Dev & Learning

HPR Health Phy Educ & Recreation

4 Examination of the factors influencing the development, performance and learning of motor skills.  

UG

Fall 2020

RHB4020

4020 Career Assessment

RHB Rehabilitation

3 Provides training in comprehensive vocational and career evaluation and assessment strategies. Integrated Writing course.  

UG

Fall 2020

EE7010

7010 Linear Systems

EE Electrical Engineering

3 Graduate level linear engineering methods in finite and infinite dimensions.  

GR

Fall 2020

POR1110

1110 Essentials of Portuguese

POR Portuguese

3 Introduction to Portuguese with an emphasis on speaking the language.  

UG
Fall 2020

BIO6110  6110  The Aquatic Environment  5  Field and laboratory course concerned with the physical, chemical, and biological factors that determine biological productivity in natural waters.  3 hours lecture, 6 hours lab.  GR  LE  Lecture

Fall 2020

PSY6430  6430  Psychometrics Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on psychometrics.  GR  SE  Seminar

Fall 2020

ASM7071  7071  Biostatistics  ASM  Aerospace Medicine  4  Catalogue Description: Studies basic and advanced statistical methods with an emphasis on biomedical problems.  Includes sampling techniques, making valid inferences and estimations, testing hypotheses, ANOVA, multiple regression, survey methods, experimental designs, diagnostic testing, and sequential analysis.  GR  LE  Lecture

Fall 2020

NUR7124  7124  Adv HHl asst Child/Ado  NUR  Nursing  3  Application of cognitive processes and psychomotor skills needed for comprehensive health assessment of children and adolescents.  Emphasis on health history, physical assessment of children and adolescents.  Various instruments will be incorporated to assess growth and development issues.  GR  LL  Lecture/Lab Combination

Fall 2020

CNL7280  7280  Pro Orient Eth & Leg Iss  CNL  Counseling  3  Surveys legal, professional, and ethical issues in counseling.  Topics include: historical review, counselor roles and functions, self-care strategies, supervision models, advocacy, professional organizations, and professional credentialing.  GR  LE  Lecture

Fall 2020

ATR7600  7600  Neuroscience in Athletic Teng  ATR  Athletic Training  3  Development, configuration, physical and mental functions, and pathological deficits of the peripheral and central nervous systems.  Stroke rehabilitation, neurological deficits, neuralgia, advanced concussion rehabilitation, and concussion laws as they apply to athletic training.  GR  LE  Lecture

Fall 2020

NUR3480C  3480C  Nursing Care of Adults Clin  NUR  Nursing  0  Required clinical for NUR 3480.  UG  CL  Clinical

Fall 2020

SOC6060  6060  Social Inequality  SOC  Sociology  3  Structures, theories and consequences of social inequality.  This course explores the patterns of inequality, as well as early and contemporary theories of stratification.  GR  LE  Lecture

Fall 2020

MLB4010  4010  Topics in Med Lab Sci  MLB  Medical Laboratory Science  0.5  Advanced topics in medical laboratory science of current interest.  Topics vary.  UG  LB  Lab

Fall 2020

BMB4000  4000  BMB Seminar  BMB  Biochem & Molecular Biology  1  Students will attend, evaluate and summarize selected lectures given by experienced researchers.  UG  SE  Seminar

Fall 2020

PHH7920  7920  Special Topics in PH  PPH  Population & Public Health  3  This course enables students to work with faculty to address current topics in public health.  Topics vary.  GR  LE  Lecture

Fall 2020

PHY1110L  1110L  Prin Physics Lab I  PHY  Physics  1  Introductory-level laboratory problems.  UG  LB  Lab

Fall 2020

MTH4260  4260  Matrix Computations  MTH  Mathematics  3  Numerical linear algebra survey using high-level computing tools.  Topics include linear equations, matrix factorizations, eigenvalue problems, least squares, applications of singular value decompositions, and iterative methods for large sparse matrices.  Emphasizes conditioning of problems and accuracy and stability of algorithms.  GR  LE  Lecture

Fall 2020

PHL3110  3110  Ethics  PHL  Philosophy  3  Critical examination of major issues and problems of contemporary philosophical ethics.  Concepts of good, bad, right, wrong, and justice.  Relation between ethics and religion.  Objectivity or subjectivity of values.  UG  LE  Lecture

Fall 2020

EC7820  7820  Research in Economics II  EC  Economics  1  Title vary.  Intensive reading or research in selected field of economics.  <b>Department Managed Prerequisites(s):</b> Graduate level EC 5090 Minimum Grade of D and Graduate level EC 5100 Minimum Grade of D and Graduate level EC 5210 Minimum Grade of D and Graduate level EC 5220 Minimum Grade of D/Grade of D</b>/Grade of D  GR  IS  Independent Study

Fall 2020

PLS4100  4100  Political Psychology  PLS  Political Science  3  Introduction to political psychology, emphasizing its application to international politics.  Surveys dominant psychological theories, approaches and works, as well as applications of psychological perspectives to foreign policy and world politics.  Integrated Writing.  UG  LE  Lecture

Fall 2020

OL4025  4025  Comm-Based Internship  OL  Organizational Leadership  3  Hands-on learning experiences coupled with specific academic assignments that demonstrate an understanding of leadership theory and practice as it applies to the workplace.  UG  IN  Internship

Fall 2020

EDT8240  8240  Digital Teach:Lit Review  EDT  Educational Technology  3  Students will explore technologies used for constructing a research-based literature review in the field of educational technology.  GR  LE  Lecture

Fall 2020

NUR3701  3701  fict/Prac NUR & HHl Care  NUR  Nursing  5  This course focuses on the management function of planning and developing leadership skills.  The strategic planning process uses a systems framework to create a long term focus for nursing and health care systems.  GR  LE  Lecture

Fall 2020

PHL4710  4710  Philosophy of Science  PHL  Philosophy  3  Analysis of the techniques of reasoning used in both natural and social science.  Exploration of the history of science and the rise of the scientific method, including an examination of important theories, discoveries, and disputes, as well as the difference between science and pseudo-science.  UG  LE  Lecture

Fall 2020

PLS4160  4160  Sex and the Law  PLS  Political Science  3  Addresses how government uses law to regulate sex as activity, expression, and identity.  Integrated Writing course.  UG  LE  Lecture

Fall 2020

BMS7780  7780  Cell Biology  BMS  Biomedical Sciences  3  Topics include but not limited to a review of current understanding of the structure and function of cells, organelles and subcellular complexes.  GR  LE  Lecture

Fall 2020

PSY8770  8770  Org. Dev. & Change  PSY  Psychology  2  Overview of the systems approach to organizational diagnosis, planning, and intervention in human service organizations.  Behavioral interventions are emphasized.  GR  SE  Seminar

Fall 2020

ART4150  4150  Studies Mod Contemp Art  ART  Art  3  General surveys and intensive studies of the period, major movements, and artists of the time.  <b>Department Managed Prerequisites(s):</b> Undergraduate level ART 3150 Minimum Grade of D and Undergraduate level ART 3160 Minimum Grade of D/Grade of D  UG  LE  Lecture

Fall 2020

MIL4022  4022  Ldrship Complex World Lab  MIL  Military Science  0  Prepares the cadets to become active duty officers, through various leadership roles responsible for the training of the Cadet Corp.  Cadets implement the fundamentals learned in previous courses and their summer training.  Each lab is cadet-led and cadet-supervised.  Mandatory weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises.  UG  LB  Lab

Fall 2020

ART3750  3750  Art  ART  Art  3  Development of personal concepts and aesthetic expression in sculpture.  Emphasis on individualized approach to sculptural problems using armature structure and figure modeling.  This course has a fee that is non-refundable once the term begins.  <b>Department Managed Prerequisites(s):</b> Undergraduate level ART 2080 Minimum Grade of D/Grade of D  UG  LB  Lab

Fall 2020

MUS2010  2010  Theory of Music III  MUS  Music  3  Continuation of MUS 1010 and 1020.  Part-writing, analysis, and harmony on a more advanced level.  UG  LE  Lecture
Fall 2020  CS6840  6840  Intro Machine Learning  CS  Computer Science  3  This course offers an introduction to the field of probabilistic machine learning. Examples are drawn from sensor signal exploitation, biology, text processing, computer vision, and robotics. Key techniques are demonstrated and implemented in MATLAB. (8) Department Managed Prerequisite(s): Undergraduate level EE 3260 Minimum Grade of D or Undergraduate level EE 2211 Minimum Grade of D or Undergraduate level EE 3260 Minimum Grade of D.

Fall 2020  HST7870  7870  History of Architecture  HST  History  3  Introduces students to the history and evolution of North American architecture, with a focus on the social and cultural developments of our historic built environment.

Fall 2020  FR4530  4530  Post Revolution Poetry  FR  French  3  Romantics, symbolists, decadents, and surrealists, including Baudelaire, Rimbaud, Verlaine, Mallarmé, Apollinaire and Prévert. Taught in French. Integrated Writing course. (8) Department Managed Prerequisite(s): Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D.

Fall 2020  CHM2450  2450  Concepts Chem I ECE/ME/CHM  CHM  Chemistry  3.5  Accelerated treatment of fundamental concepts and applications of chemistry for elementary education majors. Emphasizes concrete observable topics most appropriate for presentation to elementary and middle school students. Demonstrations and activities used extensively. Integrated lecture/lab.

Fall 2020  ED4100  4100  Ed Honors Project II  ED  Education  2  An in-depth independent study, under the guidance of a TED faculty advisor, in which students pursuing Education Department Honors present their completed Honors projects.

Fall 2020  BMS4550  6550  Advanced Linear Algebra  BMS  Biomedical Sciences  3  Basic principles of linear independence, spanning sets, bases, and dimension. Linear transformations, matrix representations of linear transformations, and determinants. Spectral theory of square matrices, Jordan canonical forms. Proper-Frobenius results on positive matrices.

Fall 2020  ME7330  7330  Convective Heat & Mass ME  ME  Mechanical and Materials Engineering  3  Heat and mass transfer analysis within conductors and or submerged objects for laminar and turbulent flows. Film condensation and boiling. (8) Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D or Graduate level ME 3360 Minimum Grade of D.

Fall 2020  PSI9480  9480  Mindful Based Clin Inter PSI  Professional Psychology  3  Students will learn mindfulness theory, practice, and clinical applications.

Fall 2020  PSY4310  4310  Clinical Psychology Cap PSY  Psychology  3  Communication-intensive seminar integrating knowledge within clinical psychology. Integrated Writing course.

Fall 2020  COM4330  4330  Internship COM  Communication  1  Research, practice, and participation in communication fora, symposia, or an oral communication project designed to meet the interest of individual students.

Fall 2020  NUR8101  8101  Elr Nur Prac Direct Care NUR  Nursing  3  This seminar course focuses on the nursing management of complex patients, diagnostic reasoning, translation of evidence into practice, and building intra and inter-professional interactive models to meet patient needs.

Fall 2020  EDS4460  4460  Impact Student Learn EDS  Education - Special Education  3  Integrating assessment based intervention strategies within inclusion setting to impact the learning of students with exceptional learning needs. Field experiences required. Integrated Writing course.

Fall 2020  ME8740  6740  Mat Sel Failure Analysis ME  Mechanical and Materials Engineering  3  Engineering aspects of failure analysis, failure mechanisms and related environmental factors, analysis of actual service failure. (8) Department Managed Prerequisite(s): Undergraduate level ME 3700 Minimum Grade of D or Undergraduate level ME 3120 Minimum Grade of D and Undergraduate level ME 4620 Minimum Grade of D (ME 4620 can be taken concurrently). (8) Department Managed Prerequisite(s): Undergraduate level ME 3120 Minimum Grade of D and Undergraduate level ME 4620 Minimum Grade of D.

Fall 2020  EDS4900  4900  Student Teach Ind Set EDS  Education - Special Education  8  Student teaching in a middle childhood school full-time for supervised field experience in inclusive setting with focus on professional/ethical practice, co-planning, local/national resources/networks, and advocacy. Cohort meetings required.

Fall 2020  MTH5260  5260  Num-Mthds Comput Sci MTH  Mathematics  3  Numerical methods for the sciences using modern programming languages. Solution of linear and nonlinear equations, symmetric matrix eigenvalue problems, interpolation and least squares. Initial value and boundary value problems for representative systems governed by ordinary and partial differential equations are also solved numerically.

Fall 2020  PSY9045  9045  Bayesian Analyses PSY  Psychology  3  This course is an introduction to applying Bayesian data analysis. We will cover the necessary probability theory to understand Bayesian rule and to derive posterior distributions for simple models. We will discuss MCMC approaches to estimating posteriors including Gibbs sampling and the basics of Hamiltonian-MCMC. In the latter half of the course, we will implement and explore a number of variations of generalized linear models, ranging in complexity from t-tests to hierarchical ordinal regression.

Fall 2020  PSI9520  9520  Family Therapy PSI  Professional Psychology  3  Organization and structure of the family and common problem areas. Review of theories of family therapy and treatment strategies of marital and sexual dysfunctions.

Fall 2020  AF56040  6040  The African Diaspora AFS  Afr / Afr Amer Studies  3  Examination of the evolution and development of the African diaspora in an international context.

Fall 2020  CEG4500  4500  Computer Graphics CEG  Computer Engineering  3  Raster graphics algorithms, geometric primitives and their attributes, clipping, antialiasing, geometric transformations, structures and hierarchical models, input devices, and interactive techniques. Students develop interrelated programs to design a three-dimensional hierarchical model, manipulate, and view it.


Fall 2020  BIB660L  6600L  Population Genetics Lab BIO  Biology  0  Required laboratory for BIO 6600.

Fall 2020  KNH1300  1300  Hiking KNH  Kinesiology & Health  1  Fundamental skills and knowledge of hiking. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020  BID8990  8990  Graduate Research BIO  Biology  1  Supervised thesis research.

Fall 2020  ACC2100  2100  Accounting Principles I ACC  Accountancy  3  Introduction to accounting for business enterprises. Includes analysis of the effect of transactions on financial position, preparation of financial statements, the recording process, and measurement issues and reporting requirements for assets.

Fall 2020  CHM4610  4610  Synthetic Polymer Chem CHM  Chemistry  2  Step-growth and chain-growth polymerization in homogenous and heterogeneous media; properties of commercial polymers.

Fall 2020  IT1410  1410  Digital Media I IT  Information Technology  3  Use of a non-linear video editing program to combine audio and video film.
Fall 2020
- TEG2930 2930 Basic Mach & Welding TEG Technical Engineering 6 Identification and operation of proper welding and machining operations.
- FR3310 3310 Survey of French Literature FR French 3 Middle Ages to the present. An overview of trends, thought, and style. Taught in French.  
- SCM7990 7990 SCM Capstone Project SCM Supply Chain Management 1 Student completes a comprehensive supply chain management project either individually or in a small team. The objectives of the project are to (a) develop a feasible solution for a significant business problem in the supply chain of the sponsoring organization; (b) demonstrate how the solution provides value to the sponsoring organization; and (c) provide a review of relevant best practices and research in the field of supply chain management related to the topic of the project. This course has a fee that is non-refundable once the term begins.
- EES4640 4640 Risk Assessment & Comm EES Earth & Environmental Sciences 3 Determination of quantitative risk to humans and the environment. Current regulatory activities, including hazard identification, sampling, data evaluation, exposure assessment, toxicity assessment, and risk characterization.
- ANT3100L 3100L Human Structure Funct I Lab ANT Anatomy 0 Required laboratory for ANT 3100.
- FR4920 4920 Occupation Cinema FR French 3 Analysis of films made during and after the Occupation of France, such as L'Œil de Vichy, Le Dernier Métro, La Ronde, L’Amour, Le Gai Svol, etc. Integrated Writing course.
- PLS4880 4880 Conflict Resolution PLS Political Science 3 Survey of literature on causes and resolution of conflict and application of concepts and theories to analysis of a real-world international conflict. Integrated Writing course.
- PSY4280 4280 Psych Game Theory Cap PSY Psychology 3 Game theory studies strategic reasoning and decision-making in business, diplomacy, and personal life. A game is defined as an interaction between two or more players. Game theorists are interested in what strategies players choose, what they know about one another, what their motives are, etc. Integrated Writing course.
- WGS3300 3300 Crit Sexualities & Gender Studies WGS Women, Gender, and Sexuality 3 Introduction to how individual identities and social expressions of sexuality are shaped and reflected by cultural, political, historical, psychological, and biological contexts. Students with credit for WMS 3010 cannot receive credit for WGS 3300.
- PPH6400 6400 Social & Behavioral De PPH Population & Public Health 3 This course addresses the socio-ecological and behavioral theories of health behavior and their application to designing theory-based interventions. Students develop a theory-based logic map for one risk or protective health behavior.
- GR2020 2020 Intermediate Greek II GR Greek 3 Review of essentials and reading for comprehension in selected authors.
- CNL7301 7301 Marriage Pre-Practicum CNL Counseling 1 This course focuses on the practice of systemic interventions and problem solving in the process of resolving marriage and family related concerns.
- PSY4910 4910 Psych of Stress & Har PSY Psychology 3 Communication-intensive seminar integrating knowledge on the psychobiology of stress. Students will become familiar with original scientific literature on the psychobiology of stress, how psychological systems respond to psychosocial stressors, and the current thinking on stress-related health disorders. Integrated Writing course.
- BMS4640 6640 Computational Statistics BMS Biomedical Sciences 3 Random number generation and Monte Carlo methods. The bootstrap and permutation tests. Numerical methods for optimization related to maximum likelihood estimation. Nonparametric density estimation. Monte Carlo and Markov Chain (MCMC) methods. Classification and regression trees. Software used for the course includes SPLUS or R.
- PPH7150 7150 Applied Epidemiology PPH Population & Public Health 3 This course will overview advanced topics in epidemiology as they apply in public health research and applications. Department Managed Prerequisite(s): Graduate level PPH 6100 Minimum Grade of B and Graduate level PPH 6200 Minimum Grade of B.
- ASM3575 3575 Aerospace Skills I ASM Aerospace Medicine 3 Aerospace Skills for Healthcare Providers. This is intended to provide an integration of flightcrew (pilot) operational aeronautical knowledge skills and pertinent aeronautical concepts as it pertains to the flight surgeon.
- MUE2770 2770 Chamber Orchestra MUE Music: Ensembles 1 Instrumental ensemble, consisting primarily of strings and varying combinations of wind and percussion instruments, devoted to the study and performance of music written for that medium.
- MTH4990 4990 Selected Topics in Math MTH Mathematics 1 Selected topics in mathematics. 
- BIO3990 3990 Undergrad Teaching Asst BIO Biology 1 Supervised experience in preparing materials and apparatus for laboratory sessions in the biological sciences. Students will work with course staff on a regularly scheduled basis to develop the practices and skills associated with laboratory teaching responsibility and assist course staff in teaching the laboratory. Graded pass/unsatisfactory.

UG: Undergraduate Level
LL: Lecture/Lab Combination
GR: Graduate Level
SE: Seminar
PR: Practicum
Combination: Lecture/Lab Combination
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Department</th>
<th>Coreqs</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS3420</td>
<td>3</td>
<td>Civic Lib I: 1st Amendment</td>
<td>PLS</td>
<td>Political Science</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>CS4810</td>
<td>4</td>
<td>Bioinformatic Algorithms</td>
<td>CS</td>
<td>Computer Science</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>CH6030</td>
<td>3</td>
<td>Adv Studies: Lang &amp; Civ</td>
<td>CHI</td>
<td>Chinese</td>
<td>Lecture</td>
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<tr>
<td>LAT1010</td>
<td>1</td>
<td>Beginning Latin I</td>
<td>LAT</td>
<td>Latin</td>
<td>Lecture</td>
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<tr>
<td>EDL7900</td>
<td>3</td>
<td>Instr Ldshp Practicum</td>
<td>EDL</td>
<td>Educational Leadership</td>
<td>Lecture</td>
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<tr>
<td>PL56910</td>
<td>3</td>
<td>Independent Research</td>
<td>PLS</td>
<td>Political Science</td>
<td>Lecture</td>
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<tr>
<td>ED6760</td>
<td>6</td>
<td>AYA: Int Science C&amp;M II</td>
<td>ED</td>
<td>Education</td>
<td>Lecture</td>
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<tr>
<td>EE7410L</td>
<td>4</td>
<td>Power Electronics I Lab</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>Lab</td>
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<tr>
<td>CHM5560</td>
<td>3</td>
<td>Physical Chem Life Sc</td>
<td>CHM</td>
<td>Chemistry</td>
<td>Lecture</td>
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<tr>
<td>BMS6530</td>
<td>4</td>
<td>Ion Channels</td>
<td>BMS</td>
<td>Biomedical Sciences</td>
<td>Lecture</td>
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<tr>
<td>GEO3500</td>
<td>3</td>
<td>Environmental Geography</td>
<td>GEO</td>
<td>Geography</td>
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<tr>
<td>MTH6150</td>
<td>6</td>
<td>Scientific Computation</td>
<td>MTH</td>
<td>Mathematics</td>
<td>Lecture</td>
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<tr>
<td>URS5980</td>
<td>3</td>
<td>Quantitative Research</td>
<td>URS</td>
<td>Urban Affairs</td>
<td>Lecture</td>
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<tr>
<td>LDR7590</td>
<td>3</td>
<td>Qualitative Research MTH</td>
<td>LDR</td>
<td>Leadership</td>
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<tr>
<td>NUR8004</td>
<td>3</td>
<td>Org Sys Ldshp Hlth Care</td>
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<tr>
<td>IT4400</td>
<td>4</td>
<td>Motion Graphics</td>
<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>SPN4500</td>
<td>4</td>
<td>Senior Honors Project</td>
<td>SPN</td>
<td>Spanish</td>
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<tr>
<td>SOC3100</td>
<td>3</td>
<td>Sociology of the Family</td>
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<tr>
<td>STT5860</td>
<td>3</td>
<td>Ind Read Stat and Prob</td>
<td>STT</td>
<td>Statistics</td>
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<tr>
<td>MBS3840</td>
<td>3</td>
<td>Data Vis for Business</td>
<td>MBS</td>
<td>Management Information Systems</td>
<td>Lecture</td>
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<tr>
<td>ENGL740</td>
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<td>Seminar: Literary Genre</td>
<td>ENG</td>
<td>English</td>
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<tr>
<td>EDL7751</td>
<td>2</td>
<td>Instr Ldshp Cng: STEM</td>
<td>EDL</td>
<td>Educational Leadership</td>
<td>Lecture</td>
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<tr>
<td>CLS5400</td>
<td>3</td>
<td>Art &amp; Archaeology</td>
<td>CLS</td>
<td>Classics</td>
<td>Lecture</td>
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<tr>
<td>EDS3400</td>
<td>3</td>
<td>Curriculum &amp; Materials</td>
<td>EDS</td>
<td>Education - Special</td>
<td>Lecture</td>
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</tr>
</tbody>
</table>

Fall 2020 courses are listed with their corresponding terms and credits.
Fall 2020  MTH4920  4290  Cryptography Data Secur  MTH Mathematics  3  Mathematical principles of cryptography and data security. Introduces relevant algebra and number theory. Discusses developments in cryptography, including the data encryption standard (DES), public-key encryption (RSA), cryptographic hash functions, digital signatures, key safeguarding schemes, and cryptographic protocols such as key exchange and entity authentication, identification schemes, electronic elections and digital cash. UG  LE  Lecture

Fall 2020  PLS3550  3350  The American Presidency  PLS Political Science  3  General political functions, roles, and structure of the presidential office; limits and opportunities of presidential power; relations with Congress, courts, bureaucracy, the public, and the political parties, and presidential personality. UG  LE  Lecture

Fall 2020  NUR2400  2400  Intro Clin Nursing  NUR Nursing  7  Introduces nursing theories with emphasis on interprofessional, intraprofessional, and patient-centered communication skills, the lab and clinical experiences basic to clinical practice, critical reasoning, and the application of health assessment skills in the clinical setting. (3 didactic hrs; 2 clinical hrs; 2 lab hrs) UG  LE  Lecture

Fall 2020  CL4720  4720  Advanced Microbiology  CL Clinical Laboratory Science  2  Characteristics, pathophysiological mechanisms and identification of chlamydia, fungi, viruses and other organisms and the methods used to diagnose and treat related diseases. UG  LE  Lecture

Fall 2020  DMV999  999  For Administrative Use Only  DMV DMV Consortium  0  

Fall 2020  NEU4200  4200  Neu-ImmSys CS-TiH Hmnts  NEU Neuroscience  3  Multidirectional interactions between the nervous and immune systems have been documented in homeostasis and pathologies ranging from multiple sclerosis to autism, and from leukaemia to acute and chronic inflammation. This course focuses on neuro-immune interactions at barrier surfaces—mostly the gut, but also including the skin and the airways, areas densely populated by neurons and immune cells that constantly sense and adapt to tissue-specific environmental challenges. UG  LE  Lecture

Fall 2020  ME4550  4550  Geothermal Energy  ME Mechanical and Materials Engr  3  Techniques for tapping the energy of the earth will be discussed. This will include hot and cold geothermal energy. Use of geothermal energy to produce electricity, for space and district heating and cooling, and for industrial applications will be presented. In addition, geothermal energy's effect on the environment and its economic benefits will be discussed.<b> Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D-/b>. UG  LE  Lecture

Fall 2020  BME4703  4703  Medical Imaging  BME Biomedical Engineering  4  Overview of the various methods used in generating images in medicine. Basic principles of the image-forming process and the physical properties of the resultant image are discussed. UG  LE  Lecture

Fall 2020  CHM9990  8990  Thesis Defense  CHM Chemistry  2  Public defense of a written thesis that is based on original research in a CHM faculty laboratory. GR  SE  Seminar

Fall 2020  OL2010  2010  Leading Self  OL Organizational Leadership  3  Overview of the personal and professional skills and dispositions necessary for effective leadership in an organizational setting. UG  LL  Lecture/Lab

Fall 2020  ME6730  6730  Introduction to Ceramics  ME Mechanical and Materials Engr  3  Ceramic and refractory raw materials and products; atomic structure and bonding; structure of crystalline phases and glasses; structural imperfections; diffusion in oxides; phase equilibria; processing of ceramics.<b> Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D-/b>. GR  LE  Lecture

Fall 2020  BMB7630  7630  NMR Spectro  BMB Biochem & Molecular Biology  3  Also listed as RMS 7630 and BME 7630. Discusses the applications of NMR spectroscopy to the study of tissue metabolism in vivo. The fundamental theory of magnetic resonance imaging, with a survey of clinical applications, is also presented. GR  LE  Lecture

Fall 2020  REL5940  5940  Existentialism  REL Religion  3  (Also listed as PHL 5090) An introduction to 20th century philosophical and literary movement. Emphasis on concrete existence and the passions over abstract rationality, conception of self as a product of radically free acts of self-creation, affirmation of uncertainty and absurdity as inseparable elements of the human condition, and rejection of traditional ethical systems. GR  LE  Lecture

Fall 2020  PLS3310  3310  Political Parties  PLS Political Science  3  General functions, organization, and operation of American political parties. Emphasis on role of parties in democratic systems. Examines nominations, elections, campaigns, and presidential politics. Integrated Writing course. UG  LE  Lecture

Fall 2020  PLT7010  7010  ICP Statistics I  PLS Political Science  3  Emphasis on quantitative research design, statistical literacy and data analysis in political science. Discusses measurement, probability, and univariate hypothesis testing. GR  LL  Lecture/Lab

Fall 2020  CHM6610  6610  Synthetic Polymer Chm  CHM Chemistry  2  Step-growth and chain-growth polymerization in homogeneous and heterogeneous media; properties of commercial polymers. GR  LE  Lecture

Fall 2020  NUR7354  7354  Eval Strategies Nur Educ  NUR Nursing  3  Examination and application of the art, principles, theories, models, and strategies of evaluation in nursing education. Role of nurse educator in classroom and clinical is explored. GR  LE  Lecture

Fall 2020  ATH5820  6620  Anthropology of Religion  ATH Anthropology  3  (Also REL 5810) An introduction to the anthropological study of the practices and ideas associated with religions of the world, and how they relate to other domains of human cultural existence. Discusses many examples of contemporary non-Western religions, but will also use that information to gain insights regarding more familiar Western ones. GR  LE  Lecture

Fall 2020  EE4210L  4210L  Digital Comm Lab  EE Electrical Engineering  1  Hands-on experience with modulation/demodulation modules and experimentation with representative communication systems.<b> Department Managed Prerequisite(s): Undergraduate level EE 4000 Minimum Grade of C-/b>. UG  LB  Lab

Fall 2020  SOC5300  3300  Social Organization  SOC Sociology  3  Theories and analysis of social organization in its historical and present context. Emphasis on the interrelationships between individuals, the family, and other institutions. UG  LE  Lecture

Fall 2020  MFK4360  4360  Studies in MP Production  MFK Motion Picture  3  Intensive study of a selected area of motion picture production. Topics vary. UG  LL  Lecture/Lab

Fall 2020  CS2800  2800  Web Development I  CS Computer Science  3  Introduction to basic web design and development using HTML and CSS. Topics include page structure, responsive design, and use of multimedia. Client-side programming using scripting languages such as JavaScript and jQuery will be introduced.<b> Department Managed Prerequisite(s): Undergraduate level CS 1160 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D-/b>. UG  LL  Lecture/Lab

Fall 2020  MTH4290  4290  Cryptography Data Secur  MTH Mathematics  3  Mathematical principles of cryptography and data security. Introduces relevant algebra and number theory. Discusses developments in cryptography, including the data encryption standard (DES), public-key encryption (RSA), cryptographic hash functions, digital signatures, key safeguarding schemes, and cryptographic protocols such as key exchange and entity authentication, identification schemes, electronic elections and digital cash. UG  LE  Lecture
Fall 2020  MTH6290  6290  Cryptography Data Secur  MTH  Mathematics  3  Mathematical principles of cryptography and data security. Preliminary algebra and number theory will be briefly introduced. Various developments in cryptography will then be discussed, including the data encryption standard (DES), public-key encryption (RSA), cryptographic hash functions, digital signatures, key safeguarding schemes, and cryptographic protocols such as key exchange and entity authentication, identification schemes, electronic elections and digital cash.—Department Managed Prerequisite(s): Undergraduate level MTH 2530 Minimum Grade of D—GR  LE  Lecture

Fall 2020  FR3550  3550  French Service Learning  FR  French  3  Students engage in an international service learning project in teaching, translation or interpreting in a Francophone country. Student must be enrolled in a Wright State sponsored Ambassador Program to a French-speaking country, such as France, Canada (Quebec), or Senegal.—Department Managed Prerequisite(s): Undergraduate level FR 2020 Minimum Grade of D—UG  PR  Practicum

Fall 2020  PLS4410  4410  Natural Resources Law  PLS  Political Science  3  Examines federal management of natural resources on public lands, specifically, water, minerals, timber, grazing, and wildlife. Analysis of constitutional authority, statutes, regulations, federalism, and judicial review of administrative decisions.—Department Managed Prerequisite(s): Undergraduate level FR 2020 Minimum Grade of D—UG  LE  Lecture

Fall 2020  ED6970  6970  Cont Sem: MA/Wild Lang  ED  Education  3  Seminar accompanying student teaching focusing on pedagogical content knowledge in World Languages, assessment of the American Council on the Teaching of Foreign Languages standards, completion of the professional portfolio and submission of the EdTPA.—Department Managed Prerequisite(s): Undergraduate level ED 2110 Minimum Grade of D—GR  SE  Seminar

Fall 2020  LAT3530  3530  Readings in Roman Epic  LAT  Latin  3  Virgil's Aeneid, Ovid's Metamorphoses; Lucan, Statius, Valerius Flaccus, and Silius. Topics include intent and structure of the Aeneid, history and development of Roman epic, structure and transitional devices in the Metamorphoses, and the nature of rhetorical epic.—Department Managed Prerequisite(s): Undergraduate level LAT 2110 Minimum Grade of D—UG  LE  Lecture

Fall 2020  EDT6260  8620  Applied Res for HPA  EDT  Educational Technology  2  Participants research educational technologies used in the health professions environment. Participants evaluate how the use of the educational technology has had an impact on the health professionals teaching environment.—Department Managed Prerequisite(s): Undergraduate level EDT 2110 Minimum Grade of D—GR  LE  Lecture

Fall 2020  REL3440  3440  Hinduism  REL  Religion  3  Explores major beliefs and practices of Hinduism.—Department Managed Prerequisite(s): Undergraduate level REL 2120 Minimum Grade of D—UG  LR  Lecture/Recitation Combination

Fall 2020  SPN3610  3610  Spanish Phonology  SPN  Spanish  3  Study of the vowel and consonant sound system of Spanish. Spanish phonetics and intonation.—Department Managed Prerequisite(s): Undergraduate level SPN 2120 Minimum Grade of D—UG  LE  Lecture

Fall 2020  HST6850  6850  Approaches to History  HST  History  3  Examines approaches to the study of history and historical methodology. Topics vary.—Department Managed Prerequisite(s): Undergraduate level HST 2110 Minimum Grade of D—GR  LE  Lecture

Fall 2020  KHN1160B  1160B  Dance: Latin  KHN  Kinesiology & Health  1  Fundamental skills and knowledge of Dance: Latin. Competency-based approach. Course may accommodate disabled students when appropriate.—Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D—UG  LB  Lab

Fall 2020  ENG6300  6300  Studies in American Lit  ENG  English  3  Intensive study of American literary history and/or the work of individual American writers. Intended to develop an understanding of literature within the contexts of the author's life, literary production, and historical background.—Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D—GR  LE  Lecture

Fall 2020  CS6700  6700  Database Management  CS  Computer Science  3  Logical and physical aspects of database management systems are surveyed. Data models including entity—relationship (ER) and relational models are presented. Physical implementation (data organization and indexing) methods are discussed. Query languages including SQL, relational algebra, relational calculus, and QBE are studied. Database schema design methods are presented.—Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D—GR  LL  Lecture/Lab Combination

Fall 2020  ART3140  3140  Studies in Baroque Art  ART  Art  3  General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing Assessment of the American Council on the Teaching of Foreign Languages standards, completion of the professional portfolio and submission of the EdTPA.—Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D and Graduate level ART 2120 Minimum Grade of D—UG  LE  Lecture

Fall 2020  BHE7770  7370  Medical Device  BHE  Industrial & Hum Fac Engr  3  For students who are interested in acquiring a broad-based knowledge in the human factors of medical instrumentation and devices. Approaches the design and implementation of medical technology from the perspective of patient safety and product usability. Topics to be covered will range from design guideline considerations, tools for usability analysis, and emerging trends and technologies.—Department Managed Prerequisite(s): Graduate level BHE 6500 Minimum Grade of D or Undergraduate level BHE 4500 Minimum Grade of D—GR  LE  Lecture

Fall 2020  MKT4720  4720  Small Bus Mitg Planning  MKT  Marketing  3  Apply basic business and marketing concepts to practical situations. Students work in small teams as consultants on a business/marketing plan project with local small businesses.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—UG  LE  Lecture

Fall 2020  ENG3320  3320  American Texts to 21st C  ENG  English  3  Representative American writings from the late nineteenth century through the 21st century.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—UG  LE  Lecture

Fall 2020  DOS5200  9260  Doc Workshop in Lifelong  DOS  Doctor Org Studies  1  Small group learning for doctoral students designed around a specific topic in organizational studies.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—GR  SE  Seminar

Fall 2020  ACC7810  7810  Spec Studies in ACC  ACC  Accountancy  3  Tickle vary.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—GR  LE  Lecture

Fall 2020  ATR4610  4610  Org & Admin in AT  ATR  Athletic Training  3  Knowledge, skills, and dispositions required of the entry-level Certified Athletic Trainer to develop, organize, and manage an athletic training facility. Professional development will also be addressed.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—UG  LE  Lecture

Fall 2020  EE7050  7050  Computation Egr Analysis  EE  Electrical Engineering  3  Students will learn practical and efficient computational techniques that are routinely encountered in modeling, simulation and analysis of engineering problems.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—GR  LE  Lecture

Fall 2020  ACC4780  7480  Ethics & Corp Governance  ACC  Accountancy  3  Provides students an understanding of sound corporate governance principles and an ability to apply professional ethics standards for accountants and an awareness of ethical dilemmas commonly faced by accounting professionals.—Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D—GR  LE  Lecture
<table>
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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC7460</td>
<td>Fin Statement Analysis</td>
<td>ACC</td>
<td>3 Financial Statement presentations are analyzed from an accounting perspective with heavy emphasis on footnote analysis and the impact on the financial statements.</td>
</tr>
<tr>
<td>BMST7136</td>
<td>Inst for Radiation Msr</td>
<td>BMS</td>
<td>3 Theoretical and practical consideration of radiation detectors and associated instrumentation, with focus on measurement of gamma radiation in the diagnostic energy range. Identification of metrics used to characterize system performance, quality assurance of imaging components.</td>
</tr>
<tr>
<td>URS7070</td>
<td>MPA Capstone Project</td>
<td>URS</td>
<td>3 Capstone research project for the master's degree in public administration.</td>
</tr>
<tr>
<td>ENG1230</td>
<td>British Texts: to 21st C</td>
<td>ENG</td>
<td>3 Representative works of major British writers from the middle of the 19th century through the beginning of the 21st century.</td>
</tr>
<tr>
<td>EDL9300</td>
<td>Sch Dist Finance Bus Mgt</td>
<td>EDL</td>
<td>3 Guiding principles for developing adequate district fiscal programs; study of local, state, and federal revenue sources; and, procedures in management of district funds.</td>
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<tr>
<td>MUS3310</td>
<td>Orchestra Music Ed Meth</td>
<td>MUS</td>
<td>1 The course will teach students the methodology, techniques, and strategies that will make them successful with elementary, middle and high school orchestra programs.</td>
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<tr>
<td>PL6160</td>
<td>Sex and the Law</td>
<td>PLS</td>
<td>3 Addresses how government uses law to regulate sex as activity, expression, and identity.</td>
</tr>
<tr>
<td>PL6220</td>
<td>Internet Politics Cyber Sec</td>
<td>PLS</td>
<td>3 Examines the power and politics of cyber security, and the international implications of political and legal issues of digital technology on individuals, institutions, and states. Explores cyber security in the context of national and international security, with an emphasis on cyber espionage, cyber influence, and cyber conflict operations.</td>
</tr>
<tr>
<td>PSY4900</td>
<td>Behavioral Neuro Cap</td>
<td>PSY</td>
<td>3 Communication-intensive seminar integrating knowledge within behavioral neuroscience. Integrated Writing course.</td>
</tr>
<tr>
<td>EDL7980</td>
<td>Leadership with Diverse Pops</td>
<td>EDL</td>
<td>3 The purpose of this course is to gain contextual knowledge to lead contemporary schools. The course emphasizes social and legal aspects of planning and operating special programs in regular schools with diverse populations.</td>
</tr>
<tr>
<td>CS7960</td>
<td>Project - Cyber Security</td>
<td>CS</td>
<td>1 Capstone Project Research in Cyber Security</td>
</tr>
<tr>
<td>MT310</td>
<td>Virology</td>
<td>MI</td>
<td>3 This course provides an introduction to the field of virology. The course emphasizes the intrinsic properties of viruses that cause human disease and their interaction with cells, multiplication, genetics, and tumor induction.</td>
</tr>
<tr>
<td>CSD5220</td>
<td>Legal Issues Health Care</td>
<td>CSD</td>
<td>3 Legal principles covering sources of law, business, enterprises, government regulations, general health law, and managed care.</td>
</tr>
<tr>
<td>SW4880</td>
<td>SW Feld Practicum II</td>
<td>SW</td>
<td>3 Individual learning experiences under the supervision of an agency field instructor, with guidance from the faculty field liaison. Department Managed Prerequisite(s): Undergraduate level SW 4860 Minimum Grade of D and Undergraduate level SW 4870 Minimum Grade of D/0</td>
</tr>
<tr>
<td>SW2700</td>
<td>Intro to Social Work</td>
<td>SW</td>
<td>3 Includes an introduction to: the historical development of social work as a profession, the major fields of practice, social systems theory, the ecological perspective on social problems, and the nature and value base of the profession. The course includes an introduction to foundational knowledge, the skills and values needed for the profession, the development of critical thinking, self-awareness, problem solving skills and an appreciation of diversity.</td>
</tr>
<tr>
<td>AES4310</td>
<td>Prep for Active Duty I</td>
<td>AES</td>
<td>3 Overview of the complex social and political issues facing the military profession.</td>
</tr>
<tr>
<td>PSY920</td>
<td>Mental Workload</td>
<td>PSY</td>
<td>3 This course reviews the major theories and practices of mental workload measurement, including a review of the research relevant to them. Applications to human factors will be discussed.</td>
</tr>
<tr>
<td>MTH4510</td>
<td>Modern Algebra I</td>
<td>MTH</td>
<td>3 Elementary number theory: divisibility, prime numbers, congruences, quadratic reciprocity, and number-theoretic functions. Introduction to rings, integral domains, and fields.</td>
</tr>
<tr>
<td>LAW7350</td>
<td>Law for Accountants</td>
<td>LAW</td>
<td>3 Course covers specific areas of business law that are included on the CPA Examination. Law and their application are drawn from the following general areas of business law: agency, business organizations, bankruptcy, the Uniform Commercial Code, accountants' liability, and property.</td>
</tr>
<tr>
<td>SAA7620</td>
<td>Student Affairs in Higher Ed</td>
<td>SAA</td>
<td>3 Surveys student services in colleges and universities. Consideration is given to the organization, administration, and rationale of these services, within the context of the entire institution.</td>
</tr>
<tr>
<td>GER7250</td>
<td>Business German I</td>
<td>GER</td>
<td>3 An introduction to the language of business with insight into Germany's place in the global economy.</td>
</tr>
<tr>
<td>ME7200</td>
<td>Mechanics of Composites</td>
<td>ME</td>
<td>3 The main objective of this course is to introduce composites as an engineering material and emphasize the basic concepts of their nature and mechanical properties. Micromechanics and macro-mechanics and laminination theory of composites will be emphasized; Department Managed Prerequisite(s): Undergraduate level ME 1020 Minimum Grade of D and Undergraduate level ME 5120 Minimum Grade of D/0</td>
</tr>
<tr>
<td>KND140</td>
<td>Orienting/Land Nav</td>
<td>KND</td>
<td>1 Fundamental skills and knowledge of Orienting/Land Navigation: Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>SPN4310</td>
<td>Sem Spanish Lit</td>
<td>SPN</td>
<td>3 Intensive study of selected topics in Spanish peninsular literature. Background lectures, oral reports, and discussions. Topics vary: Department Managed Prerequisite(s): Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D and Undergraduate level SPN 3310 Minimum Grade of D or Undergraduate level SPN 3320 Minimum Grade of D/0</td>
</tr>
<tr>
<td>ED6950</td>
<td>Cont Sem: AYA/Int Math</td>
<td>ED</td>
<td>3 Seminar accompanying Adolescent and Young Adult Internship focusing on pedagogical content knowledge in Integrated Mathematics, assessment of the National Council of Teachers of Mathematics (NCTM) standards and the completion of the professional portfolio.</td>
</tr>
<tr>
<td>CS3200</td>
<td>Theory of Computing</td>
<td>CS</td>
<td>3 Introduction to the theory of formal languages and automata with an emphasis on the classes of languages commonly encountered by computer scientists. Compatibility examines the solution of decision problems, the Church-Turing thesis, the undecidability of the Halting Problem, and problem reduction and undecidability.</td>
</tr>
<tr>
<td>ACC3230</td>
<td>Management Accounting</td>
<td>ACC</td>
<td>3 Application of managerial accounting concepts and techniques to complex problems in manufacturing accounting and service firms.</td>
</tr>
</tbody>
</table>
Fall 2020  ME4880  4880  Powder Processing of Mat  ME  Mechanical and Materials Engr  3  Fundamental metallurgy and ceramic science of powder processing techniques. Details of current powder processing technology and methods. Hands-on laboratory experience with both metal and ceramic materials. Requires: Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D and (Undergraduate level ME 3110 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D)<b>/</b>  UG  LL  Lecture/Lab Combination

Fall 2020  CS3840  3840  Applied Machine Learning  CS  Computer Science  3  Explores techniques in machine learning and analytics with a focus on applications. Some of the topics covered include regression, neural networks, nearest neighbors and clustering.  UG  LE  Lecture

Fall 2020  RHH7300  7300  Epidemiology Addictions  RHH  Rehabilitation  3  Theory and practice of a variety of treatment modalities and settings. Explores interdisciplinary treatment planning, evidence-based practices, family, individual and group interventions, systems, holistic intervention strategies, recovery supports including self-help groups.  GR  LE  Lecture

Fall 2020  CHM6900  6900  Critical Lit Analysis  CHM  Chemistry  1  For the development of a set of critical thinking skills that will allow for a thorough analysis of current chemical and general scientific literature.  GR  LE  Lecture

Fall 2020  PHL4020  4020  Continental Phil Seminar  PHL  Philosophy  3  Focus study of a narrow theme or topic in the continental and European philosophical traditions. Topics vary, but will focus on an issue in phenomenology, hermeneutics, critical theory, psychoanalytic theory, or continental social and political philosophy. Integrated Writing course.  UG  SE  Seminar

Fall 2020  ARA3220  3220  Adv ARA Syltax & Gram II  ARA  Arabic  3  An advanced course based in classical approaches to Arabic grammar and syntax, designed to prepare students to engage primary texts, both modern and classical.<b>/</b> Department Managed Prerequisite(s): Undergraduate level ARA 3210 Minimum Grade of D<b>/</b>  UG  LE  Lecture

Fall 2020  MTH8300  8300  Topics in Analysis  MTH  Mathematics  1  Selected advanced topic or topics in analysis.  GR  IS  Independent Study

Fall 2020  ACC7390  7390  Advanced Accounting  ACC  Accountancy  3  To study the accounting principles and techniques used to consolidate parent and subsidiary companies at the date of combination and in subsequent periods.  GR  LE  Lecture

Fall 2020  ME7760  7760  Transformation of Solids  ME  Mechanical and Materials Engr  3  This is the first course in a two course sequence. Covers the theory of homogeneous and heterogeneous nucleation and diffusion and interface controlled growth.<b>/</b> Department Managed Prerequisite(s): Graduate level ME 5760 Minimum Grade of D<b>/</b>  GR  LE  Lecture

Fall 2020  ME4160  4160  Advanced CAD  ME  Mechanical and Materials Engr  3  Advanced course in computer-aided design reinforces and augments the fundamentals of technical blue-print reading, technical sketching, mechanical drawing, computer-aided design (CAD) of parts, assemblies, and engineering drawings, modeling and prototyping, and computer-assisted analysis.<b>/</b> Department Managed Prerequisite(s): Undergraduate level ME 2020 Minimum Grade of D and Undergraduate level ME 2210 Minimum Grade of D<b>/</b>  UG  LE  Lecture

Fall 2020  TH3990  3990  Selected Subjects  TH  Theatre  1  Variable content dealing with problems, approaches, and topics in the field of theatre.  UG  LL  Lecture/Lab Combination

Fall 2020  PSY9730  8730  Training in Organization  PSY  Psychology  2  This course will address theories, issues, and research in training. The purpose will be to discuss factors and processes involved in training needs assessment, design, and evaluation as well as learning processes, individual difference and motivational factors affecting training, and selected special topics.<b>/</b> Department Managed Prerequisite(s): Graduate level PSY 8610 Minimum Grade of D<b>/</b>  GR  SE  Seminar

Fall 2020  EE6130  6130  Cont Control Systems  EE  Electrical Engineering  3  Introductory course providing students with a general control background. Major topics include block diagrams and signal flow graphs, electromechanical modeling, time response, root locus, and design of PID controllers.  GR  LE  Lecture

Fall 2020  KHN1220  1220  Fencing  Competitive  KHN  Kinesiology & Health  1  Intermediate level of skills and knowledge in Fencing: Competitive. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  EE8990  8990  PhD Dissertation  EE  Electrical Engineering  1  Research on the PhD dissertation topic. Graded pass/unsatisfactory.  GR  IS  Independent Study

Fall 2020  URS4400  4400  Comm/Reg Planning II  URS  Urban Affairs  3  Examination of the links between urban planning and urban administration, and investigation of planning as a profession and a process.  UG  LE  Lecture

Fall 2020  SW6750  6750  Child Welfare I  SW  Social Work  3  Framework for categorizing child welfare problems. Historical and current examination of legislation, policies, programs, and services to address child welfare needs, including the role of the child welfare worker.  GR  LE  Lecture

Fall 2020  PHIL5090  5090  Existentialism  PHIL  Philosophy  3  Introduction to 20th century philosophical and literary movement which, rooted in traditional questions of freedom and moral responsibility, breaks dramatically with the past in its emphasis on concrete existence and the passions over abstract rationality, its conception of self as a product of radically free acts of self-creation, its affirmation of uncertainty and absurdity as inseparable elements of the human condition, and its rejection of traditional ethical systems.  GR  LR  Lecture/Recitation Combination

Fall 2020  LEP6110  0110  Writing - Level 1  LEP  LEAP  0  Writing for beginning ESL students. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture

Fall 2020  MUS3550  3550  Keyboard Musicianship  MUS  Music  1  This course provides vocal performance education majors with functional and technical keyboard skills.  UG  LE  Lecture

Fall 2020  LAT4550  4550  Readings Roman Politics  LAT  Latin  3  Readings include Cicero's political essays, the letters of Cicero and Pliny, and Augustine's Res Gestae.  GR  LE  Lecture

Fall 2020  PSY5070  5070  Tests & Measures  PSY  Psychology  3  Introduction to the use, application, evaluation, and development of psychological tests and measures including ability, aptitude, attitude, standardized, or normed measures.  GR  LE  Lecture

Fall 2020  CEG6322  6322  VLSI Design  CEG  Computer Engineering  3  (Also listed as CEG 654.) Introduction to VLSI system design. Topics include CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processing and design rules, chip planning and layout, system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI.  GR  LE  Lecture

Fall 2020  EED4400  4400  Assessment Methods P-S  EED  Elementary Education P-S  3  Varying assessment techniques and strategies, both formal and informal, utilized in grades P-S. Various forms of assessments used to assess P-S students. Learning in order to plan and implement effective lessons.  UG  LE  Lecture

Fall 2020  ATH2720  3720  Ethnographic Museum Coll  ATH  Anthropology  3  An introduction to museums with ethnographic and archaeological materials in their collections. Examination of collections in terms of aesthetic manifestations and historical and cultural content. Utilize ethnographic and cultural collections housed in museums in Ohio to familiarize students with the importance of collections in documenting the cultural diversity of peoples of the United States and the world. Integrated Writing course.  UG  LE  Lecture

Fall 2020  CHI3110  3110  Chinese Conversation  CHI  Chinese  3  This course will pursue a balance of the four basic language skills: reading, writing, listening, and speaking in Chinese with a focus on conversation.<b>/</b> Department Managed Prerequisite(s): Undergraduate level CHI 2020 Minimum Grade of D or AP Chinese Language & Culture 4<b>/</b>  UG  LE  Lecture/Recitation Combination
Fall 2020

ENG 4730  4730   TESOL Theory and Culture

ENG  English  3

 Presents a theoretical foundation for the study of second language acquisition, including awareness of first language acquisition. Builds awareness of cultural similarities and differences and addresses the impact of cultural and personal variables on English language learning. Integrated Writing course. Department Managed Prerequisite(s): Undergraduate level ENG 2100 Minimum Grade of D-;  

UG  LE  Lecture

Fall 2020

KHNH 460  1460   Rape Def Strat: Intermed

KHN  Kinesiology & Health  1

 Intermediate level of knowledge and skill in Rape Defense Strategies: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.  

UG  LB  Lab

Fall 2020

COM 2020  2020   Interpersonal Com

COM  Communication  3

 Theoretical and behavioral approach to the role of communication in relationships across various contexts. Emphasis on perception and self-concept, relational development, verbal and nonverbal messages, influence, gender and diversity. Department Managed Prerequisite(s): Undergraduate level COM 1040 Minimum Grade of C and Undergraduate level ENG 1100 Minimum Grade of C.  

UG  LL  Lecture/Lab Combination

Fall 2020

DAN 1110  1110   Modern Dance I

DAN  Dance  3

 Modern dance technique class for pre-professional dancers. Emphasis on helping students become strong, versatile dancers by expanding their body's range of motion while emphasizing alignment, coordination, strength and flexibility of the torso.  

UG  ST  Studio

Fall 2020

BMS 59980  9980   Laboratory Rotation III

BMS  Biomedical Sciences  1

 Independent study designed to develop proficiency in technology, instrumentation, research design, and data analysis in an area of concentration (advanced curriculum) different from a student's area of specialization.  

UG  GR  LE  Lecture

Fall 2020

EC 3170  3170   Intermediate Macroeconomics

EC  Economics  3

 Analysis of national economic problems including inflation, unemployment, interest rates, and economic stability. Emphasizes the impact of public policy. Integrated Writing course.  

UG  LE  Lecture

Fall 2020

SOC 2570  3730   Soc Courts Law Justice

SOC  Sociology  3

 Critical examination of the U.S. court system: its structure, key processes, and ability to attain justice. Special attention to race, class, and other influential social forces.  

UG  LE  Lecture

Fall 2020

BMS 59490  9940   Introduction to Research

BMS  Biomedical Sciences  4

 Introduces BMS students to the ongoing research activities within the nine program tracks; involves presentations by BMS faculty. Graded pass/unsatisfactory.  

GR  LE  Lecture

Fall 2020

DAG 5010  5010   DAGSI Registration

DAG  DAGSI  0.5

Overview of feminist analysis of economic policy in developing and developed nations. Topics include valuing women's unpaid work, gender bias in public spending, tax policy, property rights, population policy, and regulation of advertising.  

UG  LE  Lecture

Fall 2020

KHNH 1980A  1980A   Zumba

KHN  Kinesiology & Health  1

 Fundamental skills and knowledge of Zumba. Competency-based approach. Course may accommodate disabled students when appropriate.  

UG  LB  Lab

Fall 2020

PLS 6050  6050   Pol Polarization Am Politics

PLS  Political Science  3

 Explores the causes and consequences of the deepening political divide in the U.S. Evaluates the role played by political elites and institutions such as the media and political parties in furthering political division.  

UG  GR  LE  Lecture

Fall 2020

BME 6704  6704   Advanced Medical Imaging

BME  Biomedical Engineering  4

 Generation, effects, and detection of ionizing radiation and its application to plain radiographic imaging in medicine. Successful completion of this course entitles students to be registered users of radioactive isotopes and radiation-generating equipment. Department Managed Prerequisite(s): Undergraduate level BME 4703 Minimum Grade of D or Graduate level BME 6703 Minimum Grade of D-;  

UG  GR  LE  Lecture

Fall 2020

KHNH 1800A  1800A   Weight Training: Women

KHN  Kinesiology & Health  1

 Fundamental skills and knowledge of Weight Training: Women. Competency-based approach. Course may accommodate disabled students when appropriate.  

UG  LB  Lab

Fall 2020

PPH 7120  7120   Qualitative Methods in P

PPH  Population & Public Health  3

 This is an overview of qualitative research methods commonly used in public health. Students will gain experience in the qualitative research process: problem definition, instrument development, data collection, data analysis (qualitative analysis software), interpretation and write-up of findings. Students will develop a critical perspective and be able to evaluate the methodological rigor of qualitative studies by recognizing their strengths and weaknesses, appropriate, and inappropriate uses.  

GR  LE  Lecture

Fall 2020

FAS 4100  4100   Food Laws and Regulation

FAS  Food and Agricultural Systems  3

 A study of various food laws and regulations governing food processing operations in the United States.  

UG  LE  Lecture

Fall 2020

SOM 717  717     Year 2 Medical Study Part Time

SOM  School of Medicine  1

MD  LE  Lecture

Fall 2020

SPN 3980  3980   Studies in Selec Subj

SPN  Spanish  1

 Individual research project approved and supervised by a full-time faculty member. Taught in Spanish. Department Managed Prerequisite(s): Undergraduate level SPN 7110 Minimum Grade of D or Undergraduate level SPN 3120 Minimum Grade of D or Undergraduate level SPN 3220 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D-;  

UG  LE  Lecture

Fall 2020

EES 3130  4310   QA of Environmental Analysis

EES  Earth & Environmental Sciences  0.5

 Fundamentals of Quality Control and Quality Assessment for analysis of environmental samples.  

UG  LL  Lecture/Lab Combination

Fall 2020

OL 4990  4990   OL Honors Project

OL  Organizational Leadership  1

 A theoretically based research project under the guidance of a faculty advisor. Examples might include: defining a specific research question and providing a comprehensive literature review, or identifying, examining, and researching a work-based problem/issue.  

UG  IS  Independent Study

Fall 2020

PPH 2000  2000   Global Health

PPH  Population & Public Health  3

 This course will investigate the commonalities and differences of global health issues around the world and how these are diverse, but interconnected, Integrated Writing course.  

UG  LE  Lecture

Fall 2020

MUE 6050  6050   Chamber Music

MUE  Music: Ensembles  1

 Small chamber ensembles of varying instrumentation.  

UG  LR  Lecture/Lab Combination

Fall 2020

HST 7750  7750   Interpretation & Exhibit

HST  History  3

 Examines interpretation theory and practice. Design and construction of a museum exhibit including budgeting, research, artifact selection, media relations, educational programming and opening reception.  

GR  LE  Lecture

Fall 2020

CHI 3500  3500   CHI Ambassador Program

CHI  Chinese  3

 Professor-led study abroad program in China, service-learning intensive course, taught in Chinese. Department Managed Prerequisite(s): Undergraduate level CHI 1010 Minimum Grade of D and Undergraduate level CHI 1020 Minimum Grade of D or AP Chinese Language & Culture;  

UG  LE  Lecture

Fall 2020

SLI 3530  3530   Consecutive Interpreting

SLI  Sign Language Interpreting  3

 Focuses on consecutive interpreting, working to and from ASL and English. Students will determine when, where, and why to use consecutive interpreting, note-taking and mapping, and strategies to manage the discourse.  

UG  LE  Lecture
Fall 2020  
MIL3011  3011  Adaptive Team Ldrship Lab  
MIL  Military Science  0  
Prepares cadet for six-week summer Leadership Development and Assessment Course. Cadet is required to lead squads of 9-12 in battle drills and patrolling in this cadet-led and cadre-supervised lab. Participation in weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises is required.  
UG  LB  Lab

Fall 2020  
FR6210  6210  Lit of the Middle Ages  
FR  French  3  
Selected medieval texts: epic poems, romances, and plays. Taught in French.  
Department Managed Prerequisite(s): Undergraduate level FR 5110 Minimum Grade of C or Graduate level FR 5120 Minimum Grade of C or Graduate level FR 5210 Minimum Grade of C or Graduate level FR 5220 Minimum Grade of C  
GR  LE  Lecture

Fall 2020  
EE6840  6840  Intro Machine Learning  
EE  Electrical Engineering  3  
This course offers an introduction to the field of probabilistic machine learning. Examples are drawn from sensor signal exploitation, biology, text processing, computer vision, and robotics. Key techniques are demonstrated and implemented in MATLAB.  
UG  LE  Lecture

Fall 2020  
TEG2910  2910  Main Fund/indust Mchng  
TEG  Technical Engineering  3  
Technical topics and methods courses.  
UG  LL  Lecture/Lab Combination

Fall 2020  
TH4100  4100  Stage Manage Practicum  
TH  Theatre  1  
Participation in departmental theatre stage management activities. Specific assignments determined at initial meeting.  
UG  PR  Practicum

Fall 2020  
FR5120  5120  Oral Proficiency: French  
FR  French  3  
Practice in oral use of French emphasizing the culture of the French-speaking world. Taught in French.  
GR  LE  Lecture

Fall 2020  
BIO4440  4440  Plant Physiology  
BIO  Biology  4  
Plant physiology, including the major features of nutrition, photosynthesis, transport, hormones, development, and environmental responsiveness. Laboratory includes analytical techniques, experimental design, and interpretation and communication of scientific results.  
UG  LE  Lecture

Fall 2020  
CS4700  4700  Database Management  
CS  Computer Science  3  
Logical and physical aspects of database management systems are surveyed. Data models including entity-relationship (E-R) and relational models are presented. Physical implementation (data organization and indexing) methods are discussed. Query languages including SQL, relational algebra, relational calculus, and QBE are studied. Database schema design methods are presented.  
LG  LL  Lecture/Lab Combination

Fall 2020  
BMB7010  7010  Selected Topics-Biochem  
BMB  Biochem & Molecular Biology  0.5  
Special topics in Biochemistry and Molecular Biology covering recent developments in selected faculty member's area of research expertise.  
GR  LE  Lecture

Fall 2020  
EC4400  4400  Regional and Urban Econcs  
EC  Economics  3  
Regional economic analysis in a policy and planning context. Interdisciplinary approach to analyze the economics of location, inter-regional trade, regional development, urban areas, and growth strategies.  
UG  LE  Lecture

Fall 2020  
PLS3150  3150  Religion and Politics  
PLS  Political Science  3  
(Also listed as REL 3650) General examination of both the historical and the contemporary relation between religion and politics in the United States, with special reference to church/state separation. Integrated Writing course.  
UG  LE  Lecture

Fall 2020  
PSY8310  8310  Cognitive Systems Engin  
PSY  Psychology  3  
The role of human factors in system design is examined from a cognitive systems engineering perspective. The analysis tools of CSE are explored and applied in design projects.  
GR  SI  Seminar

Fall 2020  
ART2350  2350  Ceramics for Non-Majors  
ART  Art  3  
Introduction to ceramics as a medium for three-dimensional artistic exploration and expression, focusing on functional and sculptural aspects with an emphasis on hand building techniques.  
UG  ST  Studio

Fall 2020  
NUR7212  7212  12 Lead EKG Interp  
NUR  Nursing  1  
The interpretation and clinical significance of abnormalities of the twelve lead electrocardiogram.  
GR  LE  Lecture

Fall 2020  
P&N8990  8990  Physiology Research  
P&N  Physiology & Neuroscience  1  
Supervised thesis research.  
GR  IS  Independent Study

Fall 2020  
PJP3110  3110  Japanese Conversation  
PJP  Japanese  3  
Practice in oral use of Japanese, emphasizing the culture of the Japanese world.  
Department Managed Prerequisite(s): Undergraduate level JPN 2020 Minimum Grade of D or AP Japanese Language & Culture 4  
UG  LE  Lecture

Fall 2020  
ATR3840  3840  Lower Body Assessment  
ATR  Athletic Training  2  
Clinical/practicum emphasizing lower body injury assessment skills.  
UG  CL  Clinical

Fall 2020  
EE4600  4600  UAV Flight Control  
EE  Electrical Engineering  3  
Introduction to course of UAV autopilot design. Major topics include quadcopter dynamics and modeling, UAV sensors, stabilization and control of altitude, pitch/roll, and yaw, position navigation using orientation angles, waypoint navigation, integration and practical issues.  
UG  LE  Lecture

Fall 2020  
LFP0140  0140  Integrated Skills - Level 1  
LFP  LEAP  0  
Reading, vocabulary, listening, cross-cultural discussions for beginning ESL students. This course has a fee that is non-refundable once the term begins.  
UG  LE  Lecture

Fall 2020  
AES1210  1210  Foundations of USAF  
AES  Aerospace Studies  1  
Basic characteristics, missions, and organization of the Air Force. Mandatory Leadership Lab and two physical fitness sessions per week.  
UG  LE  Lecture

Fall 2020  
CHM4020  4020  Environmental Chemistry  
CHM  Chemistry  3  
Environmental sampling and analysis using instrumental techniques. Chemical fate prediction by measurement and examination of physical and chemical properties.  
UG  LE  Lecture

Fall 2020  
PSTY930  930  Belkas' Neurol Ed Capstone  
PSTY  Psychology  3  
Communication-intensive seminar integrating knowledge on behavioral neuroscience education.  
GR  SI  Seminar

Fall 2020  
EDS4800  4800  Internship Phase I  
EDS  Education - Special Education  1  
Internship in a middle childhood school setting for supervised field experience in inclusive setting in one of the two licensure content areas while focusing on professionalism, student assessment, teaching, and collaboration.  
UG  IN  Internship

Fall 2020  
EDD450  450  AYA Intern Pt 1-Mbl IM  
ED  Education  1  
Candidates, mentored by a mathematics educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a 7-12th grade setting applying pedagogical content knowledge from mathematics content and methods courses.  
GR  IN  Internship

Fall 2020  
PSY8350  8350  Aviation Psychology  
PSY  Psychology  3  
The application of psychological principles and methods in the aviation domain. The focus is on the dynamic pilot-cockpit interface, its cognitive processing demand, and implications for design of technological support.  
Department Managed Prerequisite(s): Undergraduate level PSY 7210 Minimum Grade of D or AP Psychology 4  
GR  LE  Lecture

Fall 2020  
ATR4870  4870  Athletic Training Intern  
ATR  Athletic Training  1  
Internship in one of the following settings: high school, college, sports medicine clinics, industrial setting, Olympics, or professional sports or any other setting approved by the Director of Athletic Training Education.  
UG  IN  Internship

Fall 2020  
EDS6640  6640  Curr Methods Matrs Autism  
EDS  Education - Special Education  3  
Explores Least Restrictive Environment (LRE) options by using formal and informal measures to identify student learning and regulatory needs, and designing student-centered curricula, using research based methods and materials that match learner needs.  
GR  LL  Lecture/Lab Combination

Fall 2020  
REL2050  2050  What Is Religion?  
REL  Religion  3  
Explores the meaning of religion by looking at various ways in which people experience and express it. Diverse examples of religion and religious life are considered.  
UG  LE  Lecture
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Level</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME4980</td>
<td>Special Topics in ME</td>
<td>ME</td>
<td>1</td>
<td>Lecture</td>
<td>Special topics course in Mechanical Engineering or Materials Science and Engineering. Topics vary.</td>
</tr>
<tr>
<td>AES4320</td>
<td>Special Topics in OL</td>
<td>AES</td>
<td>0</td>
<td>Seminar</td>
<td>Special topics course in Mechanical Engineering or Materials Science and Engineering. Topics vary.</td>
</tr>
<tr>
<td>GEO6440</td>
<td>Adv GIS Applications</td>
<td>GEO</td>
<td>4</td>
<td>Lecture</td>
<td>Study of advanced geospatial analysis techniques using ArcView and ArcGIS software. GIS analysis and technology used to describe spatial elements of public and private sector development issues and to forecast change.</td>
</tr>
<tr>
<td>KNH1620B</td>
<td>Stretch &amp; Tone/Pilates</td>
<td>KNH</td>
<td>1</td>
<td>Lecture</td>
<td>Fundamental skills and knowledge of Stretch &amp; Tone/Pilates. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>EES6590</td>
<td>Aquatic Geochem</td>
<td>EES</td>
<td>3</td>
<td>Lecture</td>
<td>Fundamentals of biogeochemistry in aquatic systems, emphasizing physical, geological, chemical, and biological interactions in marine and lacustrine environments. Topics include the biogeochemical cycling of nutrients, trace metals, gases, energy, and chemical equilibria and rates in natural waters.</td>
</tr>
<tr>
<td>ED6200</td>
<td>Practicum: Multi-Age</td>
<td>ED</td>
<td>2</td>
<td>Lecture</td>
<td>Educators with prior teaching license(s), under the direct supervision of an experienced classroom teacher, are assigned to a school for field experience in grades K-12 and their concentration area(s).</td>
</tr>
<tr>
<td>REL3110</td>
<td>Judaism: Faith &amp; People</td>
<td>REL</td>
<td>3</td>
<td>Lecture</td>
<td>Judaism as a religious faith and people, with special reference to formative historical, social, ethnic, and cultural factors.</td>
</tr>
<tr>
<td>PSY2530</td>
<td>Influence and Persuasion</td>
<td>PSY</td>
<td>3</td>
<td>Lecture</td>
<td>Examines the importance of attitude formation, structure, and change, which special emphasis on the elements of persuasive appeals. Applications of this research to marketing, advertising, political law.</td>
</tr>
<tr>
<td>CEG6130</td>
<td>Pers Soft/Dev Process</td>
<td>CEG</td>
<td>3</td>
<td>Lecture</td>
<td>Discusses software development as it relates to the individual, software process measurement, design and code reviews, software quality measurement, design and design verification. Each student will participate in the development of a software project(s). Undergraduate level CEG 4110 Minimum Grade of D or Undergraduate level CEG 4110 Minimum Grade of D</td>
</tr>
<tr>
<td>ED6560</td>
<td>AYA Int Pr II: Grad T S</td>
<td>ED</td>
<td>8</td>
<td>Lecture</td>
<td>Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades 7-12 in Integrated Science.</td>
</tr>
<tr>
<td>MUS202D</td>
<td>Theory of Music IV</td>
<td>MUS</td>
<td>3</td>
<td>Lecture</td>
<td>Continuation of MUS 1010 and 1020. Part-writing, analysis, and harmony on a more advanced level.</td>
</tr>
<tr>
<td>EIE4620</td>
<td>Analy &amp; Pred Complex Sys</td>
<td>EES</td>
<td>3</td>
<td>Lecture</td>
<td>Quantitative analysis and probabilistic forecasting of the behavior of complex nonlinear natural and human systems. Methods of analysis include fractals to quantify spatial, size, and temporal scaling and chaos to study sensitivity to initial conditions and feedback. Modeling includes self-organization and cellular automata. Systems studied include seismology, chemistry, biochemistry, hydrology, medicine, geography, and coupled human and natural systems.</td>
</tr>
<tr>
<td>PHY7400</td>
<td>Nacl. Methods in Physics</td>
<td>PHY</td>
<td>3</td>
<td>Lecture</td>
<td>Topics in the application of nuclear structure, nuclear processes, and energy loss processes to physical measurement and research. Radiation damage. Particle scattering. Gamma, alpha and beta spectroscopy. Energy loss spectroscopy</td>
</tr>
<tr>
<td>IIE6712</td>
<td>Sim &amp; Stock Models</td>
<td>IIE</td>
<td>4</td>
<td>Lecture</td>
<td>Study of quantitative techniques to analyze and predict systems performance. Topics include queueing models, system simulation, model validation, data collection, quantitative analysis of system performance, and system design evaluation. Undergraduate level IIE 4150 Minimum Grade of D or Undergraduate level IIE 4150 Minimum Grade of D</td>
</tr>
<tr>
<td>Course Code</td>
<td>Degree</td>
<td>Title</td>
<td>Description</td>
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<tr>
<td>PPH6100</td>
<td></td>
<td>Bihostatics for Health</td>
<td>Introduction to the basic principles and applications of statistical methods as they are applied to data arising in the health professions.</td>
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</tr>
<tr>
<td>RHH4990</td>
<td>GR</td>
<td>Rehab Internship</td>
<td>Placement in a community agency that addresses disabilities will provide the student with the integration of skills learned in program. Minimum of 400 hours at an approved site.</td>
<td></td>
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<tr>
<td>CEG4330L</td>
<td></td>
<td>Micropros Embedded Sys Lab</td>
<td>Required laboratory for CEG 4330.</td>
<td></td>
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</tr>
<tr>
<td>PTE2220</td>
<td>GR</td>
<td>Scientific Writing</td>
<td>Students will independently write a 10-15 page scientific review on a current topic in Pharmacology &amp; Toxicology with at least 25 references.</td>
<td></td>
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<tr>
<td>ISE4310</td>
<td>LE</td>
<td>Ergonomics</td>
<td>Introduction to the application of ergonomic principles to the industrial environment. Includes ergonomic planning and implementation, the work environment, NIOSH work factors, work measurement and work-station and equipment design.</td>
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<tr>
<td>M&amp;I4310</td>
<td>LE</td>
<td>Virology</td>
<td>Intrinsic properties of viruses that cause human disease and their interaction with cells, multiplication, genetics, and tumor induction.</td>
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<tr>
<td>LAT6530</td>
<td>UG</td>
<td>Roman Hist &amp; Biography</td>
<td>Readings in Latin focusing on prose narrative in history and biography. Authors include Sallust, Livy, Tacitus, and Suetonius. Titles vary.</td>
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<tr>
<td>PHY2400R</td>
<td>GR</td>
<td>General Physics I Recitation</td>
<td>Required recitation for PHY 2400.</td>
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</tr>
<tr>
<td>CLS3500</td>
<td>LE</td>
<td>Ancient Culture and Soc</td>
<td>Special topics in ancient culture and civilization based on literature, art, archaeology, legal documents, and other sources. Integrated Writing course.</td>
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</tr>
<tr>
<td>SRV4000</td>
<td>LE</td>
<td>Engaged Citizenship Capstone</td>
<td>This course provides information on how to develop and maintain a psychological practice in clinical psychology. Students design and complete a service-learning project, produce a scholarly paper in connection with the project and compile a portfolio to demonstrate their development as citizens through the Citizen Scholar Certificate program. Project proposals must be approved by the Office of Service-Learning prior to enrollment in the course.</td>
<td></td>
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</tr>
<tr>
<td>GER3210</td>
<td>GR</td>
<td>Writing in German</td>
<td>Oral and written composition in German. Writing techniques and grammar review. Taught in German. Integrated Writing course.</td>
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</tr>
<tr>
<td>PHL5410</td>
<td>LE</td>
<td>Aesthetics and PHL Art</td>
<td>Exploration of philosophical theories of art, including such questions as: Are the fine arts different from mere entertainment? Are there objective standards? Is the goal of art to express emotion, communicate truth, or produce pleasure? Can immured artworks be good art? Students will critically examine their aesthetic experiences and prejudices to develop a richer sense of why we value the arts. Readings will include historical works by thinkers such as Plato, Tolstoy, Nietzsche, and Walter Benjamin, as well as contemporary philosophers like Arthur Danto.</td>
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</tr>
<tr>
<td>ME3870</td>
<td>LE</td>
<td>Machining</td>
<td>Fundamentals of machining with an emphasis on engineering models of machinability, chip formation, cutting forces and power, and lubrication. Introduction to numerical control machining. (3 Lecture, 1 Lab)</td>
<td></td>
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</tr>
<tr>
<td>AFS3890</td>
<td>UG</td>
<td>Variable Topica</td>
<td>Examines variable topics that pertain to the African American experience. Integrated Writing course.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI9060</td>
<td>UG</td>
<td>Practice Mgmt</td>
<td>This course provides information on how to develop and maintain a psychological practice in clinical psychology. Included are topics such as developing a business plan, financial considerations, marketing a practice, dealing with third party payers, managing employees, and working with advisors.</td>
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</tr>
<tr>
<td>NEU4030</td>
<td>LE</td>
<td>Sr Cap Neuro Rev Art</td>
<td>NEU Neuroscience majors will select a neuroscience topic, critically analyze the scientific literature associated with it, and write a scientific review article on the study of that topic. Integrated Writing course.</td>
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</tr>
<tr>
<td>NUR7002</td>
<td>GR</td>
<td>Info Tech in Hils Care</td>
<td>This course focuses on the theoretical basis of nursing and health care informatics. The model of data, information and knowledge is used to explore the basis of nursing informatics within health care. Strategies are examined for dissemination, access, retrieval and evaluation of information for professionals and consumers of health care.</td>
<td></td>
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<tr>
<td>CS4710</td>
<td>LL</td>
<td>Introductory Data Mining</td>
<td>Introduction to the fundamentals of data mining. Emphasis is on data preparation/exploration/selection, association rules, classification, clustering, OLAP/OLAM, pattern/model evaluation, anomaly detection. Students will develop and use data mining software.</td>
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</tr>
<tr>
<td>ACC7410</td>
<td>LE</td>
<td>Fin ACC Adv Topics/Res</td>
<td>A survey of accounting theory, standard setting and accounting procedures. Includes an intensive study of the balance sheet and income statement and the underlying accounting principles. Accounting research will be integrated throughout the course.</td>
<td></td>
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</tr>
<tr>
<td>SW3000</td>
<td>LE</td>
<td>Research Methods in LA</td>
<td>Introduces social science and humanities majors to research design, and the kinds of data produced, in describing, explaining, and understanding social problems.</td>
<td></td>
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</tr>
<tr>
<td>ITA1020</td>
<td>LE</td>
<td>Beginning Italian II</td>
<td>Communicative introduction to Italian. Study of the vocabulary and structure of the Italian language; practice in speaking, listening, reading, and writing. (4 Lecture, 4 Lab)</td>
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</tr>
<tr>
<td>ETE4900</td>
<td>LE</td>
<td>Antenna Theory &amp; Design</td>
<td>The course introduces the fundamental principles of antenna theory, covering radiation integrals, auxiliary potential functions, fundamental parameters of antennas, linear wire antennas, loop antennas, antenna arrays, microstrip antennas, and traveling wave antennas. Antenna teaching lab will be developed to assist students to learn the design, fabrication, and characterization of various types antennas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEG4430</td>
<td>LE</td>
<td>Cyber Network Security</td>
<td>Focus on security vulnerabilities, threats, attacks, and mitigation solutions in the context of cyber networks. Topics include network traffic analysis, basic cryptography, protocol vulnerabilities, application vulnerabilities, secure networking protocols, malicious logs, firewalls, as well as the design and evaluation of intrusion detection systems.</td>
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</tr>
<tr>
<td>PHL6240</td>
<td>GR</td>
<td>Literature and Philos.</td>
<td>A study of literary texts with strong philosophical themes such as philosophy and tragedy or philosophy of science fiction.</td>
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</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
<td>Terms</td>
<td>Notes</td>
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<tr>
<td>NUR8815</td>
<td>Found Schlp of Hlthcare Systems Analysis</td>
<td>3</td>
<td>DNP foundational course with a focus on systems thinking, as well as relevant organizational and leadership theories to advance innovation and achieve sustainable change in contemporary health care settings to promote population health.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>MIS7200</td>
<td>IS Project Management</td>
<td>3</td>
<td>IS Project Management incorporates the knowledge, techniques, and tools necessary to manage the development of information systems projects. Leading edge tools, techniques, and concepts will be presented through case projects. This course has a fee that is non-refundable once the term begins.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>BIO4550L</td>
<td>Plant Systematics</td>
<td>3</td>
<td>Required laboratory for BIO 4550.</td>
<td>Fall 2020</td>
<td>UG LB Lab</td>
</tr>
<tr>
<td>EDS5900</td>
<td>Dyslexia</td>
<td>3</td>
<td>This introductory course will provide insight into dyslexia: history, theory, brain-based research, appropriate methodologies, applied techniques including instructional strategies, effective instruction, assistive technology, and an overall holistic understanding of learners with dyslexia.</td>
<td>Fall 2020</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>ATR3610</td>
<td>Asses Athletic Injury I</td>
<td>2</td>
<td>Assessment and skills for lower body athletic injuries/conditions of the physically active.</td>
<td>Fall 2020</td>
<td>UG LL Lecture/Lab Combination</td>
</tr>
<tr>
<td>LEP1020</td>
<td>Writing Workshop Level I</td>
<td>0</td>
<td>Writing workshop (revision, editing and lab) for beginning ESL students. This course has a fee that is non-refundable once the term begins.</td>
<td>Fall 2020</td>
<td>UG LL Lecture/Lab Combination</td>
</tr>
<tr>
<td>EE3320</td>
<td>Digital System Design</td>
<td>4</td>
<td>Basics of digital computer hardware and design. Topics include switching algebra and switching functions, logic design of combinational and sequential circuits, storage elements, register-level design, and instrumentation.</td>
<td>Fall 2020</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>BIO1050L</td>
<td>Biology of Food Lab</td>
<td>0</td>
<td>Required laboratory for BIO 1050.</td>
<td>Fall 2020</td>
<td>UG LB Lab</td>
</tr>
<tr>
<td>COM3490</td>
<td>Survey of Com Research</td>
<td>3</td>
<td>Introduction to the behavioral approach and current theories and experiments in communications research. Integrated Writing course.</td>
<td>Fall 2020</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>KNH1760B</td>
<td>Walk-Jog-Run</td>
<td>1</td>
<td>Fundamental skills and knowledge of Walk-Jog-Run. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>Fall 2020</td>
<td>UG LB Lab</td>
</tr>
<tr>
<td>BHE6980</td>
<td>Special Topics in BHE I</td>
<td>1</td>
<td>Graduate special topics in advanced industrial and human factors engineering. Topics vary.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>FAS2040</td>
<td>Intro Agronomy</td>
<td>3</td>
<td>Fundamentals of agronomic crop production, including crop biology and management, soils and soil-water management, tillage, seedling, plant breeding, seed and grain quality, and pest management.</td>
<td>Fall 2020</td>
<td>UG LL Lecture/Lab Combination</td>
</tr>
<tr>
<td>SCM7870</td>
<td>SC Py Mgt &amp; Transform</td>
<td>3</td>
<td>Planning, organizing and control or transformation projects in supply chains. Strategic role of supply chain projects, types and appropriate planning methods for supply chain projects, risk management, value considerations, project scheduling and resource management. This course has a fee that is non-refundable once the term begins.</td>
<td>Fall 2020</td>
<td>GR SE Seminar</td>
</tr>
<tr>
<td>KNH1670</td>
<td>Swimming: Intermediate</td>
<td>1</td>
<td>Intermediate level of skills and knowledge in Swimming: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>Fall 2020</td>
<td>UG LB Lab</td>
</tr>
<tr>
<td>CEG5110</td>
<td>Intro to Software Eng</td>
<td>3</td>
<td>Introduction to the concepts of Software Engineering. Software qualities, development life-cycle models, requirements analysis, semi-formal and formal systems modeling, system design, testing, and project management techniques. Case studies and a course project serve as examples illustrating the software engineering process.</td>
<td>Fall 2020</td>
<td>GE LE Lecture</td>
</tr>
<tr>
<td>PL54420</td>
<td>Criminal Justice System</td>
<td>3</td>
<td>Survey of the American criminal justice system concentrating on political aspects. Topics include police, judges, attorneys, supreme court decisions, crime, and public opinion.</td>
<td>Fall 2020</td>
<td>GE LE Lecture</td>
</tr>
<tr>
<td>ME3610</td>
<td>Comp Meth for Mech Eng</td>
<td>3</td>
<td>Combines material learned in statics, dynamics, thermodynamics, fluid mechanics, and heat transfer and applies them to the design of mechanical systems using numerical methods.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>GER4250</td>
<td>19th Cent German Prose</td>
<td>3</td>
<td>Readings and reports in 19th-century literature. Representative works of Eichendorff, Hoffmann, Keller, Meyer, Storm, Fontane, and others.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>STT3860</td>
<td>Ind Read Stat and Prob</td>
<td>1</td>
<td>Topics vary.</td>
<td>Fall 2020</td>
<td>UG IS Independent Study</td>
</tr>
<tr>
<td>CHI5250</td>
<td>Business Chinese</td>
<td>3</td>
<td>Introduces the language of business Chinese and explores China’s place in the global economy.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>PHY5710</td>
<td>Mechanics</td>
<td>3</td>
<td>Intermediate problems in statics, kinematics, and dynamics; the study of equilibrium of forces, rectilinear motion, curvilinear motion, central forces, constrained motion, energy and moments of inertia, and the Lagrange method.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>EDH150</td>
<td>Digital PD</td>
<td>3</td>
<td>Students will use elements of instructional design and storyboarding techniques to translate instruction into various types of multimedia professional development workshops.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>MBA5200</td>
<td>Survey of Economics</td>
<td>3</td>
<td>An introduction to economics. Provides students with models of reasoning regarding individual and business behavior and enhances students' ability to understand the aggregate economy and how it influences business decisions.</td>
<td>Fall 2020</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>MUE4930</td>
<td>University Men's Chorale</td>
<td>1</td>
<td>Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.</td>
<td>Fall 2020</td>
<td>UG LL Lecture/Lab Combination</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
<td>Department</td>
<td>Level</td>
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<tr>
<td>REL5750</td>
<td>New Testament Intro</td>
<td>3</td>
<td>Introduction to the literature, history, and religion of early Christianity.</td>
<td>REL</td>
<td>GR</td>
</tr>
<tr>
<td>EDS6220</td>
<td>Entwnt w/Jan ECIS/PIKSSN</td>
<td>3</td>
<td>Family partnerships and advocacy in early childhood special education and early intervention.</td>
<td>EDS</td>
<td>LE</td>
</tr>
<tr>
<td>SW4900</td>
<td>Social Work Research</td>
<td>3</td>
<td>Basic skills of quantitative and qualitative social research methodology and techniques of gathering, analyzing, and interpreting data. Evaluation of research reports for relevance to practice with at-risk populations.</td>
<td>SW</td>
<td>LE</td>
</tr>
<tr>
<td>BIO1080</td>
<td>Intro to Public Health</td>
<td>3</td>
<td>Concepts and practices in public health. Students will explore the history, purposes, structures, policies, and programs that contribute to the effort to create an environment that promotes healthful living, with application to domestic and international circumstances.</td>
<td>BIO</td>
<td>LE</td>
</tr>
<tr>
<td>PSY6100</td>
<td>Applied Psych Cpl</td>
<td>3</td>
<td>Writing and oral communication intensive seminar integrating knowledge on applied psychology. Topic will vary by title.</td>
<td>PSY</td>
<td>LE</td>
</tr>
<tr>
<td>MUS3280L</td>
<td>Adv Instrumental Cond Lab</td>
<td>3</td>
<td>Builds upon the previously conducted experiences and knowledge developed in MUS 3280.</td>
<td>MUS</td>
<td>LL</td>
</tr>
<tr>
<td>CEG970</td>
<td>Independent Study in CEG</td>
<td>1</td>
<td>Independent study in computer engineering topics.</td>
<td>CEG</td>
<td>IS</td>
</tr>
<tr>
<td>EDS280L</td>
<td>Intro Robotics Lab</td>
<td>3</td>
<td>Examines materials and trends to explain the nature of familiar materials of industrial importance.</td>
<td>EDS</td>
<td>LE</td>
</tr>
<tr>
<td>CHM1060</td>
<td>Chemistry: Materials</td>
<td>4</td>
<td>Laboratory supporting EE 6560. Students will experience hands on learning in lab environment.</td>
<td>CHM</td>
<td>LB</td>
</tr>
<tr>
<td>SOC200</td>
<td>Explore Social Problems</td>
<td>3</td>
<td>Focuses on specific social problems. Topics vary.</td>
<td>SOC</td>
<td>LE</td>
</tr>
<tr>
<td>PL3020</td>
<td>Intro to Comparative Pol</td>
<td>4</td>
<td>Examines differences among political systems, parliamentary and presidential, democratic and authoritarian, as well as regional differences in political economic development. Integrated Writing course.</td>
<td>PL</td>
<td>LE</td>
</tr>
<tr>
<td>ASL3010</td>
<td>Deaf Culture &amp; Community</td>
<td>1</td>
<td>Major concepts and issues in the field of deafness, integrating the disciplines of history, anthropology, linguistics, creative arts, and literature as they apply to deaf culture and the deaf community and the current cultural trends and issues.</td>
<td>ASL</td>
<td>LE</td>
</tr>
<tr>
<td>ANT7890</td>
<td>Continuing Registration</td>
<td>1</td>
<td>Continuing Registration</td>
<td>ANT</td>
<td>IS</td>
</tr>
<tr>
<td>BMB4870</td>
<td>BBM Sem with Dev Rich</td>
<td>4</td>
<td>Students will attend graduate students' presentations.</td>
<td>BMB</td>
<td>LE</td>
</tr>
<tr>
<td>MTH1450</td>
<td>Math and Modern World</td>
<td>3</td>
<td>An application of mathematics to modeling real world problems from the behavioral, computational, managerial, and social sciences. Includes topics such as probability, descriptive and inferential statistics, financial management, voting systems, codes and data storage.</td>
<td>MTH</td>
<td>LE</td>
</tr>
<tr>
<td>BME4940</td>
<td>Biomed Eng Internship I</td>
<td>1</td>
<td>Biomedical engineering internship course. Students are supervised via weekly seminars and regular feedback from employer. Must have completed all of the 3rd year courses as listed in the program guide. Minimum of 30 hours per week for each credit hour registered. A minimum total of 450 hours of work is required for 3 credits of technical elective credit.</td>
<td>BME</td>
<td>IN</td>
</tr>
<tr>
<td>BIO4020</td>
<td>Current Lit in Biology</td>
<td>3</td>
<td>Uses current research articles to develop critical thinking skills. Designed for advanced undergraduate or beginning graduate students. Integrated Writing course.</td>
<td>BIO</td>
<td>LE</td>
</tr>
<tr>
<td>PHY4600</td>
<td>Intro to Quantum Mechanics II</td>
<td>3</td>
<td>Mathematical structure of quantum mechanics. Applications to selected one- and three-dimensional problems will emphasize on atomic structure.</td>
<td>PHY</td>
<td>LE</td>
</tr>
<tr>
<td>CHM3510R</td>
<td>Physical Chin Lab I</td>
<td>1</td>
<td>Required instruction for 3510. Integrated Writing course.</td>
<td>CHM</td>
<td>RE</td>
</tr>
<tr>
<td>SW3750</td>
<td>Hum Behav Soc En -Macro</td>
<td>3</td>
<td>Analysis of groups, systems, and community organizations in order to guide assessment, intervention, and evaluation of social work practice. Includes theories such as systems theory, social justice, oppression, and basic human rights. Department Managed Prerequisite(s): Undergraduate level SW 3700 Minimum Grade of D-.&lt;br&gt;EDS 6200 Lecturer Lab Combination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM3520</td>
<td>Physical Chemistry II</td>
<td>3</td>
<td>Theoretical aspects of chemistry including quantum chemistry, spectroscopy and statistical mechanics.</td>
<td>CHM</td>
<td>LE</td>
</tr>
<tr>
<td>ENG3000</td>
<td>Enhancing Creativity</td>
<td>3</td>
<td>Cultural mythology about artists often blocks our creativity. This course helps students confront these myths, clear away blocks, and discover and recover their creativity.</td>
<td>ENG</td>
<td>LE</td>
</tr>
<tr>
<td>CEG5301L</td>
<td>Computer Organization Lab</td>
<td>3</td>
<td>Required laboratory for CEG 5300.</td>
<td>CEG</td>
<td>LB</td>
</tr>
<tr>
<td>KHS141B</td>
<td>Dance: Balloom</td>
<td>1</td>
<td>1140A Dance: Balloom Fundamentals and knowledge of Dance: Balloom. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>KHS</td>
<td>LB</td>
</tr>
<tr>
<td>KHS4111</td>
<td>Fitness Assessm &amp; Progres</td>
<td>3</td>
<td>Introduction to the administration and evaluation of a comprehensive fitness assessment emphasizing the interpretation of the fitness assessment in exercise program design. Integrated Writing course.</td>
<td>KHS</td>
<td>LL</td>
</tr>
<tr>
<td>PSY6410</td>
<td>Indus Psy Cap</td>
<td>3</td>
<td>Writing and oral communication intensive seminar integrating knowledge on Industrial Psychology.</td>
<td>PSY</td>
<td>LE</td>
</tr>
<tr>
<td>PL6270</td>
<td>Public Policy Analysis</td>
<td>3</td>
<td>Study of the policy development process and its relationship to past and current urban issues. Focuses on current urban issues through discussion, reading, and research.</td>
<td>PL</td>
<td>LE</td>
</tr>
<tr>
<td>GEO4440</td>
<td>Advanced GIS Apps</td>
<td>4</td>
<td>Advanced geo-spatial analysis techniques using ArcView and ArcGIS software. Use of GIS analysis and technology to describe spatial elements of public and private sector development issues and forecast change.</td>
<td>GEO</td>
<td>LE</td>
</tr>
<tr>
<td>SCM7920</td>
<td>SC Design &amp; Integration</td>
<td>3</td>
<td>Supply Chain Management Special attention will be given to integration of supply chain decisions and consequential difficulties. This course has a fee that is non-refundable once the term begins.</td>
<td>SCM</td>
<td>LE</td>
</tr>
<tr>
<td>HLT7121</td>
<td>Hum Gen for Hlt Profis</td>
<td>2</td>
<td>The course focuses on the advanced study of human genetics and genomics with implications for health care professionals. Description of mechanisms of inheritance and genetic diseases are described so that health professionals can recognize possible genetic or genomic abnormalities. They can make appropriate referrals, participate in genetic counseling and consider ethical and legal implications.</td>
<td>HLT</td>
<td>LE</td>
</tr>
<tr>
<td>ED6150</td>
<td>Grad Field Experience</td>
<td>1</td>
<td>Introduces students to the educational process through participation in a P-12 classroom and through an examination of classroom dynamics within a natural setting.</td>
<td>ED</td>
<td>PR</td>
</tr>
<tr>
<td>CS4840</td>
<td>Intro Machine Learning</td>
<td>3</td>
<td>Introduction to the field of probabilistic machine learning. Examples are drawn from sensor signal exploitation, biology, text processing, computer vision, and robotics. Key techniques are demonstrated and implemented in MATLAB.</td>
<td>CS</td>
<td>LE</td>
</tr>
</tbody>
</table>

Fall 2020
Supervised individual research on selected topics. Limited to students with minimum 3.0 GPA. Student must submit application for Independent Study to the Program Director at least 6 weeks prior to the start of the semester in which the independent study will be conducted. (Undergraduate level WGS 3600 Minimum Grade of C and Undergraduate level ENG 3520 Minimum Grade of C and Undergraduate level ENG 3550 Minimum Grade of C and Undergraduate level ENG 3570 Minimum Grade of C.)

WGS 4990 Independent Study WGS Women, Gender, and Sexuality 1 Supervised individual research on selected topics. Limited to students with minimum 3.0 GPA. Student must submit application for Independent Study to the Program Director at least 6 weeks prior to the start of the semester in which the independent study will be conducted. (Undergraduate level WGS 3600 Minimum Grade of C and Undergraduate level ENG 3520 Minimum Grade of C and Undergraduate level ENG 3550 Minimum Grade of C and Undergraduate level ENG 3570 Minimum Grade of C.)

CS 1150 Intro to Comp Sci Lab CS Computer Science 0 Required laboratory for CS 1150.

SLI 1300 Translation & Texts SLI Sign Language Interpreting 3 Analysis of spoken and signed texts for both meaning and form, comparing and contrasting the differences between ASL and English texts with an emphasis on discourse markers, register, topic shift, tense, pronoun minimization and affect.

ED 4990 Adv Art Exper in Ed: Cap ED Education 3 Synthesizes histories and experiences of African Americans and examines impacts on education. Implements reflection and synthesis to identify and mitigate personal and institutional bias. Discusses strategies that provide educational access for all students.

OHS 2180 Office Tech Trends OIS Office Information Systems Lab 3 Latest information on office systems and legislative updates that impact office support professionals.

SLI 4940 K-12 Education Practicum SLI Sign Language Interpreting 3 Supervised practicum experience in a K-12 educational setting. 150 hours minimum on-site placement hours.

PSI 4940 Advanced Group Therapy PSI Professional Psychology 3 Addresses practical and clinical aspects of conducting group therapy, with an emphasis on skill building, assessment techniques from the CORE-R Battery, and multicultural applications.

PHY 4910 Lasers PHY Physics 3 Introduction to the physics of lasers including emission and absorption processes in laser, the properties of optical resonators, and a survey of salient features for principal types of lasers.

REL 5760 Four Gospels REL Religion 3 Literary and historical study of the Four Gospels in the Christian Bible, aiming to discern their purposes in writing, recontextualize their communities, and reflect on the meaning of their presentation of Jesus. Some attention to the problem of the Historical Jesus.

SOC 3610 Sociology of Gender SOC Sociology 3 Examines how gender is created and negotiated across space and place. Also how gender and gender inequality intersect with other social constructs, such as race, social class, the media, culture, sexuality, work, family, and violence.

IT 2450 Concepts Environ Design IT Information Technology 3 Intro to environmental design and how design works cohesively with the environment.

MUS 6650 Computer App in Music MUS Music 3 Study of computer technology and music software applications. Emphasis is placed upon using MIDI for electronic score notation, sequencing, and basic scoreware design.

RBB 3640 Community Accessibility RBB Rehabilitation 3 Physical accessibility requirements and issues in the community based on title III of the Americans with Disabilities Act.

EDL 970 Admin Leadership in Comm EDL Educational Leadership 3 Focuses on the development of leadership skills in relation to individual and organizational communications, group processes, conflict management, decision making, and problem solving. Participants study and practice the principles of change.

SOC 2200 Social Problems SOC Sociology 3 Analyzes how social problems are identified, legitimated and addressed in contemporary society. Uses major theoretical perspectives to evaluate and analyze social problems, develops proposals for addressing them, and compares and contrasts social problems in cross-cultural context. Considers the impact of social structure on generating social problems and the role of social movements in constructing and resolving social problems.

KIN 4880 Independent Study KIN Kinesiology & Health 1 Independent reading, writing, and/or reporting in areas related to health, physical education, or recreation. Topics vary.

DAN 4120 Modern Dance IV DAN Dance 3 Advanced work in various modern dance techniques and styles.
Fall 2020 ME7250 7250 Advanced Dynamics ME Mechanical and Materials Eng 3 Fundamentals of analytical dynamics from different perspectives applicable to complex systems. Strengths and weaknesses of various approaches. Techniques such as variational principles and Hamiltonian formulations that are significant in various optimization problems. <b>Department Managed Prerequisite(s): Graduate level ME 6210 Minimum Grade of C or better</b> GR LE Lecture

Fall 2020 EC05690 5690 Insurance Basics Teachers ECO Center for Economic Educ. 2 This course is designed for teachers with minimal knowledge of insurance principles and to provide midlle- and high school teachers with sufficient knowledge to teach basic property and casualty insurance principles. Topics include property damage, home owners insurance, and term life insurance. This course has a fee that is non-refundable once the term begins. GR LL Lecture/Lab Combination

Fall 2020 CE03120 3120 Design of Info Tech Sys CEG Computer Engineering 3 Uses modern language features and software development practices to design and develop a distributed information technology system. <b>Department Managed Prerequisite(s): Undergraduate level CS 1181 Minimum Grade of D or better</b> EG LE Lecture

Fall 2020 CLS3300 5360 Ancient Literature CLS Classics 3 Offers variety of topics including drama, epic, and lyric poetry; prose; selected themes in ancient literature; and literary criticism. GR LE Lecture

Fall 2020 ED4330 4330 Soc Sids Meth for MCE ED Education 3 Focus on principles, trends, methods, resources, technology, critical thinking skills, historiography, and social science for middle level social studies classroom, grades 4-8. Includes development of appropriate objectives, planning, resources and facilities, evaluation, and trends. GR LE Lecture

Fall 2020 PHL7900 5900 Topics in Phil of Relig PHL Philosophy 3 Examination of selected topics related to the philosophy of religion. GR LE Lecture

Fall 2020 IBE7910 7910 MEIE Team Project I BIE Industrial & Ind Hum Fac Engr 3 First seminar of team project for Master in Engineering Innovation and Entrepreneurship program. Students identify, assess and prioritize innovation and entrepreneurship opportunities; form diverse multi-cultural teams with engineering and business expertise; interact with entrepreneurs; gain technical expertise; expand their understanding of the business environment. GR LE Lecture

Fall 2020 ENG6620 6620 Document Design ENG English 3 Instruction and experience in designing effective print and online documents. <b>Department Managed Prerequisite(s): Undergraduate level ENG 3610 Minimum Grade of D or Graduate level ENG 5610 Minimum Grade of D or better</b> GR LE Lecture

Fall 2020 MKT7900 7900 Internship in Marketing MKT Marketing 3 On the job training and experience with an organization. Integrates classroom study with practical work experience. GR IN Internship

Fall 2020 GEO04410 4410 Cartography GEO Geography 4 Basic concepts of cartography, including components of maps, coordinate systems, spatial projections, and map design. Special emphasis on data, computational methods and ethical cartographic practices. EG LE Lecture

Fall 2020 EE6550L 6550L IC Hardware Security&Trust Lab EE Electrical Engineering 1 Students learn to implement hardware security/trust detection methods using the techniques learned in class and implement countermeasures to improve trust for hardware IC systems through both ASIC and FPGA. Topics include the introduction of Xilinx Vivado and Cadence, and hardware Trojan detection in various techniques. <b>Department Managed Prerequisite(s): Undergraduate level EE 2000/L Minimum Grade of D or Undergraduate level EE 4540/L Minimum Grade of D or similar digital circuit design</b> GR LE Lecture

Fall 2020 BME2940 2940 Biodm Egr Internshp 2d Yr BME Biomedical Engineering 1 Biomedical engineering internship course. Students are supervised via weekly seminars and regular feedback from employer. Must have completed all of the 1st year courses as listed in the program guide. Minimum of 10 hours per week is required for each credit hour registered. EG IN Internship

Fall 2020 ME4250 4250 Kinematics & Design-Mech ME Mechanical and Materials Eng 3 Graphical, analytical, numerical, and symbolic techniques are used in the kinematic and dynamic analysis of machines. Computer-aided design of mechanisms is introduced. Emphasis on the application of these techniques to planar mechanisms. <b>Department Managed Prerequisite(s): Undergraduate level ME 2210 Minimum Grade of D or better</b> GR LE Lecture

Fall 2020 RUS1020 1020 Beginning Russian II RUS Russian 3 Communicative introduction to Russian language and culture. Study of vocabulary and structure of the Russian language; practice in speaking, listening, reading, and writing. Taught in Russian. <b>Department Managed Prerequisite(s): Undergraduate level RUS 1010 Minimum Grade of C or better</b> EG LE Lecture

Fall 2020 TH1440 1440 Acting I TH Theatre 3 Introduction to fundamental aspects of acting, including imagination, personification, pursuit of the objective, use of tactical choices and beginning use of text with introduction to script analysis. GR LL Lecture/Lab Combination

Fall 2020 PSY2110 2110 Human Sexuality PSY Psychology 3 Survey of the diversity of human sexual behavior including the psychological, physiological, social, and emotional basis of sexual behavior. UG LE Lecture

Fall 2020 CHM1210L 1210L General Chemistry Lab I CHM Chemistry 2 Examination of the principles of General Chemistry I through experimentation. UG LB Lab

Fall 2020 ED6100 6100 Math Instr for IA ED Education 3 An in-depth investigation of important elementary mathematical topics, focusing on content, pedagogy, and differentiation of instruction for all learners. GR LE Lecture

Fall 2020 MKT7850 7850 Special Topics in Mkt MKT Marketing 3 Seminars in marketing - related topics. GR LE Lecture

Fall 2020 HST7400 7400 Special Topics Seminar HST History 3 Examines special topics in the advanced study of history. Topics vary. GR SE Seminar

Fall 2020 REL5640 5640 Religion & Pol in Amer REL Religion 3 Examination of both the historical and the contemporary relation between religion and politics in America, with special reference to the legal principle of church/state separation. GR LE Lecture

Fall 2020 TH4570 4570 Singing Mus Theatre VII TH Theatre 2 Private singing lessons for Musical theatre. UG ST Studio

Fall 2020 REL5900 5900 Topics in Phil of Relig REL Religion 3 Examination of selected topics related to the philosophy of religion. GR LE Lecture

Fall 2020 EES5620 5620 General Environ Health EES Environmental Sciences 3 Relationship of physical/chemical/biotic environments to design/operation of systems and procedures employed in maintenance/promotion of quality, healthful human environments. Emphasized: food/dairy sanitation; solid waste; institutional: housing/recreational sanitation; and vector control. GR LE Lecture

Fall 2020 HST7450 7450 Seminar Gender History HST History 3 Gender as a tool of historical analysis. Topics may include masculinity, femininity, sexuality, family and women's history. Focus may be on one nation or region or on a comparative perspective. Topics vary. GR SE Seminar

Fall 2020 ECE4030 4030 ECE-Gen Effc Sce Instr ECE Education - Early Childhood 3 Methods for teaching middle level science pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula, and materials suitable for teaching fourth and fifth grade science education. GR LE Lecture

Fall 2020 URS7220 7220 MPA Directed Study URS Urban Affairs 3 If previous knowledge and/or experience in a selected core course is demonstrated, URS 7220 may be substituted for the selected core course.
Fall 2020
ENG7220  7220  Creative Process  ENG  English  3  Survey of the theoretical and practical aspects of literary creativity including such considerations as the creative imagination and writers' practice of their craft. Includes practice in the creation of original work.  GR  LE  Lecture
Fall 2020
PSY320  8320  Ecological Interface Des  PSY  Psychology  3  Examination of critical factors in the design of effective computer interfaces, including display, from a cognitive systems engineering and ecological interface design perspective. Design principles discussed include direct perception, direct manipulation, and visual momentum.  GR  SE  Seminar
Fall 2020
PSY3530L  3530L  Social Psychology Mth Lab  PSY  Psychology  0  Required laboratory for PSY 3530. Integrated Writing course.  UG  LE  Lab
Fall 2020
SL4560  4560  Legal Interpreting  SLI  Sign Language Interpreting  3  Introduces the American legal system and interpreting for the Deaf in that setting. Arrest, Miranda Warning, questioning, and court settings will be discussed including ethical issues and interpretation practice.  UG  LE  Lecture
Fall 2020
PHY1100  1110  Principles of Physics I  PHY  Physics  4  Fundamental physics of mechanics, topics include laws of motion, work and energy, momentum, circular and rotational motion, gravity, fluids, mechanical waves and thermodynamics  UG  LE  Lecture
Fall 2020
PSY6330  6330  Personal Psych Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on personality, including theory, research, and application.  GR  SE  Seminar
Fall 2020
RHH5010  5010  Med Aspect Disabilities  RHH  Rehabilitation  3  Study of medical terminology and disorders that usually require rehabilitation intervention. Additional topics include the impact of disabling conditions on vocational and social activities. Attention given to the pharmacological aspects of treating disabilities.  UG  LE  Lecture
Fall 2020
URS7050  7050  Quantitative Analysis  URS  Urban Affairs  3  Survey of the fundamental concepts for statistical analysis of public affairs research. Emphasis on characteristics of distributions and random variables, diagnostic techniques, the test of assumptions of such analysis and multiple and logistic regression.  GR  LE  Lecture
Fall 2020
CHM3510L  3510L  Physical Chim Lab I  CHM  Chemistry  2  Experimental methods of physical chemistry. Integrated Writing course.  UG  LB  Lab
Fall 2020
PTX8070  8070  Cell Culture Training  PTX  Pharmacology/Toxicology  1  This is a two day course that focuses on the introduction of the basic principal and techniques of cell culture. The course will cover cell culture definition, cell culture types, cell culture environment, cell culture wards and the protocols for cell culture techniques. In addition, there will be hands-on teaching of cell culture techniques which will include making cell culture medium, changing medium, thawing cells, sub-culturing cells and counting cell numbers.  GR  LE  Lecture
Fall 2020
EE3600  6400  Glacial Landforms  EES  Earth & Environmental Sciences  2  This is a field trip course examining the landforms, processes, and deposits associated with Pleistocene continental glaciation, as well as subsequent post-glacial modifications. The trip traverses from Dayton, Ohio, to the Finger lakes region of central New York.  GR  LL  Lecture/Lab Combination
Fall 2020
MTG7720  7720  Project Contract Mgt  MTG  Management  3  In today's complex world, large projects are typically carried out not by a single organization, but by teams of corporate entities. Such relationships are governed by contractual agreements, which affix the rights and responsibilities of the players involved. Topics include managing risk through contracting strategies, types of contracts, subcontractor management, training strategies, and negotiation strategy and tactics.  GR  LE  Lecture
Fall 2020
EE4130L  4130L  Control Systems Lab  EE  Electrical Engineering  1  Application and testing of control systems theory with electromechanical systems. <10> Department Managed Prerequisite(s): Undergraduate level EE 3210 Minimum Grade of C or Undergraduate level ME 3210 Minimum Grade of C or Undergraduate level MTH 3210 Minimum Grade of D or Undergraduate level EE 3510 Minimum Grade of C and Undergraduate level MTH 2240 Minimum Grade of D>=3=  UG  LB  Lab
Fall 2020
CS8940  8940  Res Research in Comp Sci  CS  Computer Science  1  Research on the Ph.D. dissertation topic taken in residence.  GR  IS  Independent Study
Fall 2020
DEV9990  9990  Basic Algebra Corr  DEV  Developmental Education  2  Continuation of DEV 0970 with intermediate algebra topics including: solving equations and inequalities, rational expressions, radicals, and quadratic equations. Grade of P in DEV 0970 and MPL of 23 or 24  UG  LL  Lecture/Lab Combination
Fall 2020
ATH6750  6750  Sem Archaeology Theory  ATH  Anthropology  3  Introduces students to the directions taken by archaeological theory during the past century through a sampling of the literature in a number of topical areas. Examines how both the questions asked and the answers found in archaeological data have changed over time.  GR  SE  Seminar
Fall 2020
KHN1560B  1560B  Soccer: Indoor  KHN  Kinesiology & Health  1  Fundamental skills and knowledge of Soccer: Indoor. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020
KHN1000A  1000A  Special Topics  KHN  Kinesiology & Health  1  Activity course for a variety of content areas  UG  LB  Lab
Fall 2020
LEP0030  0330  Grammar - Level 3  LEP  LEAP  0  Grammar for high-intermediate ESL students. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture
Fall 2020
EDL9140  9140  Adv Coaching Mentoring  EDL  Educational Leadership  3  Advanced studies in developing school leaders' essential knowledge, skills, and dispositions for effective coaching and mentoring focused on improving teaching and learning.  GR  LL  Lecture/Lab Combination
Fall 2020
SOP5740  5740  Penology and Corrections  SOC  Sociology  3  Historical development and critical assessment of penal institutions. Field visits to selected institutions.  GR  LE  Lecture
Fall 2020
ML340  340  Biological Safety  ML  Microbiology & Immunology  2  Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.  GR  LE  Lecture
Fall 2020
BIB07300  7300  Cell Biology  BIO  Biology  3  Topics include but not limited to a review of current understanding of the structure and function of cells, organelles and subcellular complexes.  GR  LE  Lecture
Fall 2020
CHM6370  6370  Electroanalytical Chem  CHM  Chemistry  2  Fundamental principles of electrochemistry and the application of electrochemical methods to chemistry and chemical analysis.  GR  LE  Lecture
Fall 2020
URS6960  6960  Transit Internship  URS  Urban Affairs  3  A one semester supervised internship of at least 300 hours in a selected public, nonprofit or public-service transit agency. Arranged in consultation with student's adviser or intern director.  GR  IN  Internship
Fall 2020
FR3210  3210  Writing in French  FR  French  3  Writing techniques and grammar review; emphasis on storytelling. Taught in French. Integrated Writing course.  UG  LE  Lecture
Fall 2020
HST2210  2210  American His Since 1877  HST  History  3  Thematic survey of events, forces, groups, and individuals that contributed to and helped to shape an American civilization on the North American continent, 1877 to the present.  GR  LE  Lecture
Fall 2020
CS1181L  1181L  Computer Science II Lab  CS  Computer Science  0  Required laboratory for CS 1181. Integrated Writing course.  UG  LB  Lab
Fall 2020
PLS619  619  PLS Internship  PLS  Political Science  3  Internship for academic credit. Interns are expected to work at least 12-15 hours per week and write an assessment of the experience at the end of the semester.  GR  IN  Internship
Fall 2020
ENG1020  1020  Basic Writing ESL  ENG  English  3  Basic course in written communication with an emphasis on grammatical structures and sentence and paragraph development. For non-native speakers of English only.  UG  LE  Lecture
Fall 2020  MTE6450  6450  Geometry Mid Schl Tchr  MTE  Mathematics Teacher Education  3  A study of two- and three-dimensional geometry appropriate for grade 4-10 teachers. Compass constructions, triangle congruence postulates, Pythagorean Theorem and proofs. Surface area and volume. Coordinate geometry applied to proofs and transformations.  GR  LL  Lecture/Lab Combination.

Fall 2020  ABS7300  7300  Studies in Spec Topics  ABS  Applied Behavioral Science  3  Study of specialized topics in the areas of criminal justice or social problems. Topics vary.  GR  LE  Lecture.

Fall 2020  KNIH270A  1270A  H2O Kickboxing  KNIH  Kinesiology & Health  1  Fundamental skills and knowledge of H2O Kickboxing. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab.

Fall 2020  BIO4460  4460  Advanced Cell Biology  BIO  Biology  3  Cell structure/function including the organization of the cell nucleus, DNA replication, multiple steps of gene expression, membrane composition and the importance of the cytoskeleton for cell motility, cell division and cell adhesion. Integrated Writing course.  UG  LE  Lecture.

Fall 2020  ME4770  4770  Mech. Behavior of Metals  ME  Mechanical and Materials Eng  3  Crystal plasticity and single crystal behavior. Introduction to dislocation theory. Strengthening mechanisms and polycrystalline behavior. Rotation to fracture, fatigue, and creep of metals. (>6) Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C and Undergraduate level ME 3120 Minimum Grade of D>=

Fall 2020  ECE3000  3000  Dev Effective Phil & App  ECE  Education - Early Childhood  3  Culturally responsive, developmentally and age appropriate practices based on a framework of theoretical research, current pedagogy for early childhood (birth-age-5) and alignment to state and national early childhood guidelines. Integrated Writing course.  UG  LE  Lecture.

Fall 2020  ME4121  4121  Industrial Controls  ME  Mechanical and Materials Eng  3  Wiring diagram creation, hardware selection, and programmable logic controller design and operation. (>6) Department Managed Prerequisite(s): Undergraduate level ECE 2170 Minimum Grade of D or Undergraduate level ME 1020 Minimum Grade of D>=

Fall 2020  MIL1022  1022  Intro Tac Ldrship Lab  MIL  Military Science  0  Application of techniques introduced Tactical Leadership course in cadet-led, cadre-supervised lab. Mandatory participation in weekly two-hour leadership lab, three physical fitness classes and weekend training exercises for all contracted cadets.  UG  LB  Lab.

Fall 2020  KNIH1570  1570  Soccer: Outdoor  KNIH  Kinesiology & Health  1  Fundamental skills and knowledge of Soccer: Outdoor. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab.

Fall 2020  STT4640  4640  Machine Learning  STT  Statistics  3  Statistical models and computational algorithms are used to perform machine learning. Topics include classification and regression trees, bagging and boosting, resampling methods, bootstrapping, regularization, splines, random forest, principal component analysis. Software used for this course includes R.  UG  LE  Lecture.

Fall 2020  PSY6110  6110  Positive Psy Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge within Positive Psychology.  GR  SE  Seminar.

Fall 2020  SOC4460  4460  Qualitative Methods  SOC  Sociology  3  Provides students with an appreciation of a variety of qualitative research techniques including interviews, focus groups, case studies, and observational research.  GR  LE  Lecture.

Fall 2020  ME2120R  2120R  Statics Recitation  ME  Mechanical and Materials Eng  0  Required recitation for ME 2120. (>6) Department Managed Prerequisite(s): Undergraduate level EGR 1010 Minimum Grade of D or Undergraduate level MTH 2310 Minimum Grade of D and Undergraduate level ME 1040 Minimum Grade of D and Undergraduate level PHY 2400 Minimum Grade of D>=

Fall 2020  BIO1060  1060  Global Eco and Diversity  BIO  Biology  4  Introduces non-science majors to global ecosystems, the biological principles and processes that have contributed to the diversity of species and natural processes and human actions that work together to shape the ecological balance of the earth. Laboratory topics include specification, macroevolution, adaptive radiation, symbiosis, biogeography, and the scientific management of modern biological resources. Three hours lecture, two hours lab.  UG  LE  Lecture.

Fall 2020  ED56460  6640  Practicum: IS M/I  EDS  Education - Special Education  2  Candidates, under the direct supervision of an experienced Intervention Specialist, are assigned to a school for field experience in grades K-12 special education.  GR  IN  Internship.

Fall 2020  PTX1000  8100  Med CHM/RAD NUC Defense  PTX  Pharmacology/Toxicology  3  This course will provide an understanding of the chemical, radiological, and nuclear threat, related toxicology/pathogenesis and medical intervention. The course will also introduce requirements for Government and Contract Research standards for working with highly toxic materials, study design, development, and execution to include issues with regard to Good Laboratory Practices, Institutional Animal Care and Use Committee, Quality Assurance, and safety pharmacology.  GR  LE  Lecture.

Fall 2020  ACC4420  4420  Govt Not Profit Account  ACC  Accountancy  3  Application of fund accounting concepts to governmental and not-for-profit entities. Includes accounting procedures and preparation of financial statements.  UG  LE  Lecture.

Fall 2020  NUR7114  7114  Nursing Elective  NUR  Nursing  1  Determined by the specific facility offering the elective. The purpose of the graduate nursing elective is to offer graduate students the opportunities that may include exploring specific topics in greater depth, experiencing different health systems around the world and developing new knowledge, skills and dispositions.  GR  LE  Lecture.

Fall 2020  ED56480  6641  Professional Seminar: MI  EDS  Education - Special Education  0.5  Seminar focus will prepare candidates for state licensure requirements. Topics include: planning for instruction and assessment, instruction and engaging learners, assessing learning, and creating a portfolio.  GR  SE  Seminar.

Fall 2020  KNIH1080B  1080B  Basketball  KNIH  Kinesiology & Health  1  Fundamental skills and knowledge of Basketball. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab.

Fall 2020  BMS7500  7500  Molecular Biotechnology I  BMS  Biomedical Sciences  3  Also listed as BMB 7500. Survey course emphasizing experimental and problem-solving approaches to understanding amino acids, protein structure, enzymes, nucleic acid structure and DNA replication.  GR  LE  Lecture.

Fall 2020  ME4360  4360  Pre-Internal Combustion  ME  Mechanical and Materials Eng  3  Thermodynamics of internal combustion engines, combustion thermodynamics, friction, heat and mass losses, and computer control of the modern fuel-injected internal combustion engine. (>6) Department Managed Prerequisite(s): Undergraduate level MTH 2330 Minimum Grade of D or Undergraduate level MTH 2550 Minimum Grade of D and Undergraduate level MTH 3200 Minimum Grade of D and Undergraduate level ME 3350 Minimum Grade of D>=

Fall 2020  MUE2500  2500  Symphonic Band  MUE  Music: Ensembles  1  Performs band music of all styles. Open to all students, each semester, with intermediate to advanced experience. Audition required.  UG  LL  Lecture/Lab Combination.

Fall 2020  CS8990  8990  Dissertation Defense  CS  Computer Science  1  Examination on the Ph.D. dissertation. The written dissertation is submitted and must be successfully defended in the oral exam that is conducted by the dissertation committee and open to the public.  GR  IS  Independent Study.
| Fall 2020 | ATH6600 | 6600 | African Oral Traditions | ATH | Anthropology | 3 | Study of oral traditions in Africa. Includes examples of oral traditions, oral history, societies with combinations of oral traditions and written history. Explores how oral traditions are generated, their contexts, and their significance for those who produce them. Lessons to be learned are not only about Africa, but are applicable to many situations beyond the continent of Africa. | GR | LE | Lecture |
| Fall 2020 | SLI4710 | 4710 | Variable Topics in SLI | SLI | Sign Language Interpreting | 1 | Selected topics in the areas of interpreting or deafness are addressed on a workshop or a one-time course basis. Subject matter and titles vary. | UG | LE | Lecture |
| Fall 2020 | MGIT4250 | 4250 | Comp & Benefits | MGIT | Management | 3 | Application of compensation and benefits theory to local small businesses, job analyses, job descriptions, wage and benefit surveys, market pricing, factor-job evaluations, graded salary structure, and related policies. Requires extensive group work. | UG | LE | Lecture |
| Fall 2020 | ARA3700 | 3700 | Internship in Arabic | ARA | Arabic | 1 Supervised use of Arabic in workplace settings. Must complete an application available from the Department of Modern Languages. Minimum 45 hours a semester for 1 credit, including at least 40 hours of on-site work. Senior standing and advisor permission required. | UG | IN | Internship |
| Fall 2020 | SM4990 | 4990 | ASK - Research | SM | Science and Mathematics | 1 | Students enrolled in the ASK Program in the College of Science and Mathematics actively perform hands-on research projects under the guidance of faculty mentors. Faculty mentors will guide teams of students through research projects, and assign grades to students on an individual basis. | UG | LB | Lab |
| Fall 2020 | BIO4080 | 4080 | Writing in the Bio Sci | BIO | Biology | 3 | Surveys grammatical and stylistic aspects of scientific writing and teaches students how to organize, write, and submit a manuscript for publication in a biological journal. Grant writing will also be discussed. Integrated Writing course. | LE | LE | Lecture |
| Fall 2020 | EDS4500 | 4500 | Independent Study in IS | EDS | Education - Special Education | 0.5 | Independent study in a selected area of special education. | IS | IS | Independent Study |
| Fall 2020 | ATH5200 | 5200 | Sp Topics in Cult Anth | ATH | Anthropology | 3 | Selected topics concerning the method and theory of anthropological thought and relationships to the allied disciplines of economics, linguistics, art, politics, and history. Emphasis on current trends influencing research in cultural anthropology. Topics vary. | GR | LE | Lecture |
| Fall 2020 | PSI8110L | 8110L | Cognitive Assessment Lab | PSI | Professional Psychology | 1 Lab provides hands-on learning of the cognitive and achievement measures taught in the course. | GR | LB | Lab |
| Fall 2020 | MUE2480 | 2480 | University Clarinet Choir | MUE | Music: Ensembles | 1 Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | MUS4200 | 4200 | Opera Production and Coaching | MUS | Music | 2 For advanced singers in the production of opera; culminates in public performance. Individual coaching for major role assignment. Study and involvement in technical areas of production: set design, building, properties, and costumes. May include participation in Dayton Opera productions. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | BIO4760 | 4760 | Hum Parasites & Mycology | BIO | Biology | 3 Surveys parasites of humans worldwide with emphasis on those that occur in North and Central America and Europe. Develops a working knowledge of the anatomy, life cycle and epidemiology of each parasite covered. Compares pathogenic and opportunistic fungal infections. The epidemiology, transmission, symptoms of human mycoses and identification of pathogenic fungal infections and the available treatments. | UG | LE | Lecture |
| Fall 2020 | CS4970 | 4970 | Independent Study | CS | Computer Science | 1 Independent study in computer science. | UG | IS | Independent Study |
| Fall 2020 | BMS6740 | 6740 | Advanced Stat Methods | BMS | Biomedical Sciences | 0.5 Practical, applied coverage of basic statistical principles and terminology, ANOVA, multiple and logistic regression, sample size issues and experimental design. Biomedical data examples, review of computer output and class exercises are provided. | GR | LE | Lecture |
| Fall 2020 | URS6300 | 6300 | Nonprofit Administration | URS | Urban Affairs | 3 Examines the organizational and managerial foundations of nonprofit organizations. Explores areas such as the nature and mission of nonprofit organizations, strategies for achieving the mission, roles involved, evaluating performance, resource development/fundraising, and managing volunteers. | GR | LE | Lecture |
| Fall 2020 | MTH7000 | 7000 | Prof Experience Grad Stu | MTH | Mathematics | 1 Participation in seminars related to teaching and research. | GR | SE | Seminar |
| Fall 2020 | RBH7700 | 7700 | Independent Reading | RBH | Rehabilitation | 1 Independent study in areas of interest to students but not readily available in any existing course. | GR | IS | Independent Study |
| Fall 2020 | BME3512L | 3512L | Bioelectronics II Laboratory | BME | Biomedical Engineering | 0 Required laboratory for BME 3512. | UG | LB | Lab |
| Fall 2020 | EE4470 | 4470 | Antenna Theory & Design | EE | Electrical Engineering | 3 Linear dipole antennas, antenna arrays, thin-wire antennas, moment method analysis examples (vee dipole, folded dipole, etc.), and broadband and frequency-independent antennas. Computer-aided design and analysis of wire antennas, feed networks, and antenna arrays using antenna CAD software. | UG | LE | Lecture |
| Fall 2020 | RBH0700 | 0700 | Biopsychosocial Aspects | RBH | Rehabilitation | 3 Discovery and understanding of biological, psychological, social and spiritual processes associated with addictions. Identification and implementation of current assessment and intervention strategies utilized in the planning and treatment of addictions are addressed. | GR | LE | Lecture |
| Fall 2020 | M&I4260 | 4260 | Immunology | M&I | Microbiology & Immunology | 3 Principles of basic immunology. Cellular and soluble factors associated with innate and adaptive immunity. Examines functions of phagocytes, natural killer (NK) cells, B cells, and T cells. | UG | LE | Lecture |
| Fall 2020 | EC7120 | 7120 | Economic Forecasting | EC | Economics | 3 Techniques and theories used in forecasting. Practical methods and problems are stressed. | GR | LE | Lecture |
| Fall 2020 | SW7660 | 7660 | SW Field Ed Seminar III | SW | Social Work | 1 Integrates the Field Education III experiences and coursework. Offered concurrently with advanced generalist fieldwork and competencies. | GR | SE | Seminar |
| Fall 2020 | IB4780 | 4780 | Hon. Ind Study in IB | IB | International Business | 3 Explores an area of particular interest in international business. Student, faculty member, chair, and Director of University Honors will agree on course objectives, methodology, timeline, output medium, and evaluation criteria. | IG | IS | Independent Study |
| Fall 2020 | ME4700 | 4700 | Struc&Prop of Mat. II | ME | Mechanical and Materials Engr | 3 This course covers the fundamental phenomena that control the thermal, optical, electrical and magnetic properties in solid-state materials. Includes Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C and Undergraduate level MTH 2320 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D>/>= | UG | LE | Lecture |
Fall 2020
CS4000 4000 Social Implications Comp CS Computer Science 3 Impact of computers and computing on society. Topics include privacy, dangers introduced by computers performing critical tasks, the effect of robots on the work force, the impact of computers on education, and the new legal issues introduced by computing. Integrated Writing course: <b>UG</b> Department Managed Prerequisite(s): Undergraduate level EGR 3350 Minimum Grade of D<b>/GR</b> LE Lecture

Fall 2020
NUR7523 7523 Ped. CNS II Practicum NUR Nursing 6 Focus is on models of practice in providing health care to infants, children and adolescents within the full scope of advanced practice (orthopedic, common minor health problems, and acute and chronic illness). Expansion and utilization of expert knowledge as a pediatric clinical nurse specialist to develop a programmatic approach to promoting health of individuals, families and groups/communities. Factors influencing role development will be addressed. <b>UG</b> LE Lecture

Fall 2020
KNH4450 4450 Checkpoint 3 KNH Kinesiology & Health 1 Monitors and supports the professional progress of health and physical education licensure students. Enhances the BPR teacher candidate's preparation for Praxis II exams, student teaching and career development. <b>UG</b> LE Lecture

Fall 2020
MI6200 6200 Neuronal-Immune Sys Homeostasis MIA Microbiology & Immunology 3 Multidirectional interactions between the nervous and immune systems have been documented in homeostasis and pathologies ranging from multiple sclerosis to autism, and from leukemia to acute and chronic inflammation. This course focuses on neuro-immune interactions at barrier surfaces—mostly the gut, but also including the skin and the airways, areas densely populated by neurons and immune cells that constantly sense and adapt to tissue-specific environmental challenges. <b>GR</b> LE Lecture

Fall 2020
PHY4940 4940 Senior Project PHY Physics 3 Selected problems in experimental and theoretical physics with critical analysis of results. Integrated Writing course. <b>UG</b> IS Independent Study Option

Fall 2020
BME3520 3520 Microcomputers for BME BMIE Biomedical Engineering 4 Principles, hardware structure, and programming techniques of microprocessors, microcomputers and microcontrollers. Applications of microcomputers and microcontrollers in health care, rehabilitation and medical research. <b>UG</b> LE Lecture

Fall 2020
PHL5510 5510 Scientific Revolutions PHL Philosophy 3 A look at dramatic paradigm shifts in the history of science including Newton, Einstein, Darwin, quantum theory and emerging ideas today. <b>GR</b> LE Lecture

Fall 2020
PHY6810 6810 Electromag. Theory - I PHY Physics 4 Electromagnetic field theory emphasizing static and time dependent fields, field sources, and boundary value problems using advanced mathematical techniques. <b>GR</b> LE Lecture

Fall 2020
EES3230 3230 Intro to the Ocean EES Earth & Environmental Sciences 3 Fundamental principles and processes of oceanography for students with background in geology. Emphasizes topics of interest to Earth Science teachers. <b>UG</b> LE Lecture

Fall 2020
URS4270 4270 Public Policy Analysis URS Urban Affairs 3 Study of the policy development process and its relationship to past and current urban issues. <b>UG</b> LE Lecture

Fall 2020
FAS2120 2120 Food Proc Unit Op Lab FAS Food and Agricultural Systems 1 Investigation of the effects of food processing variables on food properties and quality during processing. <b>UG</b> LB Lab

Fall 2020
ART3170 3170 Non-Western Art ART Art 3 General surveys and intensive studies of periods, major movements, and artists in non-Western art. Integrated Writing course: <b>GR</b> Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D<b>/UG</b> Lecture

Fall 2020
BMB3990 3990 UG Teaching Assistant BMB Biochem & Molecular Biology 1 Supervised experience in preparing materials and apparatus for laboratory sessions and/or facilitation of teaching in biochemistry and molecular biology laboratories. Students will work with faculty on a regularly scheduled basis to develop the practices and skills associated with laboratory/classroom teaching responsibility and assist in teaching the laboratory/course. Students must have already passed the course for which they wish to be a teaching assistant. <b>UG</b> IS Independent Study

Fall 2020
CS8900 8900 Special Topics in CS CS Computer Science 1 Special topics in computer science. <b>GR</b> LE Lecture

Fall 2020
PSY6510 6510 Cross-Cal Psy Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on Cross-Cultural Psychology. Explores national differences in perception, cognition, and self-concept as well as in personality dynamics and interpersonal interactions, and addresses the challenges of globalization. <b>GR</b> SE Seminar

Fall 2020
MUS3300 3300 Choral Music Ed Meth II MUS Music 1 This course is designed to enable the choral music education student to be successful as a teacher/conductor at all levels, with a primary focus on the junior/senior high school. <b>UG</b> LE Lecture

Fall 2020
ARA5210 5210 Adv ARA Syntax & Gramr I ARA Arabic 3 A course based in western approaches to Arabic morphology and grammar, designed to prepare students to engage primary texts, both modern and classical <b>GR</b> Department Managed Prerequisite(s): Undergraduate level ARA 2020 Minimum Grade of D<b>/UG</b> LE Lecture

Fall 2020
PSY3910 3910 Behavioral Neurosci I PSY Psychology 3 Physiological mechanisms of behavior. Basic neuroanatomy and neurophysiology, neuronal development and function, psychopathology, reproduction, learning, sleep, and stress. <b>UG</b> LE Lecture

Fall 2020
BMB4950 4950 Biochem Honors Research BMB Biochem & Molecular Biology 3 Research experience with a biochemistry and molecular biology faculty member towards the completion of a departmental honors degree. <b>UG</b> IS Independent Study

Fall 2020
ATH3010 3010 Peoples/Cultures Africa ATH Anthropology 3 Introduction to the diverse, complex and fascinating peoples of sub-Saharan Africa. Particular attention is paid to connections between communities, regions and between Africa and the rest of the world. <b>UG</b> LE Lecture

Fall 2020
ANT4110 4110 Comprehensive Exam ANT Anatomy 4 Integrates general principles and concepts of the following systems: cardiovascular, gastrointestinal, lymphatic, nervous, respiratory, endocrine, integumentary, muscular, reproductive, and urinary. Knowledge is assessed by an oral examination before a faculty review committee. Graded pass/fail. <b>GR</b> IS Independent Study

Fall 2020
STT4920 4920 Undergrad Statistics Sem STT Statistics 3 Detailed study of a single statistics topic chosen by the student with the approval of the instructor. Integrated Writing course. <b>UG</b> SI Seminar

Fall 2020
EDL6630 6630 Principal Program Exit EDL Educational Leadership 1 Focusing on understanding current building-level leadership concepts, topics, and issues within the context of the school organization. <b>GR</b> SE Seminar

Fall 2020
EE7610 7610 Random Processes EE Electrical Engineering 3 Probability and random variable, distributions and density functions, random processes, strict-sense and wide-sense stationarity, auto-correlation and power spectral density, ergodicity, response of linear systems with stochastic inputs, discrete linear models, and Gaussian processes. <b>GR</b> LE Lecture

Fall 2020
ED7450 7450 Content Literacies K-12 ED Education 3 Exploration of content area learning with an emphasis on effective literacy strategies including vocabulary/concept development, comprehension, writing, technology, and resources to enhance literacy learning for diverse learners in grades K-12. <b>GR</b> LL Lecture/Lab Combination
Fall 2020  
EDL7750  7750  Init Ldrs Hip & Change  
EDL  Educational Leadership  3  
Strategies for developing, maintaining continual improvement processes using systems planning, instructional data, evaluation of improvement plans and communication of planning and improvement with all stakeholders.  
GR  LE  Lecture  
Fall 2020  
TH5180  3580  Singing Mas Theatre VI  
TH  Theatre  2  
Private singing lessons for musical theatre.  
UG  ST  Studio  
Fall 2020  
ART3010  3010  Independent Study in Art  
ART  Art  1  
Special studies and intensive individual work with faculty supervision.  
UG  IS  Independent Study  
Fall 2020  
PHY2400L  2400L  General Physics I Lab  
PHY  Physics  1  
Introductory physics laboratory problems in mechanics, oscillation and thermodynamics.  
UG  LB  Lab  
Fall 2020  
HST4800  6800  Comparative History  
HST  History  3  
Compares developments or movements in different parts of the world and/or different times in history such as revolutions, slave systems, religious movements, genocide, or other human experiences that transcend a particular time or place. Topics vary.  
GR  LE  Lecture  
Fall 2020  
ART3490  3490  Intermediate Painting II  
ART  Art  3  
Emphasis on principles of pictorial organization. Attention to the relationship of subject matter and abstraction as related to contemporary and traditional approaches. This course has a fee that is non-refundable once the term begins.  
UG  LB  Lab  
Fall 2020  
EE7900  7900  Independent Study in EE  
EE  Electrical Engineering  1  
Individual studies in advanced engineering topics. Titles vary.  
GR  IS  Independent Study  
Fall 2020  
WGS3800  3800  Selected Subjects  
WGS  Women, Gender, and Sexuality  3  
Issues, approaches, and topics in women's studies. Topics vary.  
UG  LE  Lecture  
Fall 2020  
TTW6480  6480  TTW Int. Voc Sped  
TTW  Transition to Work  1  
Students assigned to an experienced vocational special educator in the field for observing, discussing, researching, and practicing skills in the area of vocational special education, particularly those related to transition of individuals with disabilities.  
GR  IN  Internship  
Fall 2020  
CHM1010  1010  Chemistry: Living Things  
CHM  Chemistry  4  
Principles of covariant bonding, structures, and reactions of molecules important to living things, with attention to related technological, regulatory, and social issues.  
UG  LE  Lecture  
Fall 2020  
SRV2000  2000  Engaged Citizenship  
SRV  Service Learning  3  
Rights, privileges and responsibilities of citizenship in our democracy and the world. Develops skills for engaged citizenship through community-based activities and service-learning projects. Integrated Writing course.  
UG  LL  Lecture/Lab Combination  
Fall 2020  
SW6410  6410  Con Foc Area F&C Pract  
SW  Social Work  3  
Focus area course related to families and children. Provides the knowledge, skills, and values needed for advanced generalist social workers to engage, assess, intervene, and evaluate direct practice with children and families. Includes DSM and other diagnostic tools that apply to children and families. Discussion of clinical interventions with children and families.  
GR  LE  Lecture  
Fall 2020  
EDL7645  7645  Action Research for Tch Ldrs  
EDL  Educational Leadership  3  
This course employs action research techniques and processes to lead fellow educators in schools, emphasizing reflective practices, basic quantitative and qualitative data analysis techniques for leading instruction, and making data-driven decisions.  
GR  SE  Seminar  
Fall 2020  
BME7132  7132  Computed Tomography  
BME  Biomedical Engineering  3  
Principles of generating images from projections. Discussion of specific problems like beam hardening, scatter, metal artifacts, etc. Focus on quantitative imaging in medical applications.  
GR  LE  Lecture  
Fall 2020  
REL5620  5620  New Religious Movements  
REL  Religion  3  
Examines a variety of new religious movements in America, including Shakers, Mormons, Seventh-Day Adventists, Jehovah's Witnesses, and Christian Scientists.  
GR  LE  Lecture  
Fall 2020  
ME6540  6540  Solar Thermal Engr  
ME  Mechanical and Materials Engr  3  
Fundamentals of solar radiation and how it can be utilized as thermal energy source. Solar insulation on a surface, flat plate collectors, concentrating collectors, thermal energy storage, and solar hot water heating will be discussed.  
GR  LE  Lecture  
Fall 2020  
EES6050  6050  Earth Sci Concept for Ed Ldrs  
EES  Earth & Environmental Sciences  3.5  
This course is an introductory survey of the earth sciences, from rocks and minerals, through plate tectonics, geologic time, oceanography and meteorology, to planetary science. Lecture is interspersed with hands-on activities intended to reinforce concepts and to provide the students with ideas for teaching their own classes. Students will also develop lesson plans on several topics.  
GR  LL  Lecture/Lab Combination  
Fall 2020  
PHL5800  5800  Ident. Responses Death  
PHL  Philosophy  3  
Study of fundamental beliefs in thinking ethically: that a person exists as one person over time; that we are responsible for at least some of what we do; and that death is bad for the people who dies.  
GR  LE  Lecture  
Fall 2020  
KIN2450  2450  Checkpoint 1  
KINH  Kinesiology & Health  1  
Introduction to rehabilitation science concepts and procedures.  
UG  LE  Lecture  
Fall 2020  
PHL5130  5130  Metaphysics  
PHL  Philosophy  3  
An examination of topics such as: the problem of universals, free will and determinism, the nature of abstract entities like numbers, the problem of identity and individuation, the nature of time and cause and effect and the realism and anti-realism debate.  
GR  LE  Lecture  
Fall 2020  
MUE2940  2940  University Women's Choral  
MUE  Music: Ensembles  1  
Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.  
UG  LL  Lecture/Lab Combination  
Fall 2020  
BME1110L  1110L  Fundamentals of BIE Lab  
BME  Biomedical Engineering  0  
Required laboratory for BME 1110.  
UG  LB  Lab  
Fall 2020  
CHM1220R  1220R  General Chemistry Lab II  
CHM  Chemistry  0  
Required tutorial for CHM 1220.  
UG  RE  Recitation  
Fall 2020  
PLS5430  5430  Civil Liberties II  
PLS  Political Science  3  
Covers cases and related materials on the Bill of Rights and the Fourteenth Amendment. Emphasis on the First Amendment freedoms concerning on enforcement of civil rights and liberties under the Bill of Rights and the Fourteenth Amendment.  
GR  LE  Lecture  
Fall 2020  
SOC4091  4091  Studies in Selected Subj  
SOC  Sociology  1  
Problems, approaches, and topics in the field of sociology. Topics vary. Credits will not be awarded for repetition of course with identical topic titles. Integrated Writing course.  
UG  LE  Lecture  
Fall 2020  
CNL9520  9520  Diagnosis Clin Prac  
CNL  Counseling  3  
Clinical course designed to introduce the student to comprehensive diagnostic evaluation. Students will gain familiarity with the DSM nomenclature via assigned readings, case studies and assignments.  
GR  LE  Lecture
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**Fall 2020**
- **MIL3010** 2020: Adaptive Team Leadership  
  Application of fundamentals of Army leadership, officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. Students must fully participate in all ROTC activities.  
  - UG  
- **DEV0450** 2020: Found Quant Reasoning  
  Review of basic arithmetic and algebra concepts and skills including numbers and the number line, operations on numbers, equations, graphing points and lines in two dimensions, and reading tables and graphs and approximating areas. The context and examples will be from quantitative reasoning (statistics, number sense, functions). The content will be delivered to provide “just in time” remediation for MTH 1450. This course is taught as a co-requisite course for MTH 1450.  
  - UG  
- **SOC3320** 2020: Sociology of Work  
  Investigation, analysis, and discussion of contemporary issues focusing on the relationship of the individual to work.  
  - UG  
- **MTH3320** 2020: Complex Variables  
  Operations with complex numbers, derivatives, holomorphic functions and the Cauchy-Riemann equations.  
  - UG  
- **ME4850** 2020: Nano-scale Sci and Engr  
  Introduction to nano-scale science and engineering in terms of the nano-scale building blocks (emphasizing carbon based nano-species), the characterization techniques (emphasizing Raman Spectroscopy), and the nano-phenomena such as thermal, optical, electrical, chemical, and mechanical phenomena observed on the nano-scale.  
  - UG  
- **CNL7230** 2020: Asaes & Eval in Counsl  
  Explores best practice and use of instruments used in counseling assessment and evaluation. Additional topics include statistical concepts, reliability, validity, ethical applications, social cultural factors.  
  - GR  
- **CEG3520L** 2020: Digital System Design Lab  
  Required laboratory for CEG 5320.  
  - GR  
- **EES4320** 2020: Ecol Microbiology  
  Examines interactions of microorganisms with abiotic resources to affect natural and human-created systems, drawing on tools from microbiology, aquatic chemistry, soil science, limnology and oceanography, analytical chemistry, ecolog, geology, and biochemistry.  
  - UG  
- **BIO2110** 2020: Molecular Bio & Genetics  
  Transmission, molecular and population genetics. Gene structure, allelic segregation, genic interactions, the regulation of gene expression and the genetic structure of populations.  
  - UG  
- **COM1520** 2020: Mass Comm Communications  
  Study of mass media functions, industries, and effects to help students become more critical mass media users and consumers.  
  - GR  
- **ACC3020** 2020: Intermediate Acc II  
  Financial accounting concepts applied to complex measurement problems and the preparation of financial statements.  
  - UG  
- **EDL9130** 2020: Adv Thea Ldr Seminar  
  Advanced studies regarding critical topics and current issues relevant to the development of classroom teachers as school leaders.  
  - GR  
- **ITL7890** 2020: Intl Contin Registration  
  International students in graduate programs requiring a thesis or dissertation and who have completed all degree requirements may register for ITL 789. This course is not graded and does not carry a tuition charge.  
  - GR  
- **DAN1250** 2020: Jazz Dance for Actor II  
  Continued exploration of fundamental jazz dance technique to develop potential in creative movement, increase musical awareness, and improve professional audition skills for theatre-related activities.  
  - GR  
- **ENG5650** 2020: Ila Capstone  
  Study of the integration and pedagogy of reading, writing, listening, speaking, viewing, and visually representing.  
  - GR  
- **DAN3230** 2020: Musical Theatre Dance II  
  Group class applies ballet, jazz, and modern dance techniques to Musical Theatre dance.  
  - GR  
- **BHE3771** 2020: Fail Analysis Med Device  
  Failure modes of medical devices. Common medical devices such as total joint replacement implants, fixation plates and screws, intermedullary nails, pace makers, other implantable products. Procedures to conduct failure cause investigations within the guidelines developed by regulatory agencies.  
  - GR  
- **MKT7870** 2020: Ind. Studies in Market  
  A research project in marketing supervised by a faculty member in the Department of Marketing.  
  - GR  
- **TH2290** 2020: Fabrc, Dye Modifica  
  Basic techniques of dying and modifying fabric. Includes aging and distressing of costumes.  
  - GR  
- **ANT3100** 2020: Human Structure Func I  
  Anatomical terminology and the characteristics, maintenance and basis of life. Structure of cells emphasizing function. Body systems including integumentary system, skeletal system and articulations, nervous system, special senses and muscular system. Laboratory exercises use human donors.  
  - GR  
- **MTH4240** 2020: Coding Theory  
  Essentials of error-correcting codes, including methods for efficient and accurate transfer of information. Perfect and related codes, linear and cyclic codes, BCH codes, Reed-Muller codes, Reed-Solomon codes, Self-dual codes, weight enumerators and bounds.  
  - GR  
- **SOC3600** 2020: Social Inequality  
  Structures, theories and consequences of social inequality. This course explores the patterns of inequality, as well as early and contemporary theories of stratification.  
  - GR  
- **BSE4330** 2020: Egs in Occup Shy & Hbh  
  Discussions and demonstrates the role and responsibility of engineers in occupational safety and health-related issues. Focuses on human factors engineering design principles as a proactive approach for controlling occupational injuries.  
  - GR  
- **CHM4540** 2020: Self Topics in Organic  
  Selected topics in the field of organic chemistry, such as organic spectroscopy, heterocyclic chemistry, organometallic chemistry, and the chemistry of natural products.  
  - GR  
- **EC3260** 2020: Econ Poverty & Discrim  
  Analysis of economic causes, effects, and cures for poverty and discrimination. Study of trends, economic explanations, and current programs and legislation.  
  - GR
Fall 2020  EES6530  6530  Diagenesis of Sed Rocks  EES  Earth & Environmental Sciences  4  An introduction to the diagenesis of ancient and modern sedimentary rocks. Topics include the theory and application of petrographic techniques with emphasis on porosity development and interpretation of diagenetic environments. Four hours lecture/lab combination.

Fall 2020  PN7760  7760  Intercellular Comm  PN  Physiology & Neuroscience  3  Introduces the concepts of intercellular communication through an interdisciplinary presentation of immune and neuroendocrine system functions. Emphasizes the simulation between the systems and the multidisciplinary approaches used to study each.

Fall 2020  SOM706  706  Year 1 Medical Study  SOM  School of Medicine  24  

Fall 2020  ART2580  2580  Intro to Digital Photo  ART  Art  3  Exploration of black and white photographic materials and camera techniques. Investigation of aesthetic possibilities of the medium. Development of personal concepts and aesthetic expression in photography. This course has a fee of $400, which is non-refundable after the term begins.<br>

Fall 2020  PSY3020L  3020L  Research Methods Psy II Lab  PSY  Psychology  0  Required laboratory for PSY 3020L.

Fall 2020  SPN3250  3250  Business Spanish I  SPN  Spanish  3  An introduction to the language of business Spanish with insight into Spain and Latin America within the global economy. Integrated writing course.<br>

Fall 2020  KCHI1770  1770  Water Safety Instruction  KCHI  Kinesiology & Health  1  National American Red Cross standards training for teaching American Red Cross Swimming and Diving and Water Safety courses.

Fall 2020  ECE4650  4650  Support Struggling Edrs Issues in City, Reg,&Org Plan  ECE  Education - Early Childhood  3  Study of assessments, reading strategies, reading materials and techniques needed to assist struggling readers.

Fall 2020  URS4500  4500  Issues in City, Reg,&Org Plan  URS  Urban Affairs  3  Issues related to planning city, regional, and organizational environments. Topics include housing, growth and regionalism.

Fall 2020  ANT7550  7550  Practicum Literature Review  ANT  Anatomy  3  Students will independently create the document, with input from a faculty mentor who will guide the development of the outline and provide feedback on drafts of the individual sections. The final complete document will be reviewed and feedback will be provided by a committee of three faculty, including the mentor. The student will have the opportunity to rewrite, after which the committee will grade the final document.<br>

Fall 2020  CS3800  3800  Web Development II  CS  Computer Science  3  Focuses on server side web development. Topics include creation of dynamic web pages, processing form data, database design and interaction, managing cookies and sessions, and security. Students will use a current server-side language such as PHP and a database management system such as MySQL.

Fall 2020  PTX8140  8140  Human Studies Research  PTX  Pharmacology/Toxicology  3  All research projects that involve human subjects require review and approval at the institutional level for both regulations covering human subjects research and/or regulations under HIPAA (Health Insurance Portability and Accessibility Act). A well-crafted research proposal makes completion of the review process at each institution easier. In this class we will develop a petition, complete CITI training, and engage in dialogue on the topic.

Fall 2020  MUS4160  4160  Piano Pedagogy  MUS  Music  3  Offers a historical overview of keyboard pedagogy and examines anthologies, collections, and studies written for piano students at various performance levels.

Fall 2020  DAN3420  3420  Choreography II  DAN  Dance  2  Application of compositional concepts and principles of choreography. Solo studies, small group choreography and improvisation culminating in a final choreographic junior piece. Emphasis on written and verbal analysis of the process of creating dance.

Fall 2020  EES3990  3990  Problems Earth & Env Sci  EES  Earth & Environmental Sciences  0.5  Research and problems designed for undergraduate students at the junior level. May be taken for a letter grade or pass/unsatisfactory.

Fall 2020  ASL3200  3200  Advanced ASL II  ASL  American Sign Language  4  Continual vocabulary and sentence structure acquisition, and comparing ASL and more English based signing vocabulary to increase vocabulary use, comprehension and communication fluency.

Fall 2020  NUR7302  7302  Hum Res Mgmt Nsg Admin  NUR  Nursing  3  Analysis of human resource management in healthcare organizations. Specific application is made to the nursing administration role.

Fall 2020  ED7020  7020  Prac/Prac/Learn - 4-5  ED  Education  3  This course expands the Early Childhood educator's understanding of the development of the young child in pre-adolescence and aligns developmentally appropriate pedagogical strategies and practices for effective teaching and learning.

Fall 2020  MUE4660  4660  Univ Saxophone Quartet  MUE  Music: Ensembles  1  Performs saxophone quartet repertoire ranging from classic to jazz to contemporary. Audition required.

Fall 2020  FR6530  6530  Post Revolution Poetry  FR  French  3  Romantics, symbolists, decadents, and surrealists, including Baudelaire, Rimbaud, Verlaine, Mallarmé, Apollinaire and Prévert. Taught in French.<br>

Fall 2020  PLS4170  4170  Moot Court  PLS  Political Science  3  Politics in the appellate courts and simulated appeals arguments in a moot court setting. Integrated Writing course.

Fall 2020  ED7470  7470  Reading Recovery  ED  Education  6  Teachers learn to apply Marie Clay's theory of literacy processing while teaching Reading Recovery students. Key concepts include targeted instruction through assessment, the reciprocity of reading and writing, and teaching for accelerated learning.

Fall 2020  MUE4020  4020  Vocal Jazz Ensemble  MUE  Music: Ensembles  1  Development of performance skills in vocal jazz. Emphasis on jazz style and techniques, improvisation, and jazz theory. Audition required.

Fall 2020  FIN4120  4120  Fixed Income Sec. Analys  FIN  Finance  3  Introduction to the valuation of fixed income securities and the management of fixed income investment portfolios.

Fall 2020  ME5600L  5600L  Exp. Maj. and Instr. Lab ME  Mechanical and Materials Engr  0  Required laboratory for ME 5600.
<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Lecture/Lab Combination</th>
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<td>REL2070</td>
<td>Western Religions</td>
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<td>CHM4170</td>
<td>Applied Chemical Spectrology</td>
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<td>Cortical Visc Processes</td>
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<td>OIS Office Information Systems</td>
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<td>Army Fitness Training</td>
<td>KNEH Kinesiology &amp; Health</td>
<td>Lab</td>
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<td>DOS Doctor Org Studies</td>
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<td>Philosophy of Mind</td>
<td>PHIL Philosophy</td>
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<td>Dance Kinesiology</td>
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<td>Studies 20th Century Art</td>
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<td>Applied Elem Ger Instr</td>
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<td>LAW3000</td>
<td>Legal Env of Business</td>
<td>LAW Law</td>
<td>Lecture</td>
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Fall 2020
STT 6660 6660 Statistical Methods I  STT Statistics 4 Simple linear regression and correlation analysis. Concepts of matrix algebra, the matrix approach for regression and multiple regression. The general linear model: An introduction to generalized linear models. Single factor analysis of variance and multiple comparisons. Nonparametric methods. Statistical software packages will be used. <b>Department Managed Prerequisite(s): Undergraduate level MTH 2530 Minimum Grade of D and Undergraduate level STT 2640 Minimum Grade of D or Undergraduate level STT 3610 Minimum Grade of D;</b> <br>UG LE Lecture
Fall 2020
PLS 4819 4819 PLS Internship  PLS Political Science 3 Internships for academic credit. Interns are expected to work at least 12-15 hours per week and write an assessment of the experience at the end of the semester. <br>UG IN Internship
Fall 2020
TH 2190 2190 Stage Lighting I  TH Theatre 3 Introduction to the principles, theories and mechanics of theatrical lighting design includes instruments, control, dimming, basic electricity and lighting paperwork. <br>UG LL Lecture/Lab Combination
Fall 2020
EDL 7140 7140 Context of Education  EDL Educational Leadership 3 Emphasizes the evolution of theories and the laws that underlie the free compulsory educational system as well as the organization, control, and support by the public of the educational system. <br>UG LE Lecture
Fall 2020
TH 2220 2220 Theatre Production  TH Theatre 1 Practical experience in technical theatre serving on run crew for theatre department productions. For non-design Technology majors. <br>UG PR Practicum
Fall 2020
DMV 9999 9999 For Administrative Use Only  DMV DMV Consortium 0 <br>GR OT Other
Fall 2020
LAT 2020 2020 Intermediate Latin II  LAT Latin 3 Review of essentials and reading for comprehension in selected authors. <br>UG LE Lecture
Fall 2020
KNIH 1540A 1540A Self Defense for Women  KNIH Kinesiology & Health 1 Fundamental skills and knowledge of Self Defense for Women. Competency-based approach. Course may accommodate disabled students when appropriate. <br>UG LB Lab
Fall 2020
EE 5320 5320 Digital System Design  EE Electrical Engineering 4 Basics of Digital Computer Hardware and Design. Topics include switching algebra and switching functions, logic design of combinational and sequential circuits, storage elements, register-level design, and instrumentation. <br>GR LE Lecture
Fall 2020
DAN 3210 3210 Jazz/Theatre Dance III  DAN Dance 2 Diversified styles and techniques of jazz/musical theatre dancing. Emphasis on continued development of intricate rhythms, sophisticated syncopation, complex coordination, musicality, and variation of style. Focus on increasing body strength, flexibility, and kinesthetic awareness within the jazz idiom. <br>UG LL Lecture/Lab Combination
Fall 2020
ENG 4980 4980 English Honors Tutorial  ENG English 1 Two-semester sequence for senior English majors who are doing an English honors project. <b>Department Managed Prerequisite(s): Undergraduate level ENG 3680 Minimum Grade of C;</b> <br>UG IS Independent Study
Fall 2020
MUE 4920 4920 Vocal Jazz Ensemble  MUE Music: Ensembles 1 Development of performance skills in vocal jazz. Emphasis on jazz style and techniques, improvisation, and jazz theory. Audition required. <br>UG LL Lecture/Lab Combination
Fall 2020
SLI 4700 4700 Specialized Interpret II  SLI Sign Language Interpreting 3 Skills and vocabulary essential for settings such as legal, technical, government, theater and business. Emphasis on acquisition of specific terminology, concepts, protocol with ethical and legal ramifications of each area. <br>UG LE Lecture
Fall 2020
ENG 7990 7990 Thesis  ENG English 3 To be arranged with the Director of Graduate Studies. Students will be allowed a maximum of three hours thesis credit toward the degree. <br>GR IS Independent Study
Fall 2020
MKT 3100 3100 Con & Org Buyer Behavior  MKT Marketing 3 Examines psychological, economic, societal and cultural influences on consumer decisions. Explores the nature and scope of industrial or business-to-business marketing. Differentiation between consumer industrial marketing in project management, pricing and promotion and distribution. <br>UG LE Lecture
Fall 2020
PSY 1040 6040 Independent Reading  PSY Psychology 1 Specific topics selected by student and instructor. Graded pass/unsatisfactory. <br>GR IS Independent Study
Fall 2020
PSY 4960 4960 Fetal Behavior Capstone  PSY Psychology 3 Communication-intensive seminar integrating knowledge on fetal behavior including both normal and abnormal (teratological) development. Integrated Writing course. <br>UG SE Seminar
Fall 2020
PLS 2120 2120 American National Government  PLS Political Science 3 Introductory survey of American national government and politics including study of political participation, interest groups, political parties, leadership, mass media, elections and campaigns, the Constitution, presidency, Congress, bureaucracy, and the courts. <br>UG LE Lecture
Fall 2020
KNIH 2500 2500 Basic Anatomy Physiology  KNIH Kinesiology & Health 4 Study of anatomy and physiology correlating both structure and function of the human body. <br>UG LL Lecture/Lab Combination
Fall 2020
BMB 7890 7890 Continuing Registration  BMB Biochem & Molecular Biology 1 Continuing registration for advanced degree. <br>GR IS Independent Study
Fall 2020
PPH 7420 7420 Health Program Plan & E  PPH Population & Public Health 3 This course develops a depth of health education knowledge and skills for planning, implementing, and evaluating community health education programs. Awareness, behavioral, social, environmental, and policy type interventions will be discussed. <b>Department Managed Prerequisite(s): Graduate level PPH 6400 Minimum Grade of D;</b> <br>UG LE Lecture
Fall 2020
GER 4420 4420 Hat German Lang  GER German 3 History of the German language from the age of migration to the present. Linguistic and social history of the German language and Swiss and Austrian variations. <b>Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D and Undergraduate level GER 3210 Minimum Grade of D;</b> <br>UG LE Lecture
Fall 2020
NUR 8835 8835 Sys App & Asly Meth DNP  NUR Nursing 3 Use health care system analysis and appraisal to evaluate system problems, evidence and opportunities to optimize population care. Application of ERP and BI processes to support change in systems to promote population health. Uses appropriate databases to identify project literature/evidence. <br>UG LE Lecture
Fall 2020
MGT 7510 7510 Applied Lif Dev  MGT Management 3 This course focuses on the development of leadership skills for managing problems in organizations. Multiple perspectives are used to enhance understanding of the course concepts—leading oneself, leading individuals, leading teams and the organizational context of leadership. <br>UG LE Lecture
Fall 2020
CEG 3410 3410 Intro Digital Forensics  CEG Computer Engineering 3 Students build a body of knowledge in digital forensics in both computers and networks by incrementally seeking answers to fundamental questions including i) where to collect digital materials, ii) how to collect them, iii) how to interpret and use them, and iv) how to actively design new mechanisms to facilitate forensics. Students will develop practical skills by using various forensics analysis tools. <br>UG LE Lecture
Fall 2020
BMB 4700 4700 Molecular Biology of RNA  BMB Biochem & Molecular Biology 3 A comprehensive introduction to the diversity of RNA molecules and their biological functions with an emphasis on how cellular processes are regulated by RNA. <br>UG LE Lecture
Fall 2020

PHL2050 2050 Philosophy: Big Questions  PHL  Philosophy 3  Introduction to philosophy through the exploration and critical examination of some of the following perennial, philosophical questions: Does God exist? Are we free? What is happiness? Why be ethical? What is knowledge? What is the meaning of life? Integrated Writing course.

Fall 2020

SPN2520 5250 Business Spanish I  SPN  Spanish 3  An introduction to the language of business Spanish with insight into Spain and Latin America within the global economy.

Fall 2020

PPH8110 8110 Public Health APE  PPH  Population & Public Health 1  This applied practice experience is a supervised applied public health learning experience in which students work within a community organization to support public health efforts that are meaningful to the organization.

Fall 2020

FR6920 6920 Free Occupation Films  FR  French 3  Analysis of films made during and after the Occupation of France, such as L'Oréal de Vichy, Le Dernier Metro, Lacombe Lucien, L'Anatre des Ombres, Au revoir les enfants, etc. Department Managed Prerequisite(s): (Graduate level FR 5210 Minimum Grade of C or Graduate level FR 5220 Minimum Grade of C) or Department Managed Corequisite(s): 4020 LE Lecture

Fall 2020

PSY2130 2130 Psy Principles in Films  PSY  Psychology 3  Studies principles of psychology and their application through commercial films.

Fall 2020

KNSH1960A 1960A Yoga  KNSH  Kinesiology & Health 1  Fundamental skills and knowledge of Yoga. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020

ENG3500 3500 Language for Teachers  ENG  English 3  Introduction to language acquisition, linguistics, language diversity, grammar, and sentence structure with an emphasis on pedagogy.

Fall 2020

SW3800 3800 Social Work Practice I  SW  Social Work 3  Focus on ethics and an introduction to practice skills. Field observation required to apply skills related to ethics, rapport building, interviewing techniques, and bio-psycho-social assessment. Integrated Writing course.

Fall 2020

ENG7420 7420 Select Visual Art Cap  PSY  Psychology 3  Communication-intensive seminar integrating knowledge on selective visual attention.

Fall 2020

ASI4020 4020 Communication Variations  ASL  American Sign Language 3  Exploration of the range of registers and signing styles of deaf persons depending on factors including age, experience, education, race, socio-economic level, degree of hearing loss.

Fall 2020

CHM7460 7460 Elements Org Reaction  CHM  Chemistry 2  Discussion of the more important organic reactions including major authors and graphs and approximating areas. The context and examples will be from statistics. The content will be delivered to provide "just in time" remediation for STT 1600.

Fall 2020

ASL4010 4010 Introduction to ASL  ASL  American Sign Language 3  An intensive study of literary theory in order to develop an understanding of critical questions and approaches. Integrated Writing course.

Fall 2020

ATM3600 3600 Special Topics in ATM  ATH  Anthropology 3  Survey of various specialized aspects of archaeology.

Fall 2020

EE35450 45450 Petroleum Geology  EES  Earth & Environmental Sciences 3  Integrated Writing course.

Fall 2020

PTX7200 7200 Biokinetics/Biodynamics  PTX  Pharmacology/Toxiology 3  The course will track the absorption, distribution, inactivation and elimination of drugs and toxins. It will also present the principles of drug/toxin actions which underly their observed effects.

Fall 2020

MBAS5000 5000 Survey of Finance  MBA  MBA 3  Theories, concepts, and techniques of financial management. Designed for student with previous work in financial management and for those with a need to review the basic techniques.

Fall 2020

ATH3110 3110 Forensic Anthropology  ATH  Anthropology 3  Survey of scientific identification of human remains in forensic contexts. Students learn to assess age, sex, stature, and other features of the skeleton and recover critical evidence from crime scenes including time of death and trauma.

Fall 2020

P&N5101 5101 Sal Trends in Physiology  P&N  Physiology & Neuroscience 1  A selected area of physiology is discussed in greater detail than in basic physiology courses. Some topics may include laboratory.

Fall 2020

BIM06020 6020 Research Perspectives  BMB  Biochem & Molecular Biology 3  Lecture/research course to acquaint new graduate students with the research being carried out by the faculty in the Biochemistry and Molecular Biology program.

Fall 2020

ED7850 7850 Act Research Adv Studies  ED  Education 3  Course provides introduction to teacher-based action research. Students learn: types of research, types of data, research methodologies, data analyses, and data interpretation within the context of education.

Fall 2020

BIE9090 9090 Non-Distressed Research in BIE  BIE  Industrial & Hum Fac Engr 1  Ph.D. Non-Dissertation Research in Industrial and Human Factors Engineering.

Fall 2020

EDT7220 7220 SLM Resources for Child  EDT  Educational Technology 3  Developing school library collections for children. Introduction to children literature including major authors and illustrators. Selecting materials in different formats such as multimedia, e-books, and reference databases.

Fall 2020

DEV9600 9600 Found for Stat Concepts  DEV  Developmental Education 2  Review of basic arithmetic and algebra concepts and skills including numbers and the number line, operations on numbers, sets, equations and inequalities, graphing points and lines in two dimensions, and graphs and approximating areas. The context and examples will be from statistics. The content will be delivered to provide "just in time" remediation for SFT 1600.

Fall 2020

REL2040 2040 Bible, Qur'an & West Cyl  REL  Religion 3  Introduction to the textual formation, early historical development, and influence of Judaism, Christianity, and Islam. Integrated Writing course.

Fall 2020

EE5030 5030 Circuit Analysis II  EE  Electrical Engineering 3  Circuit review, alternating current concepts, computer-aided circuit analysis, two-port networks, power.
Fall 2020
EE6540  6540  VLSI Design  EE  Electrical Engineering  3  (Also listed as CEG 654.) Introduction to VLSI system design. Topics include CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processing and design rules, chip planning and layout, system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI.  GR  LE  Lecture

Fall 2020
EDS6990  6990  Prof & Ethics in Sp Ed  EDS  Education - Special Education  3  Exploration of the Special Education Professional Practice Standards and ethical responsibilities of intervention specialists in relation to individuals with exceptionalities and their families as well as employment within the profession.  GR  SE  Seminar

Fall 2020
ED6330  6330  MCE Soc. Studies C & M  ED  Education  3  Course focuses on principles, trends, resources, technology, critical-thinking skills, historiography, and social science research for middle school social studies. This course will also focus on teaching in the multicultural classroom.  GR  LE  Lecture

Fall 2020
PPH100  8100  Crit Thinking in Pub Hlt  PPH  Population & Public Health  1  This course is designed to assist students in developing the skills and knowledge needed to be successful in the MPH program. Students will meet every other week, have weekly assignments, and will write a concept paper based on a public health issue.  GR  LE  Lecture

Fall 2020
ED4510  4510  AYA ILA Methods  ED  Education  3  Provides developing professional educators with advanced discussion and practice in the teaching/learning of grades 7-12 language arts.  UG  LE  Lecture

Fall 2020
PLS7790  7790  Practicum  PLS  Political Science  1  Field experience for students in selected settings. Jointly supervised by faculty and on-site personnel.  GR  PR  Practicum

Fall 2020
ISM500  8500  Special Topics  ISM  Intermedia. Appl. Sci. and Math  1  Selected topics in interdisciplinary applied sciences and mathematics. Content developed by instructor is to be at a level of rigor appropriate for a Ph.D. level student. The student is expected to be able to demonstrate via work products a significant increase in understanding of the special topic.  GR  LE  Lecture

Fall 2020
URS4480  4480  Public Works  URS  Urban Affairs  3  Community infrastructure with an emphasis on capital improvement programming. Community development of street, water, and sewer systems, solid waste management, and code enforcement.  UG  LE  Lecture

Fall 2020
SOC3210  5320  Sociology of Work  SOC  Sociology  3  A comprehensive examination of victims of crime in both the United States and internationally. Also explores the role and impact of the criminal justice system on crime victims.  GR  LE  Lecture

Fall 2020
SOC4710  4710  Victimology  SOC  Sociology  3  Overview of principles related to developing and managing public and human service transportation systems. Examination of the role of public and human service transportation in society, history and geography of public transportation, and spatial, funding, organizational, cost benefit, labor, and customer service issues.  UG  LE  Lecture

Fall 2020
SOC4300  4300  Intl Migration & Intgrtn  SOC  Sociology  3  Examines the dynamics of international migration and immigration, immigrant adaptation and incorporation, and the U.S. response to immigration.  UG  LE  Lecture

Fall 2020
EES4760  4760  Air Quality Management  EES  Earth & Environmental Sciences  3  Atmospheric pollutants, dispersion, health and welfare effects, air-quality monitoring, source control, regulation, and indoor air pollution.  GR  LE  Lecture

Fall 2020
CEG6424  6424  Security Attacks & Def  CEG  Computer Engineering  3  This course presents the principles behind techniques of attacks and their defenses. It introduces reconnaissance, penetration, denial of service, and covert channels. Topics include Privilege Escalation, Hijacking, Trusted booting, Packet filtering, Protocol scrubbing and Honeytops. Lab work uses tools such as Metasploit.  GR  LE  Lecture

Fall 2020
IT3450  3450  Altern Media Platforms  IT  Information Technology  3  In this project based course, students will use Adobe Photoshop, Adobe Animate, Autodesk Maya, Superflip, and augmented reality to create animated 3D promotional material on a printed lenticular platform and augmented reality on mobile devices.  UG  LE  Lecture

Fall 2020
EC4550  4550  Comparative Capital Inst  EC  Economics  3  Compares institutions of various capitalist and socialist economies including economies in transition. Comparative analysis provides a basis for evaluating government policy.  GR  LE  Lecture

Fall 2020
MUE4700  4700  Univ Symphony Orchestra  MUE  Music: Ensembles  1  Performs orchestral music of all styles and periods.  UG  LL  Lecture/Lab Combination

Fall 2020
CS1020  1020  Intro to Microsoft Excel  CS  Computer Science  1  This course focuses on learning MS Excel software applications using a case study approach where critical thinking and problem solving skills are required. File Management and the basics of Microsoft Office 2010 will also be discussed.  GR  LE  Lecture

Fall 2020

Fall 2020
EC3252  3250  ECE Field Experience II  ECE  Education - Early Childhood  1  Candidates, mentored by an early childhood educator, assist in the planning, organizing, delivering, and assessing of instruction in a 1st-3rd grade setting increasingly applying pedagogical content knowledge from early childhood methods courses.  UG  PR  Practicum

Fall 2020
WGS4700  4700  Feminist Research Method  WGS  Women, Gender, and Sexuality  3  Examines feminist methodologies and methods of research with emphasis on qualitative inquiry and/or mixed methods. Students with credit for WMS 4790 cannot receive credit for WGS 4700.  GR  LE  Lecture

Fall 2020
EE2011L  2011L  Analog Circuit Techniques Lab  EE  Electrical Engineering  1  Computer-assisted analysis, RLC circuits, operational amplifiers and circuits, Thévenin and Norton equivalents, maximum power transfer, and AC networks. Intended for BSECET majors. May not be taken for credit if students have taken EE 2011L.  UG  LB  Lab

Fall 2020
PSY2003  2003  PSY Elective Topics  PSY  Psychology  1  A variable elective topic in psychology. Topics vary.  UG  LE  Lecture

Fall 2020
ICE7500  7500  Dev App Assessment  ICE  Education - Early Childhood  3  Assessment and evaluation of infants through age 8, and the use of assessment data to inform decision making.  GR  LE  Lecture
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<td>Phys Ed II: Math MA/CIS</td>
<td>6510</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>RST2710</td>
<td>Regional Studies: Africa</td>
<td>2710</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY7505</td>
<td>Cognition</td>
<td>7050</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
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<tr>
<td>PPL3900</td>
<td>Topics in Phil of Rel</td>
<td>3900</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
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<tr>
<td>SPN5900</td>
<td>Foreign Lang Institute</td>
<td>5900</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>BEO2310</td>
<td>Evolution and Ecology</td>
<td>2310</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>MUE2440</td>
<td>University Brass Ensemble</td>
<td>2440</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>ATH5000</td>
<td>Culture/Native North Am</td>
<td>5000</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>URS6450</td>
<td>Community Development</td>
<td>6450</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>ME3610</td>
<td>Mech Test &amp; Metal Lab</td>
<td>3610</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
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<tr>
<td>MLB4010</td>
<td>Topics in Med Lab Sci</td>
<td>4010</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>BHE7810</td>
<td>Engr Health Sys</td>
<td>7810</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
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<td>Lecture</td>
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<tr>
<td>KSN670B</td>
<td>Swimming: Intermediate</td>
<td>1670B</td>
<td>Department Managed Prerequisites(s): Undergraduate level ME 1030 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D=/?</td>
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<tr>
<td>Course Code</td>
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<td>Course Title</td>
<td>Department</td>
<td>Lecturer</td>
<td>Prerequisites</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>EES6990 Spec. Probs Earth Env Sci</td>
<td>EES</td>
<td>IS</td>
<td>Sewer System Design and Analysis. Students must have passed environmental science.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>0.5</td>
<td>EES6990 Spec. Probs Earth Env Sci</td>
<td>EES</td>
<td>IS</td>
<td>Environmental Science. Students must have passed environmental science.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td></td>
<td>PSY6420 Organizational Psy Cap</td>
<td>PSY</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>Fall 2020</td>
<td></td>
<td>CSD2370 CSD Practicum I</td>
<td>CSD</td>
<td>PR</td>
<td>Practicum</td>
</tr>
<tr>
<td>Fall 2020</td>
<td></td>
<td>CSD2370 CSD Practicum I</td>
<td>CSD</td>
<td>PR</td>
<td>Practicum</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>PSY2160 Counseling Psychology</td>
<td>PSY</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>BME4440 Biometrics</td>
<td>BME</td>
<td>UG</td>
<td>Biomechanical Engineering</td>
</tr>
<tr>
<td>Fall 2020</td>
<td></td>
<td>CSD3240 Strategic Mgt Health Admin</td>
<td>CSD</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>MUA2210 Applied Music</td>
<td>MUA</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>Fall 2020</td>
<td></td>
<td>URS6480 Public Works</td>
<td>URS</td>
<td>LE</td>
<td>Internship</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>CS1900 Internship</td>
<td>CS</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>EIDL7100 Educational Leadership</td>
<td>EDL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>BIO4200 Designing Biological Exp</td>
<td>BIO</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>MUA4420 Applied Music</td>
<td>MUA</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>ES7140 Environmental Statistics</td>
<td>ES</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>EDSS6710 Practicum: IS M/M</td>
<td>EDS</td>
<td>IN</td>
<td>Internship</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>ECO5170 Eco Applica Internet I</td>
<td>ECO</td>
<td>LE</td>
<td>Lecture; Lab Combination</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>GE04500 Sens. in Urban Geography</td>
<td>GEO</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>BMS7770 Gene Therapy</td>
<td>BMS</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>PN6550 Neuro-Glia Biology &amp; Disease</td>
<td>PN</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>IS1980 Special Topics in ISE I</td>
<td>IS</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>ART5388 Photography</td>
<td>ART</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>SLL1560 Signing Exact English</td>
<td>SLL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>PSY8250 Attention</td>
<td>PSY</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>PSY9971 Practicum I</td>
<td>PSI</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>Fall 2020</td>
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<td>CEG4450 Sensor Net and Systems</td>
<td>CEG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>BHE7980 Special Topics in HBE II</td>
<td>BHE</td>
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<tr>
<td>Fall 2020</td>
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<td>FAS3510 Intro Animal Health Phys</td>
<td>FAS</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
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<td>PHA8000 Prim Biomedical Research</td>
<td>PHA</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td></td>
<td>BMB7270 Proteins and Enzymes</td>
<td>BMB</td>
<td>LE</td>
<td>Lecture</td>
</tr>
</tbody>
</table>
Fall 2020  EES4440  4440  Well Log Analysis  EES  Earth & Environmental Sciences  3  Theory, application, and interpretation of geophysical logs emphasizing their use in correlation and determination of porosity, permeability, and fluid content of subsurface formations.  UG  LE  Lecture
Fall 2020  PHY6630  6630  Intro to Sol. State Phys  PHY  Physics  3  Selected properties of solids and their quantitative explanation in terms of simple physical models. Applications of quantum mechanics to solids.  3 hours lecture, 1 hour recitation.  GR  LE  Lecture
Fall 2020  EE7810  7810  Embedded Systems  EE  Electrical Engineering  3  Study special-purpose computing systems. Topics include system architecture, embedded processors, field programmable gate arrays, hardware software co-design, real-time scheduling, and real-time operating systems.  GR  LE  Lecture
Fall 2020  ART2140  2140  Themes in Visual Culture  ART  Art  3  Introduction to the visual arts focusing on selected major works of art throughout history. Discusses comparisons across time, basic art media, and the formal characteristics of art.  UG  LE  Lecture
Fall 2020  STT4440  7440  Multivariate Analysis  STT  Statistics  3  Matrix theory, multivariate distributions, likelihood ratio tests, MANOVA, principal component and factor analysis, canonical correlation analysis, finite mixture models and the EM algorithm, and classification techniques.  GR  LE  Lecture
Fall 2020  SA44100  4100  Spec Topics Res Life  SAA  Student Affairs in Higher Ed  1  Topics related to the training of Residence Life staff and student leaders.  UG  LE  Lecture
Fall 2020  M&I5710  7310  Virology  M&I  Microbiology & Immunology  3  This course provides an introduction to the field of virology. The course emphasizes the intrinsic properties of viruses that cause human disease and their interaction with cells, multiplication, genetics, and tumor induction.  GR  LE  Lecture
Fall 2020  URS2000  2000  Cities of the World  URS  Urban Affairs  3  Interdisciplinary view of growth and change in urban societies around the globe. Case studies illustrate how urbanization, technology development and the administrative state interwine and affect economic and population growth and change. Integrated Writing course.  UG  LE  Lecture
Fall 2020  BIO3120L  3120L  General Microbiology  BIO  Biology  0  Required laboratory for BIO 3120.  GR  LB  Lab
Fall 2020  SW7240  7240  Agency Administration  SW  Social Work  0  Teaches advanced generalist social work direct practice skills with communities and organizations. Skills applied during stages of social work intervention: Engagement, Assessment, Intervention, and Evaluation. Content includes community organization, locality development, advocacy, legislative policy change, and grant writing to support funding of social service organizations.  GR  LE  Lecture
Fall 2020  PLS4620  4620  US-India-Pak-Afghan Rel  PLS  Political Science  3  United States relations with India, Pakistan and Afghanistan. Integrated Writing course.  UG  SE  Seminar
Fall 2020  CHM2110R  2110R  Organic Chemistry I  CHM  Chemistry  0  Required recitation for CHM 2110.  UG  RE  Recitation
Fall 2020  ARA3210  3210  Adv ARA Syntax & Gramm  ARA  Arabic  3  A course based in western approaches to Arabic morphology and grammar, designed to prepare students to engage primary texts, both modern and classical.  GR  LE  Lecture
Fall 2020  PLS6510  6510  Contemp African Politics  PLS  Political Science  3  Political processes and governmental institutions of sub-Saharan Africa; special attention to dynamics of political development and socioeconomic change. Comparative analysis of selected African political systems.  GR  LE  Lecture
Fall 2020  EES4460  4460  Sequence Stratigraphy  EES  Earth & Environmental Sciences  3  Examines the mechanisms that produce sea-level change, how sediments respond to changes in sea-level, and how the architecture of basins may be assessed using the sequence stratigraphic model. Topics include the scales of stratigraphic cycles, seismic applications and outcrop scale high resolution sequence stratigraphy.  GR  LE  Lecture
Fall 2020  ATH9110  3910  Internship-Anthropology  ATH  Anthropology  3  Directed and supervised experience in an employment setting relevant to one of the major subdisciplines in anthropology. Must be preauthorized with student's faculty advisor. Minimum GPA of 3.0, and Junior or Senior standing required.  GR  IN  Internship
Fall 2020  ED2510  2510  Text Analys of Lit for MCE  ED  Education  3  Understanding strategies for reading, interpreting, and analyzing informational, persuasive, and literary texts.  UG  LE  Lecture
Fall 2020  TH2200  2200  Stagecraft  TH  Theatre  3  In-depth study of scenic technology and its techniques. Advanced scenery construction and materials, metalworking: motorized scenery; stage rigging and its equipment; and First Aid and CPR.  UG  LE  LectureLab  Combination
Fall 2020  ATH5710  5710  Ethnographic Methods  ATH  Anthropology  3  Explores the meaning, scope and dilemma of ethnography using both a hands-on ethnographic project and a wide array of readings.  GR  LE  Lecture
Fall 2020  ED6130  6130  Reading Recovery I  ED  Education  3  Teachers learn to apply Marie Clay's theory of literacy processing while teaching Reading Recovery students. Includes problem solving, and student presentations.  GR  LE  Lecture
Fall 2020  PSY7900  7900  Independent Research  PSY  Psychology  1  Research conducted under faculty supervision. Student must not have defended their Master's thesis yet.  GR  IS  Independent Study
Fall 2020  STT3960  3960  Topics in Stat and Prob  STT  Statistics  1  Titles vary.  UG  IS  Independent Study
Fall 2020  PHIL2040  2040  Great Books: Philosophy  PHIL  Philosophy  3  Selected great books in the history of Western philosophy chosen from each of three eras (ancient/modern, modern, and contemporary) and examined within their respective historical frameworks and as an exercise in critical thinking. Integrated Writing course.  UG  LE  Lecture
Fall 2020  ART3120  3120  Studies in Medieval Art  ART  Art  3  General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course.  GR  LE  Lecture
Fall 2020  CHM4680H  4860  Experimental Nanoscience  CHM  Chemistry  3  Laboratory experiments include fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets; characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses and computational modeling of nanoscale physical phenomena.  GR  LB  Lab
Fall 2020  PLS4570  4570  Pol. Dev. Nations & Principles of NMR  PLS  Political Science  3  Students will learn the basic theory of nuclear magnetic resonance (NMR) techniques, including its applications in chemical analysis (spectroscopy) and diagnostic imaging (MRI). Classroom activities will include lectures, problem solving, and student presentations.  UG  LE  Lecture
Fall 2020  MUS6360  6360  Counterpoint  MUS  Music  3  Introduction to contrapuntal techniques. Exercises in species counterpoint, imitation and fugal devices. Analysis of examples from Renaissance to 20th-century.  GR  LE  Lecture
Fall 2020  AFS4999  4999  Topics African Am  AFS  Afr /Afr Amer Studies  3  Historical and current issues in African and African American studies. Integrated Writing course.  UG  LE  Lecture
This advanced course examines both past and current theoretical frameworks for understanding cultural patterns, practices, and precepts employed in anthropology. Integrated Writing course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Type</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB8460</td>
<td>Intern Trade Management</td>
<td>B</td>
<td>3</td>
<td>Concepts and principles required to develop an import/export strategy and conduct import/export operations. Application of international trade policies, competitive strategies, U.S. and foreign government trade-promotion resources to selected country and product for importing/exporting. Integrated Writing course.</td>
</tr>
<tr>
<td>IBM7050</td>
<td>Applied Linear Technique</td>
<td>BMS</td>
<td>3</td>
<td>Graduate level linear engineering methods in finite and infinite dimensions.</td>
</tr>
<tr>
<td>IES3140</td>
<td>Sedimentary Petrology</td>
<td>EES</td>
<td>4</td>
<td>Survey of sedimentary rocks in hand thin, section and field occurrence.</td>
</tr>
<tr>
<td>EE2600</td>
<td>Intro to Education</td>
<td>ED</td>
<td>3</td>
<td>Orientation to the teaching profession and pluralistic American society as well as an awareness of the global community. Integrated Writing course.</td>
</tr>
<tr>
<td>ME4010</td>
<td>Comp Meth for Mech Engr</td>
<td>ME</td>
<td>3</td>
<td>Application of statics, dynamics, thermodynamics, fluid mechanics, and heat transfer to the design of mechanical systems using numerical methods. Department Managed Prerequisite(s): Undergraduate level ME 3560 Minimum Grade of D and Undergraduate level ME 3210 Minimum Grade of D.</td>
</tr>
<tr>
<td>FAS2030</td>
<td>Intro Animal Science</td>
<td>FAS</td>
<td>3</td>
<td>Fundamentals of livestock production, including feeding and nutrition, reproductive physiology, selective breeding, health, management, and marketing of major and minor species.</td>
</tr>
<tr>
<td>M&amp;I7770</td>
<td>Gene Therapy</td>
<td>MI</td>
<td>3</td>
<td>The molecular basis of gene therapy and the use of viral gene delivery systems for the treatment of human disease are examsined. Gene therapy strategies are compared with various diseases, including cancer and AIDs.</td>
</tr>
<tr>
<td>GER5180</td>
<td>Applied Elem Ger Instr</td>
<td>GER</td>
<td>1</td>
<td>Assist GER 1010 or GER 1020 course instructor in conducting classes. Taught in German. Instructor Permission required.</td>
</tr>
<tr>
<td>URS4940</td>
<td>Youth &amp; Comm Engagement</td>
<td>URS</td>
<td>3</td>
<td>Examines the pedagogies that encourage youth in developing the capacity to participate responsibly and effectively in the civic life of their communities. Centered on a field-based learning experience.</td>
</tr>
<tr>
<td>ENG430</td>
<td>Studies in Gender Sex</td>
<td>ENG</td>
<td>3</td>
<td>Intensive study of literature from the perspectives of gender theory. Intended to develop an understanding of gender and sexuality as important both to literature and to its critical appeciation.</td>
</tr>
<tr>
<td>SW7650</td>
<td>SW Field Ed Seminar II</td>
<td>SW</td>
<td>0</td>
<td>Integrates Field Education II experiences and coursework. Offered concurrently with advanced generalist fieldwork and competencies.</td>
</tr>
<tr>
<td>ACC1600</td>
<td>CPA Exam Concepts</td>
<td>ACC</td>
<td>1</td>
<td>Course reviews material typically covered on the CPA exam.</td>
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<tr>
<td>ED2570</td>
<td>Fld Exp II: Intro Ed Psy</td>
<td>ED</td>
<td>1</td>
<td>Introduces students to the educational process through participation in a classroom and through an examination of classroom dynamics within a natural setting. Must have at least a 2.0 GPA.</td>
</tr>
<tr>
<td>HEA9220</td>
<td>Law of Higher Education</td>
<td>HEA</td>
<td>3</td>
<td>Examination of statute and case law that governs the operation of institutions of higher education. Issues of employment, evaluation, contracts, copyright, and student and faculty rights will form the basis of the course.</td>
</tr>
<tr>
<td>ATH3000</td>
<td>Peoples of Native Americ</td>
<td>ATH</td>
<td>3</td>
<td>An introduction to the variety of people whose ancestry goes back to pre-conquest Native North America, and who continue to live and thrive on the North American continent today. The course will touch on their past, their cultures and their place in current North American political and social contexts.</td>
</tr>
<tr>
<td>CEG4410</td>
<td>Mobile Computing</td>
<td>CEG</td>
<td>3</td>
<td>Study networking protocol and system design in mobile computing. Focus on concepts, architecture, design, and performance evaluation of mobile computing protocols, protocols and applications, including: wireless TCP, Mobile IP, 802.11 agent techniques, etc. Department Managed Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D or Graduate level CEG 6400 Minimum Grade of D.</td>
</tr>
</tbody>
</table>

Note: UG = Undergraduate; GR = Graduate; LE = Lecture; Lab = Laboratory; Combination = Lecture/Lab; IE = Independent Study; IP = Internship; FLD = Fld Exp II: Intro Ed Psy; PACE = Practicum
<table>
<thead>
<tr>
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<th>Title</th>
<th>Department</th>
<th>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>ME6870</td>
<td>Machining</td>
<td>ME</td>
<td>3</td>
<td>Fundamentals of machining with emphasis on engineering models of machinability, chip formation, cutting forces and power, and lubrication. Introduction to numerical control machining. 3 lecture hours, 2 hours lab. (Also listed as M&amp;I 7270.) Department Managed Prerequisite(s): Undergraduate level ME 2210 Minimum Grade of D and Undergraduate level ME 2700 Minimum Grade of D- or better.</td>
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<tr>
<td>KNH1260B</td>
<td>H2O Deep Conditioning</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of H2O Deep Conditioning. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>EE6400</td>
<td>Nanosci. and Nanotech</td>
<td>EE</td>
<td>3</td>
<td>Introduction to nanotechnology, nanoscience and nanotechnology. Topics include introduction to quantum mechanics, fabrication, characterization, materials, electronic properties, optical properties, magnetic properties, devices, MEMS, NEMS.</td>
</tr>
<tr>
<td>PLS3100</td>
<td>Quant Method Polysci</td>
<td>PLS</td>
<td>3</td>
<td>Uses of quantitative data with emphasis on contemporary research applications in the social sciences. Analysis and interpretation of data.</td>
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<tr>
<td>DAN1080</td>
<td>1080 - Ballet for the Actor II</td>
<td>DAN</td>
<td>2</td>
<td>Continues exploration of fundamental ballet technique for beginning non-dance majors to develop creative movement potential.</td>
</tr>
<tr>
<td>PHIL3100</td>
<td>5100 - American Philosophy</td>
<td>PHIL</td>
<td>3</td>
<td>A look at the American Pragmatist tradition from Peirce, James and Dewey to more recent American philosophers such as Quine, Davidson, Putnam and Korty.</td>
</tr>
<tr>
<td>CEG4750</td>
<td>4750 - Information Security</td>
<td>CEG</td>
<td>3</td>
<td>A comprehensive study of security vulnerabilities in information systems and the basic techniques for developing secure applications and practicing safe computing. Topics include: Conventional encryption; Data Encryption Standard; Advanced Encryption Standard; Hashing functions and data integrity; Basic Number Theory; Public-key encryption (RSA); Elliptic Curve Cryptography (ECC); Digital signature; Security standards and applications; Access Control; Management and analysis of security; Intrusion Detection; Malicious Software; Legal and Ethical Issues in Security.</td>
</tr>
<tr>
<td>ATH3210</td>
<td>3210 - Medical Anthropology</td>
<td>ATH</td>
<td>3</td>
<td>Introduction to the core concepts and methods of medical anthropology, emphasizing the cultural aspects of health and healing.</td>
</tr>
<tr>
<td>MUE6690</td>
<td>6690 - Wind Symphony</td>
<td>MUE</td>
<td>1</td>
<td>The university's most select symphonic band organization, this ensemble performs compositions ranging from traditional classics to innovative contemporary literature, including transcriptions and original works. Audition and instructor permission required.</td>
</tr>
<tr>
<td>CHM6550</td>
<td>6550 - Chem/Microscopy with App</td>
<td>CHM</td>
<td>2</td>
<td>Examination of microscopy instrumentation and its applications to the study of surface and interface chemistry. The course will cover fundamentals of instrumentation design and methods. Topics will focus on scanning probe microscopy and its applications, particularly to solid-fluid interfaces.</td>
</tr>
<tr>
<td>ATH3510</td>
<td>3510 - Lab in Archaeology</td>
<td>ATH</td>
<td>3</td>
<td>An introduction to the identification and analysis of artifacts commonly encountered in prehistoric North American archaeological sites, emphasizing lithics and ceramics. Students undertake an original analysis of a selected group of artifacts from excavated sites and produce a report of their findings and interpretations.</td>
</tr>
<tr>
<td>BIEE6010</td>
<td>6010 - Ethics in Engineering</td>
<td>BIE</td>
<td>3</td>
<td>Introduction to ethical issues in engineering. Scientific research, and technical writing. Additional topics include active reading, active listening, effective presentation, faculty-advisor relationships and the thesis/dissertation process.</td>
</tr>
<tr>
<td>IT2050</td>
<td>2050 - Presentation Skills</td>
<td>IT</td>
<td>3</td>
<td>Professional speaking and electronic presentation skills.</td>
</tr>
<tr>
<td>MTH2330</td>
<td>2330 - Differential Equations</td>
<td>MTH</td>
<td>3</td>
<td>Elementary first order equations, linear equations, existence and uniqueness, phase line and phase plane, linear systems, Laplace transform, and applications.</td>
</tr>
<tr>
<td>URS7090</td>
<td>7090 - MPA Thesis</td>
<td>URS</td>
<td>3</td>
<td>Under the supervision of a thesis committee and chair, students select a public administration problem, prepare a proposal detailing the research question, complete the research, write their thesis with full documentation and defend their work before the committee.</td>
</tr>
<tr>
<td>PSI9080</td>
<td>9080 - Practice Tutorial</td>
<td>PSI</td>
<td>1</td>
<td>Exposure to a variety of clinical case materials using a vertical team format.</td>
</tr>
<tr>
<td>SPN5810</td>
<td>5810 - Applied Elem Sp Inst</td>
<td>SPN</td>
<td>3</td>
<td>Assistance for elementary course instructors in conducting classes.</td>
</tr>
<tr>
<td>BIO4700L</td>
<td>4700L - General Entomology Lab</td>
<td>BIO</td>
<td>0</td>
<td>Required laboratory for BIO 4700.</td>
</tr>
<tr>
<td>CRT1000</td>
<td>1000 - Intro to Corrections</td>
<td>CRT</td>
<td>3</td>
<td>Trends and developments in all elements of a modern correctional system for the treatment of juvenile and adult offenders.</td>
</tr>
<tr>
<td>BMS9570</td>
<td>9570 - Computed Tomography</td>
<td>BMS</td>
<td>2</td>
<td>Principles of generating images from projections. Discussion of specific problems like beam hardening, scatter, metal artifacts, etc. Focus on quantitative imaging in medical applications.</td>
</tr>
<tr>
<td>BMS6200</td>
<td>6200 - Pathogenic Microbiology</td>
<td>BMS</td>
<td>4</td>
<td>(Also listed as M&amp;I 7270.) Microorganisms pathogenic for humans and animals using the organ system approach. Emphasis on mechanisms of pathogenesis and host resistance. Includes a project segment devoted to the independent study of the mechanisms of pathogenesis in the host-parasite interactions of the infectious agents studied.</td>
</tr>
<tr>
<td>CHM7630</td>
<td>7630 - Analytical Separations</td>
<td>CHM</td>
<td>2</td>
<td>Theory of separations techniques are reviewed. The two techniques of gas and liquid chromatography are introduced to numerical control machining. 3 lecture hours, 2 hours lab.</td>
</tr>
<tr>
<td>MUS2510</td>
<td>2510 - Musicianship III</td>
<td>MUS</td>
<td>1</td>
<td>Continuation of MUS 1520.</td>
</tr>
<tr>
<td>EDL7770</td>
<td>7770 - Educ Ldrship Practicum</td>
<td>EDL</td>
<td>1</td>
<td>Focusing on the roles performed by practicing educational leaders. Students will observe, interact and draw conclusions from field experience by integrating the field experience with knowledge, skills, and dispositions gained in previous coursework.</td>
</tr>
<tr>
<td>KNH1240B</td>
<td>1240B - Golf</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Golf. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>KNH1060B</td>
<td>1060B - Backpacking</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Backpacking. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>ENG3420</td>
<td>3420 - Post-Colonial Texts</td>
<td>ENG</td>
<td>3</td>
<td>Representative works of established and emerging writers from the post-colonial world and the diaspora.</td>
</tr>
<tr>
<td>ESS800</td>
<td>8000 - Internship Option</td>
<td>ESS</td>
<td>5</td>
<td>The internship option is available to second year PhD students wishing to gain experience with an environmental professional in an approved interdisciplinary job setting and providing opportunity to formulate a dissertation research topic.</td>
</tr>
</tbody>
</table>
Fall 2020 MTE6100 6100 Math Modeling Behav Sci MTE Mathematics Teacher Education 3 Important mathematical topics such as differential equations, axiomatics, probability theory, matrix algebra, simulation, and game theory and their use in a variety of models in the social sciences, life sciences, and humanities. Includes deterministic models, probabilistic models, simulations, and considers both discrete and continuous models. GR LE Lecture

Fall 2020 MGT6770 6770 Train,Develop,Performance Mgt MGT Management 3 This course is designed to provide an introduction to the concepts, processes, and issues associated with training and development and performance management. The course will cover planning, designing, implementing, and evaluating training programs as well as creating a direct link between employee performance and organizational objectives. GR LE Lecture

Fall 2020 SST3630 3630 Engineering Statistics STT Statistics 3 Introduction to probability, distributions, and statistical methods; using calculus to develop the necessary theory. Use of computer software package (e.g., Mathlab) for statistical analysis. UG LE Lecture

Fall 2020 LEP0150 0150 List & Speak - Level I LEP LEAP 0 Listening, speaking and pronunciation for beginning level ESL students. This course has a fee that is non-refundable once the term begins. UG LE Lecture

Fall 2020 MGT6800 6800 Special Topics in Mgt MGT Management 1 Seminar in a management topic of current and timely interest. Topics and prerequisites vary. GR SE Seminar

Fall 2020 HPR2700 2700 Educational Psychology HPR Health Phys Educ & Recreation 3 Understand how people learn, how to motivate, and assess pre-K-12 students based on theoretical principles from field of educational psychology. UG LE Lecture

Fall 2020 EDS4990 4990 Professional Seminar IS EDS Education - Special Education 3 Seminar accompanying IS Student Teaching focusing on pedagogical content knowledge and the completion of and submission of the edTPA and final portfolio. UG SE Seminar

Fall 2020 ES7650 7650 Comp Tools/Strategies ES Environmental Sciences 4 This is a survey course of modern computational tools and strategies used in sequence, 3-D structure and functional analysis of biomolecules. Students will gain hands on "laboratory" experience with key software and strategies. UG LE Lecture

Fall 2020 WGS5200 5200 Women Multi. Persp. WGS Women, Gender, and Sexuality 3 Issues, approaches, and topics in women and gender studies, which may include women's history, politics, religion, or contributions to literature, film, and art. Explores racial, ethnic, cultural, and other differences among women within the U.S. Titles and topics vary. GR LE Lecture

Fall 2020 EC7240 7240 Dedriment of Ec Thought EC Economics 3 Historical development of economic thought and philosophies. >Department Managed Prerequisite(s): Graduate level EC 5900 Minimum Grade of D and Graduate level EC 5210 Minimum Grade of D and Graduate level EC 5220 Minimum Grade of D. <Department Managed Prerequisite(s): Undergraduate level FAS 2870 Minimum Grade of D.> UG LE Lecture

Fall 2020 ENG4200 4200 Studies in British Lit ENG English 3 Intensive study of British literary history and the work of individual British writers. Intended to develop an understanding of literature within the contexts of the author's life, literary production, and historical background. Integrated Writing course. UG LE Lecture

Fall 2020 FAS3870 3870 Practicum II FAS Food and Agricultural Systems 1 Individualized, supervised learning experience including on-site seminars under the direction of the instructor and on-site staff. >Department Managed Prerequisite(s): Undergraduate level FAS 2870 Minimum Grade of D. <Department Managed Prerequisite(s): Graduate level EC 5090 Minimum Grade of D.> UG PB Practicum

Fall 2020 CEG4410 4410 Mobile Computing CEG Computer Engineering 3 Study networking protocol and system design in mobile computing. Focus on concepts, architecture, design, and performance evaluation of mobile computing protocols and applications, including: wireless TCP, Mobile IP, 802.11, agent techniques, etc. UG LE Lecture

Fall 2020 MUA4220 4220 Applied Music MUA Music: Applied Music 2 Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. UG IS Independent Study

Fall 2020 IT2350 2350 Branding Experience IT Information Technology 3 Techniques and strategies used in brand creation applied to graphic design. UG LE Lecture

Fall 2020 PHY3510 3510 Advanced Physics Lab II PHY Physics 2 Statistical analysis of experimental data. Emphasizes experimental design, data analysis, and presentation in report form. Experiments are taken from several major areas of physics, such as optics, spectroscopy, solid state physics, acoustics, nuclear physics and electronics. Integrated Writing course.

Fall 2020 CHM4350L 4350L Instrumental Analy Lab CHM Chemistry 3 Instrumental techniques and analysis giving practical experience in the operation of chemical instrumentation. UG LB Lab

Fall 2020 BME6010 6010 Ethics in Engineering BME Biomedical Engineering 1 Introduce new engineering graduate students to ethics of engineering, scientific research, and technical writing. Additional topics include active reading, active listening, effective presentation, faculty-advisor relationships and the thesis/dissertation process. UG LE Lecture

Fall 2020 KHN1160 1160 Dance: Latin KHN Kinesiology & Health 1 Fundamental skills and knowledge of Dance: Latin. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 EE7410 7410 Power Electronics I EE Electrical Engineering 3 Silicon and silicon carbide power devices; Fast-recovery, ultra-fast-recovery, and p-n junctions and Schottky power diodes; performance parameters; Power MOSFETs and IGBTs; static and dynamic characteristics; voltage and current stress, Pulse-width-modulated (PWM) DC-DC power converters; topologies of power stages of power converters, such buck-boost, flyback, forward, half-bridge, full-bridge, and push-pull power stages. >Department Managed Prerequisite(s): Graduate level EE 5090 Minimum Grade of D. <Department Managed Prerequisite(s): Graduate level EE 5210 Minimum Grade of D.> UG LE Lecture

Fall 2020 ATH4990 4990 Ind Research in Anthro ATH Anthropology 3 Independent research and writing under the supervision of a faculty member in the department of anthropology. UG IS Independent Study

Fall 2020 PTX4000 4000 Xenonpharmacology PTX Pharmacology/Toxicology 3 The aim of this course is to give an overview of xenonpharmacology that includes basic principles of drug action in neurons, a description of major neurotransmitter systems in the brain and their pharmacology, with examples of their clinical and therapeutic relevance. The emphasis is on mental illness. The course is designed for graduate students in medicine and biomedical sciences. Technics and theories used in forecasting. Stressors practical methods and problems. UG LE Lecture

Fall 2020 ECO120 120 Economic Forecasting EC Economics 4 Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. UG IS Independent Study

Fall 2020 MUA2410 2410 Applied Music MUA Music: Applied Music 4 Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. UG IS Independent Study

Fall 2020 ATH3730 3730 Methods in Hum Osteology ATH Anthropology 3 This course will explore the anthropological methodology of human osteology, or the study of human skeletal materials. UG LE Lecture

Fall 2020 MTH4920 4920 Mathematics Seminar MTH Mathematics 3 Detailed study of a single mathematics topic chosen by the student with the approval of the instructor. Integrated Writing course. UG SE Seminar
Fall 2020  IHE7712  7712  Disc Ed. Mod & Analy  BHE  Industrial & Hum Fac Engr 3  Modeling of systems using discrete event techniques. Structures to support discrete event models with experience in building and verifying models. Analysis of simulation output data and creating model input from data using statistical techniques. <b>GR</b>  Department Managed Prerequisite(s): Graduate level BHE 6120 Minimum Grade of D-.<n>  
Fall 2020  MTE6420  6420  Prob Stat Mid Schl Tech  MTE  Mathematics Teacher Education 3  Probability and statistical methods applied to real problems. Scientific method of investigation. Data collection, organization, display, and analysis. Sampling distributions and probability. Introductions to statistical inference. Use of appropriate software and graphing calculator. <b>GR</b>  Department Managed Prerequisite(s): Graduate level BHE 6120 Minimum Grade of D-.<n>  
Fall 2020  BMST7120  7120  Cont Control Sysyms  BMS  Biomedical Sciences 3  Introductory course providing students with a general control background. Major topics include block diagrams and signal flow graphs, electromechanical modeling, time response, root locus, and design of PID controllers. <b>GR</b>  Department Managed Prerequisite(s): Graduate level BMST 6410 Minimum Grade of C-<n>  
Fall 2020  DAN4910  4910  Senior Dance Project  DAN  Dance 1  Advanced work in creative dance projects. Designed to showcase skills of graduating seniors with guidance and input of faculty. Involves choreography/performance of dance work in Festival Playhouse and writing a thesis. <b>UG</b>  ST  Studio  
Fall 2020  SOC4081  4081  Independent Study  SOC  Sociology 1  Research project in an area of specialized interest in sociology. Integrated Writing course. <b>UG</b>  IS  Independent Study  
Fall 2020  MUE6660  6660  Concert Band  MUE  Music: Ensembles 1  Performs band music of all styles. Open to all students without audition. <b>GR</b>  Department Managed Prerequisite(s): Graduate level MUE 6660 Minimum Grade of C-<n>  
Fall 2020  DEV9920  0920  Found of Col Rgd & Wg  DEV  Developmental Education 3  Intensive instruction in reading, writing, and critical thinking. Emphasizes reflection, revision, collaboration, and self-assessment to prepare students for collegiate success. Gradual pass/unsatisfactory. <b>UG</b>  LL  Lecture/Lab Combination  
Fall 2020  NUR3420  3420  Nur Care Mental Health  NUR  Nursing 1  Focuses on critical reasoning and in the care of individuals and groups with common mental health disorders. Emphasizes therapeutic use of self for enhancing effective communication. Incorporates principles from abnormal psychology, group dynamics, milieu nursing, and complex care relationships, substance use/abuse, crisis intervention, delivery models. (3 cr didactic; 3 cr total clinical/lab) <b>UG</b>  LE  Lecture  
Fall 2020  GER1020  1020  Beginning German II  GER  German 3  Communicative introduction to German structures and vocabulary and to Germanic culture. Practice in speaking, listening, reading, and writing. <b>&lt;b&gt;</b>  Department Managed Prerequisite(s): Undergraduate level GER 1010 Minimum Grade of C-<n>  
Fall 2020  ED6240  6240  Recent-Read Recovery Course II  ED  Education 3  Teachers deepen their understanding of Clay's literacy processing theory through contingent instruction based on student data while teaching Reading Recovery students. Key concepts include teaching for phrased reading, fluent processing and flexible problem solving. <b>GR</b>  LE  Lecture  
Fall 2020  SLI4550  4550  Interpreting for Theater  SLI  Sign Language Interpreting 3  Provides students with basic skills in musical performance and theatrical interpreting. Script analysis and translation, theater basics, character development, and interpretive issues will be addressed as well as musical styles and interpretation. <b>UG</b>  LE  Lecture  
Fall 2020  REL5700  5700  Topics in Biblical Liter  REL  Religion 3  Examination of selected aspects of Biblical literature from both literary and historical perspectives to explore the possible structure, functions, and meanings of this literature for its original context. <b>GR</b>  LE  Lecture  
Fall 2020  MIC260  260  Immunology  MI  Microbiology & Immunology 4  (Also listed as BMS 8020) Fundamentals of immunobiology and basic virology. Emphasis on the regulatory and cellular level of host immune responses against microbial pathogens, as well as mechanisms of immunopathology, and on the characteristics and molecular biology of virus pathogens. <b>GR</b>  LR  Lecture/Recitation Combination  
Fall 2020  ENG6750  6750  TESOL Grammar  ENG  English 3  Develops linguistic analysis skills to help students recognize, analyze, and remediate written and spoken grammatical errors in ESL/EFL instructional contexts. Also focuses on pedagogical aspects of grammar instruction to non-native speakers of English. <b>&lt;b&gt;</b>  Department Managed Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D or Graduate level ENG 6710 Minimum Grade of D-<n>  
Fall 2020  PTEX950  4950  Honors Pharmacology Res  PTX  Pharmacology/Toxicology 1  Experimental learning for honors program students interested in basic biomedical research. Tutorial with laboratory. <b>UG</b>  LB  Lab  
Fall 2020  FIN2050  2050  Personal Fin Decision  FIN  Finance 3  Overview of the theories, concepts, and principles of personal financial management, with an emphasis on daily financial decision making. Emphasis is on: 1) goal setting and everyday financial decision-making as they influence long-term goals, and 2) understanding macro-economics and financial systems as they influence individual's lives. Topics covered include personal financial statements, consumer debt management, insurance and retirement and estate planning. <b>UG</b>  LE  Lecture  
Fall 2020  ENG5570  5570  Reading Workshop  ENG  English 3  Advanced strategies for teaching reading to middle and adolescent students with an emphasis on literary response and workshop pedagogy. <b>GR</b>  LE  Lecture  
Fall 2020  STT7140  7140  Environmental Statistics  STT  Statistics 3  Statistical techniques for the modeling and analysis of environmental data including advanced regression techniques, generalized linear models, and random effects. Also modeling of spatial and time-series environmental data, including spatio-temporal analysis, using appropriate software. Applications and case studies. <b>&lt;b&gt;</b>  Department Managed Prerequisite(s): Graduate level STT 6670 Minimum Grade of D-<n>  
Fall 2020  IBIO430L  4430L  Vertebrate Histology Laboratory  BIO  Biology 0  Required laboratory for BIO 4430. <b>UG</b>  LB  Lab  
Fall 2020  FIN4270  4270  Practicum in Fin Plan  FIN  Finance 3  Financial planning laboratories and workshops on interviewing techniques, data gathering, plan preparation, and computerized planning models. Integrated Writing course. <b>UG</b>  LE  Lecture  
Fall 2020  PSIS9920  9920  Elective Practicum  PSI  Professional Psychology 1  Field placement that meets the criteria for PSI 9970, Practicum that is completed in addition to the placement required for PSI 9970. May be taken multiple terms. <b>GR</b>  PR  Practicum  
Fall 2020  EE4190  4190  Intelligent Control Sys  EE  Electrical Engineering 3  Foundations of fuzzy set theory, system modeling using fuzzy rules, structure of fuzzy controllers and PID fuzzy controller design. Neural network foundations, single layer/dual-layered perceptions, learning rules, basics of adaptive controls and adaptive neural control. <b>UG</b>  LE  Lecture  
Fall 2020  PSY8765  8765  Job Analysis  PSY  Psychology 2  The primary objective of this course is to provide an overview of job analysis from the perspective of the field of industrial organizational psychology. The course will examine the theory, research, and practice perspectives of job analysis. It is designed not only to give you an overview of the topic, but to get you involved in discussion and to assist you in formulating your own ideas about research and practice in this the area. Thus, the major objective of this course is for you to develop your own perspective about defining and evaluating a position. <b>GR</b>  SI  Seminar  
Fall 2020  PLS6410  6410  Natural Resources Law  PLS  Political Science 3  Examines federal management of natural resources on public lands, specifically water, minerals, timber, grazing, and wildlife. Analysis of constitutional authority, statutes, regulations, federalism, and judicial review of administrative decisions. <b>GR</b>  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Section</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR3200</td>
<td>Health Wellness Family</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>EE7550</td>
<td>Trust Integ Ckt Design</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>PHIL3150</td>
<td>Philosophy of Language</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
</tr>
<tr>
<td>M&amp;G6990</td>
<td>Special Problems in M&amp;I</td>
<td>2</td>
<td></td>
<td>IS Independent Study</td>
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<tr>
<td>BMS6650</td>
<td>Intro Neurophysiology</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>FTN4130</td>
<td>Financial Derivatives</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>PHYS710</td>
<td>Analytical Mechanics</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>BIO4060</td>
<td>Evolutionary Biology</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>ATR4850</td>
<td>Surgical Applications</td>
<td>3</td>
<td></td>
<td>LL Lecture Lab Combination</td>
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<td>HST7950</td>
<td>Thesis</td>
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<td>IS Independent Study</td>
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<td>BME6550L</td>
<td>Bioinstrumentation Lab</td>
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<td></td>
<td>Lab</td>
</tr>
<tr>
<td>REL3640</td>
<td>Religion &amp; Pol in Amer</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>SLI2800</td>
<td>Interpreting I</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>ED6920</td>
<td>Prof Sem: AYAMA Education</td>
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<td>SE Seminar</td>
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<td>TH3840</td>
<td>Intro to Dramatic Wrtg</td>
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<td>LE Lecture</td>
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<tr>
<td>NUR3100</td>
<td>Patho Across Lifespan</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>MKT4700</td>
<td>Marketing Challenges</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>PLS4823</td>
<td>Campaign Internship</td>
<td>3</td>
<td></td>
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<tr>
<td>NUR3440</td>
<td>Nur Wom &amp; Childbear Fam</td>
<td>1</td>
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<td>LE Lecture</td>
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<tr>
<td>PSY9070</td>
<td>Multilevel Modeling Psy</td>
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<td>LE Lecture</td>
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<tr>
<td>CHM2120</td>
<td>Organic Chemistry II</td>
<td>3</td>
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<td>LE Lecture</td>
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<td>CEG6324</td>
<td>Dig Integ Ckt Design</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>MUE6930</td>
<td>University Men's Chorale</td>
<td>3</td>
<td></td>
<td>LL Lecture Lab Combination</td>
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<tr>
<td>REL7900</td>
<td>Topics in Greco-Rom Relk</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>NUR7013</td>
<td>Applied Pharm Lifespan</td>
<td>3</td>
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<td>LE Lecture</td>
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<td>P&amp;N8000</td>
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<tr>
<td>REL3400</td>
<td>Topics in Asian Religion</td>
<td>3</td>
<td>Studies in the religious dimension of Asian cultures with attention to historical, social, and aesthetic perspectives.</td>
<td>UG</td>
</tr>
<tr>
<td>PS9210</td>
<td>Diversity Integration II</td>
<td>3</td>
<td>First course in a 2-course sequence that also builds on PS9120. Focus is on increasing awareness so that students can have meaningful dialogues about cultural similarities and differences and ground their thinking in post-modern, constructionist theory. Explores the complex integration of multiple identities.</td>
<td>GR</td>
</tr>
<tr>
<td>BM8990</td>
<td>Continuing Registration</td>
<td>0.5</td>
<td>Biomedical Sciences</td>
<td>UG</td>
</tr>
<tr>
<td>HST2110</td>
<td>American History to 1877</td>
<td>3</td>
<td>Thematic survey of events, forces, groups, and individuals that contributed to and helped to shape an American civilization on the North American continent. Colonial foundations to 1877.</td>
<td>UG</td>
</tr>
<tr>
<td>BIO3120</td>
<td>General Microbiology</td>
<td>5</td>
<td>Morphology, cultivation, and biochemical activities of microorganisms. Viruses, bacteria, blue-green algae, fungi and their diversity in natural environments.</td>
<td>UG</td>
</tr>
<tr>
<td>BIO3450</td>
<td>Concepts Bio I ECE/MCE</td>
<td>4</td>
<td>Introduction to biological concepts for Elementary and Middle School Education Majors. Structured around the National and Ohio State Standards and sought from an inquiry perspective. Examiners approaches an attempt to teach science as a knowledge-building practice, i.e., by engaging in scientific investigations and participating in scientific practices such as designing an investigation, explanation, and working with scientific models.</td>
<td>UG</td>
</tr>
<tr>
<td>MIL4020</td>
<td>Lifeship in Complex World</td>
<td>3</td>
<td>Study/analysis of leading in complex military operations in the contemporary operating environment. Examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. Explores aspects of interacting with non-government organizations, cinemas on battlefield, and host nation support. Course prepares for BOILC and first unit assignment.</td>
<td>UG</td>
</tr>
<tr>
<td>HED2340</td>
<td>Health Behaviors</td>
<td>23/40</td>
<td>Health Education 3 Addresses the theories of health behavior and health behavior change. Students develop a theory-based logic map for one risk behavior or protective health behavior.</td>
<td>UG</td>
</tr>
<tr>
<td>FAS2020</td>
<td>Intro Food Science Lab</td>
<td>20/20</td>
<td>Food and Agricultural Systems 1 A study of food properties including physical, chemical, microbiological, functional and sensory characteristics.</td>
<td>UG</td>
</tr>
<tr>
<td>PHY7800</td>
<td>Plasma Physics</td>
<td>78/00</td>
<td>Physics 3 Introduction to plasma physics. Motion of charged particles in electric and magnetic fields. Magnetico-ionic theory, continuum equations, the Vlasov equation, the Boltzmann equation, and the BBGKY equations.</td>
<td>GR</td>
</tr>
<tr>
<td>SOC5620</td>
<td>Race and Ethnicity</td>
<td>56/20</td>
<td>Sociology 3 The study of intergroup, racial, and ethnic group relations, including the processes and consequences of conflict, prejudice, and discrimination.</td>
<td>GR</td>
</tr>
<tr>
<td>ABS7600</td>
<td>Graduate Seminar in ABS</td>
<td>76/00</td>
<td>Applied Behavioral Science 1 In-depth coverage of special topics in applied behavioral science. Topics vary. 1-2 credit hours.</td>
<td>GR</td>
</tr>
<tr>
<td>MUS7990</td>
<td>Theory in Music</td>
<td>7990</td>
<td>Music 1 Scholarly document related to research connected to the student's area of specialty. Required by the Master's of Music degree in Music Education, Thesis Option.</td>
<td>GR</td>
</tr>
<tr>
<td>URS4950</td>
<td>Urban Affairs Internship</td>
<td>4950</td>
<td>Urban Affairs 3 Senior-level internship in the offices of a local public agency.</td>
<td>UG</td>
</tr>
<tr>
<td>CEG4120</td>
<td>Managing Softw Dev Proc</td>
<td>4120</td>
<td>Computer Engineering 3 Software development processes, models, and techniques necessary to successfully develop large-scale software. Presents the Capability Maturity Model (CMM). Each student will participate in the development of a software project. Integrated Writing course.</td>
<td>UG</td>
</tr>
<tr>
<td>MTH8990</td>
<td>Graduate Research</td>
<td>8990</td>
<td>Mathematics 1 Research on a selected topic in mathematics.</td>
<td>GR</td>
</tr>
<tr>
<td>NUR7115</td>
<td>Independent Study</td>
<td>7115</td>
<td>Nursing 1 Independent study of selected topic with guidance from faculty.</td>
<td>GR</td>
</tr>
<tr>
<td>GER4340</td>
<td>Thomas Mann</td>
<td>43/40</td>
<td>German 3 Students of the writings of Thomas Mann. 6-8 Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3350 Minimum Grade of D or Undergraduate level GER 3410 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D or-</td>
<td>UG</td>
</tr>
<tr>
<td>ECO5550</td>
<td>Teach Econ Use Child Lit</td>
<td>55/00</td>
<td>Center for Economic Educ. 2 This course is designed to help teachers with little economic education learn how to teach economics using children's literature. Topics include scarcity, decision making, marginal cost/benefit, role of incentives, trade, money and entrepreneurship. This course has a fee that is non-refundable once the term begins.</td>
<td>GR</td>
</tr>
<tr>
<td>BME7521</td>
<td>Advanced Biotransport</td>
<td>75/21</td>
<td>Biomedical Engineering 3 Application of advanced principles of transport phenomena, including the solution of the conservation equations of momentum and mass transfer to model biological systems; analysis of the physiological characteristics of biological systems and evaluation of their implication in biological transport.</td>
<td>GR</td>
</tr>
<tr>
<td>BIO1050</td>
<td>Biology of Food</td>
<td>10/50</td>
<td>Biology 4 Biological principles applied to the nature of food, its production, and use in the human body. Topics include molecular biology, photosynthesis, respiration, macro- and microorganisms, anatomy and function of digestion, nutrition, food labeling, food safety, and issues of feeding a rapidly growing human population.</td>
<td>UG</td>
</tr>
<tr>
<td>CTE4820</td>
<td>Laws &amp; Regs in Educ</td>
<td>48/20</td>
<td>Career and Technical Education 3 Fundamental knowledge of legislation, regulations and guidance. Includes an overview of educational acts and amendments, landmark cases, teacher responsibilities, professionalism, ethics and case studies.</td>
<td>UG</td>
</tr>
<tr>
<td>PHY3500</td>
<td>Advanced Physics Lab I</td>
<td>35/00</td>
<td>Physics 2 Statistical analysis of experimental data. Emphasizes experimental design, data analysis, and presentation in report form. Experiments are taken from several major areas of physics, such as optics, spectroscopy, solid state physics, acoustics, nuclear physics and electronics. Integrated Writing course.</td>
<td>UG</td>
</tr>
<tr>
<td>WGS4200</td>
<td>Women Intl Perspective</td>
<td>42/00</td>
<td>Women, Gender, and Sexuality 3 Issues, approaches and topics in women and gender studies, with focus on racial, ethnic, cultural, and other differences among women outside of the U.S. Topics and titles vary.</td>
<td>UG</td>
</tr>
<tr>
<td>KIN1120</td>
<td>Canoeing</td>
<td>1120</td>
<td>Kinesiology &amp; Health 1 Fundamental skills and knowledge of Canoeing. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.</td>
<td>UG</td>
</tr>
<tr>
<td>GEO6410</td>
<td>Cartography</td>
<td>64/10</td>
<td>Geography 4 Study of the basic concepts of cartography, including components of maps, coordinate systems, spatial projections, and map design. Special emphasis placed on data, computational methods and ethical cartographic practices.</td>
<td>GR</td>
</tr>
</tbody>
</table>
Fall 2020  FR6940  6940  Cuisine et Film  FR  French  3  How does French cuisine relate to the French psyche? This course offers a profound study of traditional French
gastronomy, from the way it is portrayed in film to the way it is prepared, served and enjoyed. Hands on cooking
classes compliment film and cultural analysis.<br>Department Managed Prerequisite(s): Graduate level FR 5210  Minimum Grade of D or Graduate level FR 5320  Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  PSY7030  7030  Personality Structure  PSY  Psychology  3  The major approaches for describing personality structure will be discussed and the results of factor analytic
studies will be summarized. Implications of personality structure for behavior will be explored and the
interactionist model will be described and evaluated. Relevant data on individual differences and tests will be
summarized and evaluated. Consistency of differences across situations as well as application of results will be
discussed.<br>Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D or Graduate level ME 5350 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  ME6440  6440  Aerospace Propulsion  ME  Mechanical and Materials
Eng  3  Engine cycle analysis; combustion fundamentals; reciprocating engines and propellers; applications to turboset,
turbomachinery, ramjet, SCRAM jet, and rocket engines.<br>Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D or Graduate level ME 5350 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  EC2500  2500  Econ Sys of Glob South  EC  Economics  3  Overview of the evolution of different mechanisms for organizing production, distribution, and consumption in
Asia, Africa, Latin America, and the Middle East. Integrated Writing course.<br>UG  LE  Lecture

Fall 2020  KNE1360A  1360A  Karate  KNE  Kinesiology & Health  1  Fundamental skills and knowledge of Karate. Competency-based approach. Course may accommodate disabled
students when appropriate.<br>UG  LB  Lab

Fall 2020  MTH4320  4320  Real Variables II  MTH  Mathematics  3  Infinite series, sequences and series of functions, power series, Taylor series, uniform convergence, topology of
R^n, real-valued and vector-valued functions of several variables, derivatives and integrals of functions of several
variables.<br>UG  LE  Lecture

Fall 2020  SW7160  7160  Grad SW Research II  SW  Social Work  0  Data analysis component of social science research and program evaluation. Covers procedures for rigorous,
valid, reliable, and credible collection and analysis of quantitative and qualitative data to arrive at decisions that
improve interventions and contribute to knowledge. Continued development of research design for student's culminating research project.<br>Department Managed Prerequisite(s): Graduate level SW 6160 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  TH1050  1050  Ballet Mus Theatre II  TH  Theatre  2  Group classes continuing to introduce musical theatre majors to fundamentals of ballet technique.<br>UG  ST  Studio

Fall 2020  ME4870  4870  Machining  ME  Mechanical and Materials
Eng  3  Fundamentals of machining with an emphasis on engineering models of machinability, chip formation, cutting
forces and power, and lubrication. Introduction to numerical control machining.<br>UG  LE  Lecture

Fall 2020  EES6900  5600  Water and Solid Waste  EES  Earth & Environmental
Sciences  4  Relationship of physical and basic environments to design and operation of systems and procedures employed in
maintenance and promotion of a quality, healthful human environment. Emphasis on water quality control and
methods and management of waste disposal. Topics covered include regulatory history, regulatory processes,
environmental audits, requirements for water and waste generators, transporters, treatment/storage/disposal
facilities, and pollution prevention concepts.<br>GR  LE  Lecture

Fall 2020  MI4260  4260  Immunology  MI  Microbiology & Immunology  3  Principles of basic immunology. Cellular and soluble factors associated with innate and adaptive immunities.
Examines functions of phagocytes, natural killer (NK) cells, B cells, and T cells.<br>UG  LE  Lecture

Fall 2020  EES6310  6310  Qual Assur of Enviro Analysis  EES  Earth & Environmental
Sciences  0.5  Course surveys the fundamentals of Quality Control and Quality Assessment for analysis of environmental
samples.<br>GR  LE  Lecture

Fall 2020  PTX7003  7003  Biokinetics/Biodynamics  PTX  Pharmacology/Toxicology  3  This course surveys the fundamentals of Quality Control and Quality Assessment for analysis of environmental
samples.<br>GR  LE  Lecture

Fall 2020  HST3800  3800  Intro to Gender History  HST  History  3  Special topics in gender history, such as masculinity, femininity, sexuality, family, and women's history. Focus
can be on one nation, region, or a comparative perspective.<br>UG  LE  Lecture

Fall 2020  SOC6991  6991  Studies in Selected Subj  SOC  Sociology  1  Problems, approaches, and topics in the field of sociology. Topics vary. Credit will not be awarded for repetition
of courses with identical topic titles.<br>GR  LE  Lecture

Fall 2020  GER5210  5210  Writing in German  GER  German  3  Oral and written composition in German; translations from English into German. Further grammar study.<br>GR  LE  Lecture

Fall 2020  CHM5120L  5120L  Quant Analysis Lab  CHM  Chemistry  3  Experimental methods of analysis. Practical applications of the lecture material presented in CHM 5120.
Department Managed Prerequisite(s): Undergraduate level ME 2210 Minimum Grade of D or Undergraduate level BME 3212 Minimum Grade of D or Undergraduate level BSE 3212 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  BEL2900  2900  Power and Politics  BEL  Political Science  3  Examines power and conflict; introduces several worldviews for understanding important issues in domestic
and international politics. Integrated Writing course.<br>UG  LE  Lecture

Fall 2020  FAS3320  3320  Agronomic Industry & Bus  FAS  Food and Agricultural
Systems  3  Fundamentals of agronomic crop production, including crop biology and management, soils and soil
water relations, tillage and seeding, plant breeding, weed and grain quality, pest management, agricultural
sustainability, and future developments.<br>UG  LE  Lecture

Fall 2020  BME6410  6410  Biomedical Thermodynamics  BME  Biomedical Engineering  3  Students will be able to apply first and second laws, along with constitutive equations for simple fluids to
problems involving human systems and human physiology. Department Managed Prerequisite(s): Undergraduate level BME 3211 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  BBO6010  6010  Topics in Biology  BIO  Biology  1  Advanced topics in modern biology of current interest. Topics vary.<br>GR  LE  Lecture

Fall 2020  TH4440  4440  Acting IV  TH  Theatre  3  Application of the principles of realistic, contemporary, and verse based drama to musical theatre texts.
Structured as a scene study class in which students develop songs as monologues and in scene work.<br>UG  LE  Lecture/Lab

Fall 2020  BMI6630  6630  Principles of NMR  BMI  Biochem & Molecular
Biology  3  Students will learn the basic theory of nuclear magnetic resonance (NMR) techniques, including its applications in
chemical analysis (spectroscopy) and diagnostic imaging (MRI). Classroom activities will include lectures, problem
solving, and student presentations.<br>GR  LE  Lecture

Fall 2020  EGR1010  1010  Intro Math for Egr Appl  EGR  Engineering  3  Math topics most heavily used in first and second-year engineering courses. Topics include engineering
applications of algebra, trigonometry, vectors, complex numbers, sinusoids and signals, systems of equations and
circles, derivatives, integrals and differential equations. Integrated Writing course.<br>UG  LE  Lecture

Fall 2020  CEG3320L  3320L  Digital System Design Lab  CEG  Computer Engineering  0  Required laboratory for CEG 3320. Integrated Writing course.<br>UG  LB  Lab

Fall 2020  SOC3100  3100  Sociology of the Family  SOC  Sociology  3  Sociological analysis of family development over its life cycle. Involves Involves the relationship of the family to society and
the individual. Topics include: courtship, marriage, parenthood, adulthood, and aging.<br>GR  LE  Lecture

Fall 2020  BBO3150L  3150L  Invertebrate Zoology Lab  BIO  Biology  0  Required laboratory for BIO 3150.<br>UG  LB  Lab
<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>ART3580</td>
<td>Interned Photo Practices</td>
<td>3</td>
<td>Exploration of expanded black and white photographic materials and photography techniques. Investigation of artistic possibilities of the media. Development of personal concepts and aesthetic expression in photography. This course has a fee that is non-refundable once the term begins. Department Managed Prerequisite(s): Undergraduate level ART 2070 Minimum Grade of D.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUE4480</td>
<td>Univ Clarinet Choir</td>
<td>4</td>
<td>Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC4190</td>
<td>International Economics</td>
<td>3</td>
<td>Basic trade theories, commercial policy, and theories of international investment and migration, exchange rate determination and open macroeconomics. Special attention to international economic institutions and current financial issues.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHIL3030</td>
<td>Modern Philosophy</td>
<td>3</td>
<td>History of philosophy from Descartes to Kant. Topics vary. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUA3990</td>
<td>Junior Recital</td>
<td>3</td>
<td>A solo concert performance on the major instrument during the junior year.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ANT4150</td>
<td>Adv Human Embryology</td>
<td>3</td>
<td>Classical and contemporary issues in human developmental biology. Emphasis is on the clinical relevance of developmental processes, and on modern methods used to study the mechanisms of development.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BID4600</td>
<td>Population Genetics</td>
<td>4</td>
<td>Examines the causes of genetic differences within and among species and how molecular biology techniques can be used to identify these differences. Emphasizes human genetics, anthropology, ecology, and conservation implications.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BID0810</td>
<td>Bioinformatic Algorithms</td>
<td>4</td>
<td>Theory-oriented approach to the application of contemporary algorithms to bioinformatics. Graph theory, complexity theory, dynamic programming and optimization techniques are introduced in the context of applications toward solving specific computational problems in molecular genetics.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ART3130</td>
<td>Studies Renaissance Art</td>
<td>3</td>
<td>General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ENG4930</td>
<td>Internship in Teaching</td>
<td>4</td>
<td>Supervised college-level teaching or tutoring.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SOC3110</td>
<td>Sociology of Religion</td>
<td>3</td>
<td>Explores the role of religion in society. Religion is viewed not only as a fundamental institution within our social structure, but also as a means by which individuals give meaning to their lives.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMS7750</td>
<td>Pathogenic Mechanisms</td>
<td>4</td>
<td>(Also listed as M&amp;7650.) This advanced level course will expand the knowledge of basic microbiology by focusing on human-microbial pathogen interactions. The molecular basis of the pathogenic mechanisms will be emphasized. In addition, the student will gain a better appreciation and understanding of the complexities of the interactions between microbes and their human hosts.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED0160</td>
<td>Practicum: Anst for Ed</td>
<td>1</td>
<td>Anatomy students, mentored/supervised by an Anatomy educator, shall assist in the planning, organizing, delivering, and assessing of instruction in an educational setting applying pedagogical content knowledge in the academic area of Anatomy.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED0440</td>
<td>Mass &amp; Assessment in ED</td>
<td>3</td>
<td>The design and integration of traditional and alternative assessment in the classroom.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BBM2100</td>
<td>Intro to Biochemistry</td>
<td>2</td>
<td>Basic concepts in Biochemistry.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MBA7600</td>
<td>Marketing Strategy</td>
<td>3</td>
<td>Course emphasizes key elements of marketing and their importance to organizations including both processes and outcomes. Students will demonstrate an understanding of: The strategic role of marketing organizations, including the key role of a marketing plan in the firm/key strategic issues such as market segmentation, product and brand equity pricing, service satisfaction, and customer satisfaction.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>OLS3040</td>
<td>Leading Teams</td>
<td>3</td>
<td>Strategies for leading effective teams, improving teamwork, and building collaboration toward commonly shared goals.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MLB4611</td>
<td>Serology Lab</td>
<td>4</td>
<td>Pathogens and the stimulation of antibodies in vivo, and the use of these reactions to perform in vitro testing to diagnose and monitor the course of disease. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ME3940</td>
<td>Mech &amp; Mat EGR Intern I</td>
<td>3</td>
<td>Department internship course. Students are supervised via weekly seminars and regular feedback from employer. Must have completed all of the 2nd year courses as listed in the program guide. Minimum of 30 hours a week for a total of no less than 450 hours of work is required.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSN9940</td>
<td>Applied Teaching Prac</td>
<td>2</td>
<td>Basic craft of choreography in dance. Particular attention paid to use of various stimuli to create dances as well as the act of improvisation and how it relates to the ongoing process of choreography. Self-evaluation and critical analysis of choreographic works.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BAN3410</td>
<td>Choreography I</td>
<td>3</td>
<td>Undergraduate level ART 2070 Minimum Grade of D</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED4530</td>
<td>AYA ISS Methods</td>
<td>2</td>
<td>Provides developing professional educators instruction in current trends, issues and methods in adolescence and young adult social studies.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC4100</td>
<td>Math Models for Econ</td>
<td>3</td>
<td>Application of mathematical tools in the formulation of economic theory.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ISE4920</td>
<td>ISE Design II</td>
<td>3</td>
<td>Segment two of the ISE senior design sequence. Practicum results in the final engineering design and completion of the design project. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED6550</td>
<td>AYA Int Pt II Std T BM</td>
<td>3</td>
<td>Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades 7-12 in Integrated Mathematics.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC3190</td>
<td>Institutional Economics</td>
<td>3</td>
<td>Interrelationships between market and nonmarket forces, exploring contemporary social, technological, political, and other influences on resource allocation decisions and on economic change. Integrated Writing course.</td>
</tr>
</tbody>
</table>
Fall 2020  EES6340  6340  Mapping Methods  EES Earth & Environmental Sciences 2  This course teaches the key basic skills of mapping and measurement with a Brunton compass as applied to field studies in the earth and environmental sciences. Key skills include pace & compass traverse mapping, triangulation, bearing and reverse bearings, measurement of lines and planes.  GR  LL  Lecture/Lab Combination

Fall 2020  ME4820  4820  Corrosion  ME Mechanical and Materials Engr 3  This course covers the principles of the corrosion and prevention methods from thermodynamics to electrochemical kinetics. Fundamental of passivation, anodic polarization, and cathodic protection will be elucidated. Laboratory exercises are included.<b> Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D and (Undergraduate level ME 3310 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D)/</b><br><br><br>UG  LL  Lecture/Lab Combination

Fall 2020  PSYW990  9990  Meta-Analysis  PSY Psychology 1  Introduction to the use of meta-analytic methods in psychology.  GR  LE  Lecture

Fall 2020  KNH1680B  1680B  Swimming: Advanced  KNH Kinesiology & Health 1  Advanced level of skills and knowledge in Swimming: Advanced. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  FR4630  4630  20th Cen Lit: Drama  FR French 3  Study of contemporary plays by playwrights such as Anouilh, Beckett, Césaire, Duraz, Genet, Ionesco and Sartre. Taught in French.<b> Department Managed Prerequisite(s): (Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D)/</b><br><br><br>UG  LE  Lecture

Fall 2020  CHM2110  2110  Organic Chemistry I  CHM Chemistry 3  Principles, theories, and applications of the chemistry of carbon compounds.  UG  LE  Lecture

Fall 2020  DAG6010  6010  DAGSI Registration  DAG DAGSI 0.5  Students enrolled in a DAGSI program will take this online registration course.  GR  LE  Lecture

Fall 2020  PSY6400  6400  Ind/Org Psych Cap  PSY Psychology 3  Communication-intensive seminar integrating knowledge on industrial/organizational psychology. Topics will vary.  GR  SE  Seminar

Fall 2020  URS4970  4970  Nonprofit Internship  URS Urban Affairs 3  Senior-level internship in a local nonprofit agency.  UG  IN  Internship

Fall 2020  EC7250  7250  Econ Social & Eco Sys  EC Economics 3  Economies as subsystems of social systems and ecosystems. Karl Polanyi's and Douglass North's analyses of institutions and feedbacks between economy and culture. Human ecology and ecological economics perspectives on feedbacks between economy and ecology.<b> Department Managed Prerequisite(s): Graduate level MBA 5200 Minimum Grade of C or (Undergraduate level EC 2040 Minimum Grade of D and Undergraduate level EC 2050 Minimum Grade of D)/</b><br><br><br>UG  LE  Lecture

Fall 2020  HST4050  4050  Medieval History  HST History 3  Examines the period following the decline of the Roman Empire to ca. 1450. Topics vary and can include European, Islamic, and Byzantine civilizations. Integrated Writing course.  UG  LE  Lecture

Fall 2020  PSY7990  7990  Thesis Research  PSY Psychology 1  Research conducted for the M.S. thesis. Research must be approved by supervisory committee, submitted in writing and defended by public oral examination.  GR  IS  Independent Study

Fall 2020  KNH1570A  1570A  Soccer: Outdoor  KNH Kinesiology & Health 1  Fundamental skills and knowledge of Soccer: Outdoor. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  PLS4010  4010  Dev & Con Am Civ Lab  PLS Political Science 3  Birth and development of fundamental liberties in American society. Views of political philosophers, important historical events, and altered the role of the court. Integrated Writing course.  UG  LE  Lecture

Fall 2020  PHL4010  4010  Major Philosophers  PHL Philosophy 3  In-depth study of the works of a major philosopher. Topics vary.  GR  LE  Lecture

Fall 2020  ABS7900  7900  ABS Graduate Project  ABS Applied Behavioral Science 1  Practical application of knowledge gained through coursework applied to a capstone experience.  GR  IS  Independent Study

Fall 2020  ECE7600  7600  Integ Lit & Express Art  ECE Education - Early Childhood 3  Planning literacy experiences that incorporate visual arts, poetry, music, and creative movement.  GR  LE  Lecture

Fall 2020  ENG5030  5030  TA Practicum II  ENG English 1  For English teaching assistants only. Students are assigned to an instructional class that focuses on the teaching of writing in ENG 2100 for a supervised practicum experience.  GR  PR  Practicum

Fall 2020  FTN4860  4860  Internship in FIN Serv.  FIN Finance 1  One-semester faculty-supervised internship in financial services. Students work in a firm or public agency, participate in seminars, and submit reports. Topics vary. Organized by week (14 week academic calendar and final exam) or other defined schedule.  UG  IN  Internship

Fall 2020  BME7310  7310  Adv Ergon  BME Biomedical Engineering 3  Design of workstations and hand-tools using physiology and biomechanics approach. Ergonomic analysis of assembly, machining and manual material handling operations. Practical solutions and real world case studies to improve productivity and reduce workers compensation costs.<b> Department Managed Prerequisite(s): Graduate level HHE 6310 Minimum Grade of D/</b><br><br><br>UG  LE  Lecture

Fall 2020  PSI9900I  9900 Prof Dissertation  PSI Professional Psychology 1  An original creative work, produced independently by the student with guidance from the committee that exemplifies the student's ability to think critically, to evaluate research, theory, or other scholarly or clinical work, and to write clearly and concisely.  GR  IS  Independent Study

Fall 2020  HST3120  3120  Studies Russian/Soviet History  HST History 3  Studies in Russian or Soviet history, for example a survey of a sub-field or a specific topic. Topics vary.  UG  LE  Lecture

Fall 2020  TEG2950  2950  Automation Systems  TEG Technical Engineering 3  Self-paced learning module applying theory to application in a working automated system. Learners will construct or modify an existing system and deal with new applications and tasks added to the system operation.<b> Department Managed Prerequisite(s): Undergraduate level TEG 2974 Minimum Grade of D/</b><br><br><br>UG  LL  Lecture/Lab Combination

Fall 2020  ASM3730  3730  Aerospace Toxicology  ASM Aerospace Medicine 3  Aerospace Toxicology is a required course as suggested by the American Board of Preventive Medicine in the specialty training arm of Aerospace Medicine. It is designed to integrate fundamental aspects and theory of toxicological principles with current operational Aerospace Medicine issues encountered by today's Flight Surgeons.  GR  SE  Seminar

Fall 2020  MEH020  0200  Engg Prog with Matlab  ME Mechanical and Materials Engr 3  Introduces a broad range of programming concepts using Matlab. Covers concepts such as functions, loops, logic control, graphical user interface generation, computer I/O, and communication between disparate languages.<b> Department Managed Prerequisite(s): Undergraduate level EGR 1010 Minimum Grade of D/</b><br><br><br>UG  LE  Lecture

Fall 2020  ART5180  5180  Art Theory and Criticism  ART Art 3  Historical surveys and intensive studies in art theory and criticism.  GR  LE  Lecture

Fall 2020  REL4970  4970  Senior Project  REL Religion 3  Guided research culminating in a major paper on a topic chosen by the student and the instructor. Students develop a comprehensive bibliography, prepare a detailed outline, and write and revise the final project. May be completed for Honors.  GR  IS  Independent Study

Fall 2020  SOC5800  5800  Population and Society  SOC Sociology 3  Introduction to factors influencing the structure and growth of human populations and the social consequences of population change. Emphasizes patterns of fertility, mortality, and migration in today's societies and methods and materials used to study populations.  GR  LE  Lecture

Fall 2020  PHY1050L  1050L  How Things Work Lab  PHY Physics 1  Experiments illustrating the physics of everyday scientific and technological phenomena and devices, including those associated with the generation, detection, and application of sound, light, and energy.  UG  LB  Lab
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Type</th>
<th>Credits</th>
<th>Description</th>
<th>Department</th>
<th>Prerequisites</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME7690</td>
<td>Vibe Test &amp; Hll Mon</td>
<td>ME</td>
<td>3</td>
<td>Advanced theoretical and practical aspects of vibration testing including: signal analysis, windowing, transducers, exciters, modal identification techniques, rotor dynamics, and measurement uncertainty. Independent lab study,-b&gt; Department Managed Prerequisite(s): Graduate level ME 6210 Minimum Grade of D-&lt;b&gt;</td>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td></td>
</tr>
<tr>
<td>REL5810</td>
<td>Anthropology of Religion</td>
<td>REL</td>
<td>3</td>
<td>(Also listed as ATH 6020) Anthropological approach to the meaning and function of religion in social life and the nature of the thought or belief systems that gave rise to different forms of religious life. Emphasis on primitive and peasant societies.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MGT4990</td>
<td>Strategy Domestic Inf</td>
<td>MGT</td>
<td>3</td>
<td>Issues in international business to build an interdisciplinary strategic perspective on management in a global environment.</td>
<td>UG</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>CNL4640</td>
<td>Crisis Counseling</td>
<td>CNL</td>
<td>3</td>
<td>Background, theory, practice, and needs of crisis intervention within the helping professions. Explores a variety of crisis intervention models and community resources.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ACC4780</td>
<td>Hon: Ind Study in ACC</td>
<td>ACC</td>
<td>2</td>
<td>Research in accounting for fulfillment of the Honors Program project requirement.</td>
<td>UG</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>EGR8950</td>
<td>Dissertation</td>
<td>EGR</td>
<td>1</td>
<td>Graded pass/unsatisfactory.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>PSY2430</td>
<td>Psy Issues in Aging</td>
<td>PSY</td>
<td>3</td>
<td>Explore scientific research on the topic of aging. Will cover issues facing older adults in today's society. Replaces the view of aging as a time of illness, helplessness, and disability, and has view of aging as a time of continued growth, change, and maturation. In addition to the decline of aging, attention will be given to the different ways older individuals interact with society, the unique way they experience social situations, and the specific issues they face as a result of the aging process.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>HED3320</td>
<td>Diverse Needs in Health</td>
<td>HED</td>
<td>3</td>
<td>Addresses the diverse needs of students related to health status and health education. Topics include diabetes, asthma, grief, sexuality in individuals with disabilities, ESL, reading, and individualized education plans.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BIO6020</td>
<td>Current Lit in Biology</td>
<td>BIO</td>
<td>3</td>
<td>Writing intensive course using current research articles to develop critical thinking skills designed for advanced undergraduates or graduate students. Four different sections emphasize broad areas of biology.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CHI3010</td>
<td>Advanced Chinese I</td>
<td>CHI</td>
<td>3</td>
<td>Development of linguistic proficiency through studying advanced reading and grammar patterns with emphasis on cultural aspects of communication. Taught in Chinese. If prerequisite not met, contact instructor for permission.&lt;b&gt; Department Managed Prerequisite(s): Undergraduate level CHI 2020 Minimum Grade of D or AP Chinese Language &amp; Culture 4&lt;b&gt;</td>
<td>UG</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td></td>
</tr>
<tr>
<td>IHE6712L</td>
<td>Sim &amp; Stock Models Lab</td>
<td>IHE</td>
<td>0.5</td>
<td>Required laboratory for IHE 6712.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
<td></td>
</tr>
<tr>
<td>KNH1450</td>
<td>Rape Def Strat Basic</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Rape Defense Strategies: Basic. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
<td></td>
</tr>
<tr>
<td>ISE4711</td>
<td>Optimization Methods</td>
<td>ISE</td>
<td>4</td>
<td>Introductory course on deterministic models in research operation and their applications in Industrial and Systems Engineering. Students will formulate appropriate models, and obtain and interpret results in the context of ISE problems.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>URS6390</td>
<td>Issues-Nonprofit Admin</td>
<td>URS</td>
<td>3</td>
<td>Exploration of issues and topics related to the administration of nonprofit organizations.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CEG6550</td>
<td>Op Sys Concepts &amp; Usage</td>
<td>CEG</td>
<td>4</td>
<td>Provides introduction to Linux and Windows operating systems and system administration. Covers files and directories, ownership and sharing, programs and processes, system calls, libraries, dynamic linking, command line shells, scripting, regular expressions and secure network protocols.&lt;b&gt; Department Managed Prerequisite(s): Undergraduate level CS 1160 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D or&lt;b&gt;</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MUS4550</td>
<td>Vocal Literature I</td>
<td>MUS</td>
<td>2</td>
<td>Survey of vocal literature from the 18th through the 20th century emphasizing German lieder, French melodies, and English and American art songs.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>RHB3660</td>
<td>Wellness for Helpers</td>
<td>RHB</td>
<td>3</td>
<td>Importance of wellness and stress management to maximize their career potential in the social service field. Psychological, psychological, and social elements associated with stress. Various approaches to enhance overall wellness and lessen life stress.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>REL3100</td>
<td>Topics in Judaism</td>
<td>REL</td>
<td>3</td>
<td>Topics vary.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>FAS5270</td>
<td>Nutrient Management</td>
<td>FAS</td>
<td>3</td>
<td>Fundamental concepts of soil sampling, soil test interpretation, and development of nutrient recommendations for crop production. Topics include common fertilizers and other nutrient sources, application rates to satisfy crop production requirements, and application methods and timing of nutrients in various forms.</td>
<td>UG</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td></td>
</tr>
<tr>
<td>MKT4600</td>
<td>Advanced Retailing</td>
<td>MKT</td>
<td>3</td>
<td>For students who plan to pursue a career in retailing or who plan to develop and grow a business. Advanced instruction and skill development through a focus on such topics as retail formats, multichannel retailing, store layout and location, and the retail and services communications mix.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MBLY4510</td>
<td>Basic Clinical Chemistry</td>
<td>MBLY</td>
<td>2</td>
<td>Theory and application of human biochemistry and principles of chemistry techniques used in the analysis of blood and other body fluids.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PLSL400</td>
<td>Law and Society</td>
<td>PLSL</td>
<td>3</td>
<td>Examines the judicial process, civil litigation (torts, contracts, family law) and pertinent constitutional issues.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MKT7950</td>
<td>Mkt Analytics: Big Data</td>
<td>MKT</td>
<td>3</td>
<td>In this course, students conduct practical applications of technologies, from prediction to marketing intelligence to marketing analytics. Specific data analytic methodologies covered include predictive analytics, data mining, and Big Data related technologies.&lt;b&gt; Department Managed Prerequisite(s): Graduate level MBA 7600 Minimum Grade of C and Graduate level MBA 7800 Minimum Grade of C (MBA 7800 can be taken concurrently)&lt;b&gt;</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BMB8990</td>
<td>Biochemistry Research</td>
<td>BMB</td>
<td>0.5</td>
<td>Original research in a BMB faculty laboratory. Variable credit hours. 5 - 15.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>GER5220</td>
<td>Adv. Writing in German</td>
<td>GER</td>
<td>3</td>
<td>Oral and written composition in German; translations from English into German.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PSI9570</td>
<td>Trauma Ther Asmt Interv</td>
<td>PSI</td>
<td>3</td>
<td>Introduction to the psychology of trauma, covering history of trauma theories, etiology, neurobiological impact of trauma across the life-span, types of trauma, symptoms, diagnosis, and treatment of trauma-responses in adults and children, particularly post-traumatic stress disorder (PTSD) within a cultural context. Management of countertransference reactions and recognition, prevention, and treatment of compassion fatigue and vicarious traumatization in the clinician will be emphasized.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020  MTH4880  4880 Independent Read Math  MTH  Mathematics  1 Selected readings in mathematics.  UG  IS  Independent Study
Fall 2020  SOC3400  3400 Sociological Analysis  SOC  Sociology  3 Focus on quantitative methods to analyze and interpret data in the social sciences. Prior completion of Math 1450 (or WSU Core Element 2 equivalent) is strongly recommended.  UG  LE  Lecture
Fall 2020  PN7920  7920 Mechanisms of Cell Death  PN  Physiology & Neuroscience  2 Signalling and Molecular mechanisms of Apoptotic Cell Death and relationship to human diseases.  GR  LE  Lecture
Fall 2020  BIO6990  6990 Special Prob in Biology  BIO  Biology  1 All assignments, reading material, and experimentation are determined by instructor. Typically, instructional material will be derived from primary research literature and writing a critical review paper will be required. This does not discount inclusion of relevant laboratory or field exercises. Instruction will generally consist of one-on-one, student:instructor discussions and mentoring.  GR  IS  Independent Study
Fall 2020  BMS5950  9590 Process Medical Images  BMS  Biomedical Sciences  3 Digital image processing and its application to medical images. Topics include image display, compression, filtering, spatial versus frequency domain techniques, edge detection, morphological operations, registration and classification.  GR  LE  Lecture
Fall 2020  EDL9800  9800 Comm Relation & Process  EDL  Educational Leadership  3 The course examines relationships between schools and communities from demographic, political and marketing perspectives. The course focuses on school and community roles in delivering educational programs and services responsive to local needs.  GR  SE  Seminar
Fall 2020  TH4330  4330 Comp Graphics Theatre II  TH  Theatre  3 Tools and techniques available to produce paint elevations, projections, and theatrical designs using existing and created images.  UG  ST  Studio
Fall 2020  CIN6010  6010 CIN. Theory and Practice  CIN  Counseling  3 Presents an overview of the major theoretical approaches to counseling. Key concepts, therapeutic processes, and techniques will be examined. Opportunity will also be available for discussion of philosophical and ethical issues in counseling.  GR  LE  Lecture
Fall 2020  ATH3310  3310 Human Evolution  ATH  Anthropology  3 Review of the fossil and archaeological records and the genetic evidence for human evolution, and examination of evolutionary principles and current issues addressed by paleoanthropology. <b>UG Department Managed Prerequisite(s): Undergraduate level ATH 2100 Minimum Grade of D</b>  UG  LE  Lecture
Fall 2020  REL5770  5770 Letters of Paul  REL  Religion  3 Literary and historical study of the letters of Paul, aiming to discover when and why they were written and how they fit into the development of the early Jesus movement. Some consideration of the biography of Paul and his influence.  GR  LE  Lecture
Fall 2020  BIO6070  6070 Wetlands Biology  BIO  Biology  5 Ecological investigation of wetlands of the U.S. with emphasis on the Midwest. Primarily field oriented with some lecture. Covers soils, vegetation, hydrology, conservation, and restoration. Requires two weekend trips and written report.  GR  LL  Lecture/Lab Combination
Fall 2020  PLS4510  4510 Contemp African Politics  PLS  Political Science  3 Political processes and governmental institutions of sub-Saharan Africa; special attention to dynamics of political development and social and economic change. Comparative analysis of selected African political systems. Integrated Writing course.  UG  LE  Lecture
Fall 2020  LEP2120  2120 Writing - Level 2  LEP  LEAP  0 Writing for low-intermediate/intermediate ESL students. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture
Fall 2020  MGT7030  7030 Sen Human Resource Mgt  MGT  Management  3 Analysis of the principal functions, processes, and problems involved in the management of human resources. Evaluation of personnel systems, with emphasis on implications of personnel policy and practice.  UG  LE  Lecture
Fall 2020  ISE4712  4712 Sim & Stock Models  ISE  Industrial & Systems Engr  4 Study of quantitative techniques to analyze and predict system performance. Topics include queuing models, simulation, model validation, data collection, quantitative analysis of system performance, and system design evaluation.  UG  LE  Lecture
Fall 2020  EDT8490  8490 Online Courses Interactive  EDT  Educational Technology  3 Examines the theory and practices of using educational technologies to ensure online courses include ample interaction. Class will include the knowledge and skills necessary to utilize some of these educational technologies.  GR  LE  Lecture
Fall 2020  MEE510  5110 Thermodynamics 1  ME  Mechanical and Materials Engr  3 This course studies energy and energy conversion from the classical thermodynamics perspective. Properties of fluids, conservation of mass, conservation of energy, and the second law of thermodynamics are studied. These principles are applied to engineering problems. <b>UG Department Managed Prerequisite(s): Undergraduate level EGR 1010 Minimum Grade of D or Undergraduate level MTH 2310 Minimum Grade of D (MTH 2310 can be taken concurrently) and Undergraduate level PHY 2400 Minimum Grade of D</b>  UG  LE  Lecture
Fall 2020  URS6990  6990 Special Topics  URS  Urban Affairs  1 Advanced study in selected topics in urban studies. Topics may include new developments in methodology or the various subfields of the discipline.  GR  LE  Lecture
Fall 2020  NUR2400C  2400C Intro Clin Nursing Clinical  NUR  Nursing  0 Required clinical for NUR 2400.  UG  CL  Clinical
Fall 2020  ART1470  1470 Adv Printmkg Intaglio  ART  Art  3 Development of personalized concepts and individual aesthetic expression in printmaking. This course has a fee that is non-refundable once the term begins. <b>UG Department Managed Prerequisite(s): Undergraduate level ART 3670 Minimum Grade of D</b>  UG  LB  Lab
Fall 2020  EDS6400  6400 Child & Med/Phys/Sens/AU  EDS  Education - Special Education  3 Medical, physical, sensory, and autism spectrum needs of individuals with exceptionalities, birth-22. Collaboration of families and professionals, resources, accommodations, modifications, and methods. Direct work with appropriate aged individual with moderate/intensive needs required.  GR  LE  Lecture
Fall 2020  BIO4530L  4530L Respiratory Physiology Lab  BIO  Biology  0 Required laboratory for BIO 4530.  UG  LB  Lab
Fall 2020  MIS7900  7900 Bus Data Visualiztn  MIS  Management Information Systems  3 An in-depth study of business data visualization technologies and applications. A special focus on the application of analytics and visualization technologies for the discovery of insights from business data. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture
Fall 2020  MIS4800  4800 Special Topics in IS  MIS  Management Information Systems  3 Each offering focuses on one area of emerging technology or information systems management. Topics could include information assurance, information architecture, data mining and data warehousing.  UG  LE  Lecture
Fall 2020  PPH7210  7210 Maternal and Child Hlth  PPH  Population & Public Health  3 Concentrating on women of childbearing age, pregnant women, infants, and children from birth through 21 years, this course provides an introduction to the health needs of women and children and to the delivery of services/interventions designed to meet these needs. Critical areas in maternal, infant and child health are examined from several perspectives. Students learn the biological, social, political, and economic context within which maternal and child health problems arise.  GR  LE  Lecture
This course was developed to give the medical student completing the clinical investigation M.S. graduate program a chance to showcase their research completed as an MD/MS student. The timeline can be rearranged depending on the schedule of the student and the faculty member.

This course explores relationships between music and the other arts, especially visual art and literature.

Examine a variety of countries, topics and periods in European history from the Enlightenment to the present. Topics vary.

Activity course for a variety of content areas.

This course accompanies Multi Age Student Teaching focusing on pedagogical content knowledge and completion of and submission of the edTPA.

Space Medicine II will introduce Aerospace physicians to the unique environment of medical operations involved in sub-orbital, orbital, and beyond earth orbit space flight operations.

Representative German authors of the period. Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3260 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D.

This course is a follow-up to ISM Research and Career Development I with the goal of continuing to advance student preparation for thesis research. This course builds on the prerequisite, ISM 8000, with a focus on the development of research projects and proposals. Students will continue to get exposure to the research activities of program faculty via seminars. In addition, the student activity in this course will focus on the development of a mock research proposal.

Principles and application of computational methods and technologies to neuroinformatics and neuroengineering; analysis of applications related to brain-system interface and augmented sensory perception; articulation of various methods of non-invasive neuroscience measurements.

Survey of the principles of corrosion processes with application to metallic and nonmetallic materials. Principles of electrochemistry are included. Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D and Undergraduate level ME 3310 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D.

Theory and application of conservation equations for fluid mechanics. Develops boundary layer equations for laminar and turbulent flow. Topics include incompressible, viscous, supersonic, and hypersonic flows. Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D or Graduate level ME 3350 Minimum Grade of D or Graduate level ME 3350 Minimum Grade of D.

Thermodynamics applied to chemical systems: solids, liquids, gases, and mixtures thereof. Kinetic rates and mechanisms of chemical reactions in the gas phase and solutions.

Group class introduces students to fundamentals of tap dance technique.

Basic fundamental scales and principles associated with the jazz tradition. Includes the study and performance of the blues, minor pentatonic, minor seventh, and major scales.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Course Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAA6620</td>
<td>Spec. Topics Sta Affairs</td>
<td>1</td>
<td>Topical related to the various functional areas and/or current issues in student affairs in higher education will be offered. Past topics have included Working with Students with Disabilities, Supervision Skills, Job Search in High Education, and Working with the Media.</td>
</tr>
<tr>
<td>EES6250</td>
<td>Climate Change</td>
<td>3</td>
<td>This lecture course deals with the causes and variations of temperature and precipitation patterns over tens to millions of years, the mechanisms that drive them (air pollution, orbital and solar variation, etc.). It includes the nature of evidence for previous climatic conditions and the bases for predictions of future climate change.</td>
</tr>
<tr>
<td>ME7950</td>
<td>Thesis</td>
<td>1</td>
<td>Masters thesis.</td>
</tr>
<tr>
<td>WGS6000</td>
<td>Topics Gender/Sexuality</td>
<td>3</td>
<td>Issues, approaches, and topics in the field of gender and sexuality studies. Titles and topics vary.</td>
</tr>
<tr>
<td>ME7370</td>
<td>Cardio BioFluid Mechanic</td>
<td>3</td>
<td>This course describes the intricate relations between the fluid mechanics and biomedical aspects of the cardiovascular system. By the end of the course, students will be able to: 1) Identify, recognize and define bloodflow mechanisms concepts in relation to the cardiovascular system. 2) Model the flow and fluid-structure interactions in cardiovascular structure. 3)Apply this knowledge to analyze clinical research problems.4) Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D+/B.</td>
</tr>
<tr>
<td>IT3210</td>
<td>Print of Package Design</td>
<td>3</td>
<td>Complete coverage of step-by-step creation of package design including the pre-production and production processes.</td>
</tr>
<tr>
<td>ENG3180</td>
<td>Antich Writers Workshop</td>
<td>3</td>
<td>Participation in the one-week summer Antich Writers’ Workshop and preparation of a portfolio of polished creative writing.</td>
</tr>
<tr>
<td>PDX7130</td>
<td>P&amp;D Journal Club-Summer</td>
<td>1</td>
<td>WSU P&amp;T faculty driven course. Students are presented with current literature on a around a specific topic. The students will give presentations on the material.</td>
</tr>
<tr>
<td>CEG6870</td>
<td>Intro Intel Cont Sys</td>
<td>3</td>
<td>Foundations of fuzzy set theory, system modeling using fuzzy rules, structure of fuzzy controllers and PID fuzzy controller design. Also included are neural network foundations, single layer/multi-layered perceptions, learning rules, basics of adaptive controls and adaptive neural control.</td>
</tr>
<tr>
<td>PSI9930</td>
<td>First Year Clinical Exp</td>
<td>0</td>
<td>Students, under supervision, become acquainted with the work of professional psychologists through direct and indirect experience. Successful completion of two quarters is required for the PsyFh degree.</td>
</tr>
<tr>
<td>GEO4430</td>
<td>Geographic Info Sci Prin</td>
<td>4</td>
<td>Study of the principles, structure and application of macro and micro spatial analytical techniques. Utilizes state-of-the-art software to create map layers that can be stacked and interpreted.</td>
</tr>
<tr>
<td>ACC5340</td>
<td>Federal Income Tax I</td>
<td>3</td>
<td>Federal income taxation of individuals. Analysis of the determinants of taxable income and the tax liability, including property transfers, receipt, passive activities and income characterization.</td>
</tr>
<tr>
<td>EDL5920</td>
<td>Tchr Ldr Masters Exit</td>
<td>1</td>
<td>An examination of Asian religious perspectives (Confucianism, Daoism, Buddhism, and Shinto) on the meaning and value of the natural world and the relationship between human beings and nature. Focus will be on environmental ethics in comparative Asian perspective.</td>
</tr>
<tr>
<td>REL5540</td>
<td>Asian Religious Ecology</td>
<td>3</td>
<td>An examination of Asian religious perspectives (Confucianism, Daoism, Buddhism, and Shinto) on the meaning and value of the natural world and the relationship between human beings and nature. Focus will be on environmental ethics in comparative Asian perspective.</td>
</tr>
<tr>
<td>PSY3340</td>
<td>Engineering Psychology</td>
<td>3</td>
<td>A survey of psychological principles and methods pertinent to issues of human-machine interactions. It is emphasized that basic and applied research inform each other and are both necessary for advancing the field.</td>
</tr>
<tr>
<td>ED4550</td>
<td>MA WL Methods</td>
<td>4</td>
<td>Prescribes world language curriculum and materials with emphasis on ACTFL Standards in order to plan and implement effective lessons and activities focused on PK-12 second language acquisition.</td>
</tr>
<tr>
<td>MIS3150</td>
<td>Data and Info Mgmt</td>
<td>3</td>
<td>Concepts, principles and data models of managing organizational data. Extensive experience in developing data models, applying relational database software, creating and using complex queries using Structured Query Language (SQL). Build custom multi-tier database applications using a web application language and a commercial database system.</td>
</tr>
<tr>
<td>ECE4200</td>
<td>Math Methods in ECE</td>
<td>4</td>
<td>Core curriculum and materials for teaching early childhood mathematics emphasizing conceptual math, growth mindset, integration, and interventions to meet the needs of diverse learners. Includes development and implementation of assessments, lessons, and appropriate modifications.</td>
</tr>
<tr>
<td>NUR1410</td>
<td>Nursing Elective</td>
<td>4</td>
<td>Titles and topics vary.</td>
</tr>
<tr>
<td>PSY4710</td>
<td>Sig Det Theory Psy Cap</td>
<td>4</td>
<td>Communication-intensive seminar integrating knowledge on signal detection theory in psychology. Integrated Writing course.</td>
</tr>
<tr>
<td>EDS4590</td>
<td>Assessment Skills for IS</td>
<td>3</td>
<td>Administration and interpretation of formal and informal educational assessment instruments and communication of assessment data to parents, students, and colleagues. Fifteen hours of field experience required. Integrated Writing course.</td>
</tr>
<tr>
<td>PL6520</td>
<td>Intl Human Rights</td>
<td>3</td>
<td>Examines the role of human rights in international relations. Considers contending definitions of human rights and debates over policy by focusing on thematic issues and case studies.</td>
</tr>
<tr>
<td>CHM4880</td>
<td>Ind Reading Chemistry</td>
<td>4</td>
<td>Selected readings in Chemistry.</td>
</tr>
<tr>
<td>BME7951</td>
<td>Thesis Research in BME</td>
<td>3</td>
<td>M.S. Thesis Research in Biomedical Engineering</td>
</tr>
<tr>
<td>HST7310</td>
<td>Seminar in Asian History</td>
<td>3</td>
<td>Examines topics from various periods of Chinese, Japanese, and other Asian histories. Topics vary.</td>
</tr>
<tr>
<td>KNI5260</td>
<td>Nutrition</td>
<td>3</td>
<td>Nutrient and food energy needs of the individual who is physically active. Tissue maintenance, growth and development, immune function, energy development, dietary guidelines and sound dietary practices are investigated.</td>
</tr>
<tr>
<td>CEG4510</td>
<td>3D Modeling/Animation</td>
<td>3</td>
<td>Transforms, interpolation, morphing, camera control, hierarchical kinematic modeling, rigid-body animation, controlling groups of objects, collision detection, image-based rendering. Students develop three programs and a final project relating to animation.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ECE5030</td>
<td>ECEG Effective Sci Instr</td>
<td>5030</td>
<td>Methods for teaching middle level science pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula, and materials suitable for teaching fourth and fifth grade science education.</td>
</tr>
<tr>
<td>BIO6470</td>
<td>Pop &amp; Comm Ecology</td>
<td>6470</td>
<td>Derivation and use of deterministic and stochastic population models, methods of analyzing community structure, composition, and dynamics.</td>
</tr>
<tr>
<td>SW7170</td>
<td>SW Capstone</td>
<td>7170</td>
<td>Implementation of a culminating research project following a rigorous qualitative and/or quantitative design to collect and analyze data to inform agency practice and/or policy decisions. Successful completion of culminating research project required for graduation.</td>
</tr>
<tr>
<td>NUR2100L</td>
<td>Hlth Pro &amp; Assess Adults Lab</td>
<td>2100L</td>
<td>Required laboratory for NUR 2100.</td>
</tr>
<tr>
<td>PHL4810</td>
<td>Independent Study</td>
<td>4810</td>
<td>Faculty-directed, individualized study on student-selected topics. Limited to majors and advanced students. Permission of department and a minimum 3.0 GPA required.</td>
</tr>
<tr>
<td>IST3650</td>
<td>Ohio History</td>
<td>3650</td>
<td>Survey of Ohio history from its Native-American origins to Ohio in the Post-Industrial Age.</td>
</tr>
<tr>
<td>URS4490</td>
<td>Issue in CityCommu Dev/ment</td>
<td>4490</td>
<td>Examines issues that impact city and community development as well as the impact of development. Topics include pollution, international development, housing and transportation.</td>
</tr>
<tr>
<td>SPN2120</td>
<td>IntSpell: LawEnf/Envtal Sc/W</td>
<td>2120</td>
<td>Continued study of intermediate Spanish with emphasis on law enforcement and social work contexts. Taught in Spans.--: Department Managed Prereq(s): Undergraduate level SPN 2010 Minimum Grade of D or Undergraduate level SPN 2110 Minimum Grade of D or Undergraduate level SPN 2210 Minimum Grade of D.</td>
</tr>
<tr>
<td>EES6610</td>
<td>Near-Surface Geophysics</td>
<td>6610</td>
<td>This course teaches the electrical geophysical methods most used for near surface studies, and include GPR (ground penetrating radar), Resistivity, and EM (electro-magnetics). The course includes theory, but especially focuses on data acquisition methods, data processing and analysis, as well as report preparation.</td>
</tr>
<tr>
<td>BMB4020</td>
<td>Research Perspectives</td>
<td>4020</td>
<td>Acquisition of research being carried out by faculty in the Biochemistry and Molecular Biology program.</td>
</tr>
<tr>
<td>DEV9415</td>
<td>Fndtn Ele Math Crcpt for Tehr</td>
<td>0415</td>
<td>Developmental Education 2  The course includes a study of number systems and place value; concepts and algorithms for the four operations; representations for operations on whole numbers, fractions, rational numbers, and decimal numbers. Includes an introduction to geometry of angles, lines, circles, and polygons. This course supports future early and middle childhood educators as they complete MTH 2415. This course is required as a co-require-all for those students who do not have at least an MPL of 23.</td>
</tr>
<tr>
<td>ART4120</td>
<td>Adv Studies Medieval Art</td>
<td>4120</td>
<td>Intensive studies of the period, major movements, and artists of the time. : Department Managed Prereq(s): Undergraduate level ART 3120 Minimum Grade of D.</td>
</tr>
<tr>
<td>ED4850</td>
<td>AYA Int II:Std Teach</td>
<td>4850</td>
<td>Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades 4-9 in Integrated Language Arts, Social Studies, Science, or Mathematics.</td>
</tr>
<tr>
<td>PLS4660</td>
<td>Politics in South Asia</td>
<td>4660</td>
<td>Political institutions and political, economic, security and international relations issues in India, Pakistan, Sri Lanka, Bangladesh and Nepal. Integrated Writing course.</td>
</tr>
<tr>
<td>PSY6270</td>
<td>Cog Neuro Capstone</td>
<td>6270</td>
<td>This graduate course will introduce students to current topics and controversies in cognitive neuroscience. The course will demonstrate how different research traditions are integrated to inform and advance present-day understanding of the relationship between brain and behavior.</td>
</tr>
<tr>
<td>RHB7000</td>
<td>Foundations of Rehab</td>
<td>7000</td>
<td>Explores the historical issues of rehabilitation counseling, working with people who have disabilities, and people first terminology. Additional components include interviewing an individual who has a disability and visiting a rehabilitation facility.</td>
</tr>
<tr>
<td>EES6260</td>
<td>EES Seminar</td>
<td>6260</td>
<td>Exposes students to selected research topics by reading and discussing, as a group, journal articles, book chapters, and research abstracts in earth and environmental sciences. Occasional lectures are presented by faculty or invited researchers. Students may give presentations prepared for professional meetings to the seminar for feedback and evaluation. Students conducting research may present their work in progress.</td>
</tr>
<tr>
<td>ENG2110</td>
<td>Research and Argument</td>
<td>2110</td>
<td>Adapts principles introduced in ENG 1100 to writing for educators. Emphasizes audience awareness, reflection, analysis, argument, research, and effective use of supporting source materials. Students may use any of the following courses to satisfy the requirements of the Core, but only one may count: ENG 2100, ENG 2110, ENG 2120, ENG 2130, or ENG 2140.</td>
</tr>
<tr>
<td>MIS2150</td>
<td>IS Apps Development</td>
<td>2150</td>
<td>This course introduces the fundamental principles of conceiving, designing, developing, and testing information systems applications for business. The course incorporates the applications development lifecycle: determining requirements including business processes, activities, and stakeholders; designing an optimal solution using appropriate business objects, data structures, and algorithms; developing the solution using a high-level programming language; and testing the completed solution.</td>
</tr>
<tr>
<td>GEO4900</td>
<td>Honors Project in Geo</td>
<td>4900</td>
<td>Independent advanced work on an approved honors project.</td>
</tr>
<tr>
<td>MUA4120</td>
<td>Applied Music</td>
<td>4120</td>
<td>Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.</td>
</tr>
<tr>
<td>REL3100</td>
<td>Topics in Judaism</td>
<td>3100</td>
<td>Topics vary.</td>
</tr>
<tr>
<td>FTN6220</td>
<td>Analytic Corp. Fin. Info</td>
<td>6220</td>
<td>This course analyzes corporate financial information from an investment analyst perspective.</td>
</tr>
<tr>
<td>ED4510</td>
<td>MCE Internship II:StuTch</td>
<td>4510</td>
<td>Teacher candidates are assigned to a school for intensive teaching experience in grades 4-9 under the direct supervision of an experienced classroom teacher.</td>
</tr>
<tr>
<td>CHM1050L</td>
<td>Chemistry: Living Things Lab</td>
<td>1050L</td>
<td>Required laboratory for CHM 1050.</td>
</tr>
<tr>
<td>CHM1050L</td>
<td>Chemistry: Living Things Lab</td>
<td>1050L</td>
<td>Required laboratory for CHM 1050.</td>
</tr>
</tbody>
</table>
ATR2620 2620 Emergency Medical Response 4 Recognition of athletic health care providers.

PHY6600 6600 Intro to Quantum Mechanics I 3 Introduction to ideas and methods of the quantum mechanics. Applications to selected one- and three-dimensional problems.

EDLD9590 9590 Dist Lx/leader Prep: Milpht 1 Candidates explore various educational leadership topics/issues and their relationship to praxis.

SOC3510 3510 Individual and Society 3 Focused upon the interaction of individual and group lifeworlds, this course explores theoretical arguments and ontological and methodological problems. Students will be exposed to the interdisciplinary area of human factors engineering. Students will be exposed to the

PSY4030 4030 VLSI Design 3 Required laboratory for PSY 3630.

MEU4490 4490 University Women's Choral Ensembles 1 Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

DAN1220 1220 Jazz for MT2 1 Group class introduces Musical Theatre majors to fundamentals of jazz and modern dance technique. ST 316

MKT3600 3600 Retailing & E-Commerce 3 Marketing analyzes performance of marketing functions at the retail level. Emphasizes institutional and competitive factors and management of the marketing mix as it relates to retail market segments.

MEU4490 4490 Chamber Players 1 Exploration and performance of compositions for small wind ensemble (usually 8 to 16 players). Typical repertoire may include works by Gabrieli, Mozart, Beethoven, Schubert, Dvorak, Strauss, or others. The ensemble functions according to a player pool concept, utilizing instrumental forces as needed for various works. Audition and instructor permission required.

SOC3620 3620 Race and Ethnicity 3 Study of intergroup, racial, and ethnic group relations including the processes and consequences of conflict, prejudice, and discrimination.

PSY4030 4030 Practicum in Applied Psy 3 Supervised work in an applied psychological setting consistent with students' individual interests (e.g., mental health agency, industrial, or organizational setting). Graded pass/unsatisfactory.

PHL4970 4970 Senior Project 3 Guided research culminating in a major paper on a topic chosen by the student and the instructor. Students develop a comprehensive bibliography, prepare a detailed outline, and write and revise the final project. May be completed for Honors.

ISE4300 4300 Fund of Human Fact Egr 3 Broad overview of the interdisciplinary area of human factors engineering. Students will be exposed to the

ENG7350 7350 Div in EC Classrooms 3 Examination of sources of individual differences within the early childhood classroom: culture/ethnicity, race, language, social, learning style/ability, and gender.

ENG7350 7350 Sem in Cultural Periods 3 Reading, research, reports, and discussion of topics dealing with the literature and culture of particular historical periods or with literary movements (e.g., the Middle Ages, Romanticism, or Postmodernism). Required laboratory for ENG 7350.

PSY6360L 360L Condition & Learning Mh Lab 3 Family science and nursing theories are used as frameworks to assess and analyze family functioning including health promotion and risk identification of families experiencing health issues. Therapeutic interventions are discussed including multidisciplinary approaches.

PSY5610 5610 Conditioning & Learning 3 Introduction to experimental findings and contemporary theories of conditioning, learning, and motivation.

NUR7106 7106 Adv Fam Nsg 3 Family science and nursing theories are used as frameworks to assess and analyze family functioning including health promotion and risk identification of families experiencing health issues. Therapeutic interventions are discussed including multidisciplinary approaches.

PLS4050 4050 Political Polar in Am Politics 3 Explores the causes and consequences of the deepening political divide in the U.S. Evaluates the role played by political elites and institutions such as the media and political parties in furthering political division. Integrated Writing course.

EES3680 3680 Hazardous Waste 3 Covers the issues and methods surrounding the assessment of various types of academic/learning problems including academic under preparation, impact of psychological impairment, impact of physical impairment, specific learning disabilities, and ADHD.

PSI9140 9140 Educational Assessment 3 Covers the issues and methods surrounding the assessment of various types of academic/learning problems including academic under preparation, impact of psychological impairment, impact of physical impairment, specific learning disabilities, and ADHD.

LE1140 1140 Police Academy 5 3 Ohio Police Training Academy curriculum. Intermediate policing problems and procedures. Examine procedures in traffic and criminal investigations, including report writing. Requires admission to Grand Lake Law Enforcement Academy.

NUR7550 7550 Peds Minor Ill/Injuries 6 Application of advanced practice nursing skills integrating theory, research findings, and differential diagnoses in the provision of primary and minor acute care for children/adolescents in families. Clinical learning will incorporate use of case management and multi-disciplinary collaboration with consideration of physical, social, and psychological factors.

EDLD9330 9330 Instructional Leadership 3 Provides opportunities to explore the topic of instruction in depth and to apply knowledge and strategies to the process of instructional improvement.

PLS260 5260 Black Women and Politics 3 Examines the role of race and gender in the study of the political behavior of black women in the U.S., Africa and the diaspora.

IT2020 2020 Photoshop II 3 Advanced tools and techniques; topics include color harmonies, color value and saturation, color studies, various illusions created by contrast, value and saturation.
Fall 2020  CS1011  1011  Comp Software Prod Tools  CS  Computer Science 3  Advanced Microsoft Office software for problem solving and data analysis. Spreadsheet and database features such as macros, Visual Basic for Applications in spreadsheets, formula auditing, data validation, pivot tables, and web integration. <br>Department Managed Prerequisite(s): Undergraduate level CS 1010 Minimum Grade of D or better.

Fall 2020  MKT3300  3300  International Marketing  MKT  Marketing 3  Introduce the concepts and language of international marketing and examine institutional, behavioral, and managerial aspects across a diverse section of national marketing systems and multinational organizational operations. <br>Department Managed Prerequisite(s): Undergraduate level MKT 2500 Minimum Grade of D or better.

Fall 2020  KNSH1780A  1780A  Weight Training  KNSH  Kinesiology & Health 1  Fundamental skills and knowledge of Weight Training. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020  CHI2010  2010  Intermediate Chinese I  CHI  Chinese 3  Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. <br>Department Managed Prerequisite(s): Undergraduate level CHI 1020 Minimum Grade of C in CHI 1010 and AP Chinese Language and Culture 3 or better.

Fall 2020  ARAS120  5120  Levantine Arabic  ARAS  Arabic 3  An introduction to the spoken Arabic dialect of Syria, Lebanon, Jordan and Palestine for advanced speakers of Arabic. <br>Department Managed Prerequisite(s): Undergraduate level ARAS 2020 Minimum Grade of D or better.

Fall 2020  HST3550  3550  Topics Latin Amer Hist  HST  History 3  Studies in region-level Latin American History. Topics vary.

Fall 2020  EDL9500  9500  Practicum II: CPID  EDL  Educational Leadership 3  The practicum provides significant opportunities for candidates to synthesize and apply the knowledge and skills identified in the district-level standards through sustained, standards-based work in real settings.

Fall 2020  PSY9065  9065  Measurement Models  PSY  Psychology 4  This course is designed to be an intensive investigation into measurement models used in psychology. The main goals of this course are (a) to expose students to classical test theory, confirmatory factor analysis, and item response theory frameworks, (b) train students to be proficient in using these frameworks to develop measures, and (c) give the students the expertise to think about appropriate statistical techniques for the demands they will face in the future.

Fall 2020  TH2380  2380  Movement I  TH  Theatre 2  Study of physical alignment, improvisation, warm-up methods, and exploration of movement dynamics as they relate to acting. A range of established disciplines will be incorporated in this study.

Fall 2020  MUS1520  1520  Musicianship II  MUS  Music 1  The study of sight singing and techniques for hearing and notation of melody and harmony.

Fall 2020  PTX8002  8002  Principles of Biomed Res  PTX  Pharmacology/Toxicology 1  Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. PBR provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.

Fall 2020  IT3100  3100  Advanced Illustration  IT  Information Technology 3  Use of illustrator for technical purposes such as creating logos and other files for the Web. <br>Department Managed Prerequisite(s): Undergraduate level IT 2500 Minimum Grade of D and Undergraduate level IT 2500 Minimum Grade of D or better.

Fall 2020  PN4880  4880  Ind Reading - Physiology  PN  Physiology & Neuroscience 1  Various physiology topics will be discussed with an assigned faculty advisor.

Fall 2020  PLS6360  6360  Criminal Law  PLS  Political Science 3  Examines the nature of criminal law and reviews the law pertaining to criminal liability, incapacities, the elements of crimes against persons, property, and habitation; the defenses to criminal actions.

Fall 2020  ART3040  3040  Studies in Art History  ART  Art 3  Problems and approaches to art and art history. Includes cross-period and interdisciplinary studies. Integrated Writing course. <br>Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D and Undergraduate level ART 2120 Minimum Grade of D or better.

Fall 2020  HST7720  7720  Seminar African History  HST  History 3  Examines particular periods, regions, or countries in African History. Topics vary. <br>Department Managed Prerequisite(s): Undergraduate level HST 3520 Minimum Grade of D or better.

Fall 2020  REL4930  4930  Seminar in Religion  REL  Religion 3  Intensive study and discussion of a significant topic in religion studies. Students will conduct semester long research projects culminating in a seminar paper. Topics vary. <br>Department Managed Prerequisite(s): Undergraduate level REL 3520 Minimum Grade of D or better.

Fall 2020  SOC3240  3240  Drug & Alcohol Workshop  SOC  Sociology 2  Participant observation of the intervention and treatment of drug and alcohol problems including therapy and counseling groups, client-therapist contact, and professionals practicing intervention and confrontation techniques.

Fall 2020  EE7530L  7530L  VLSI Des Synth Optim Lab  EE  Electrical Engineering 1  Required laboratory for EE 7530. <br>Department Managed Prerequisite(s): Undergraduate level EE 4620 Minimum Grade of D and Undergraduate level EE 4620L Minimum Grade of D or (Graduate level EE 6620 Minimum Grade of D and Undergraduate level EE 6620L Minimum Grade of D or better.

Fall 2020  TH3560  3560  Speech III  TH  Theatre 2  Techniques in voice and speech to strengthen and expand the student's instrument and skills. Applications made to classical acting texts.

Fall 2020  EE5310  5310  Devices and Circuits  EE  Electrical Engineering 3  Introduction to theory of and application of basic solid-state electronics devices for discrete and integrated circuits. Fundamentals necessary for comprehension and further study of modern engineering electronics. Major topics include carrier flow in semiconductors, p-n junction theory, semiconductor diodes, bipolar junction transistors, field-effect transistors, biasing, introduction to amplifiers, and frequency response.

Fall 2020  GER3510  3510  German Civilization  GER  German 3  Survey of the contribution of German-speaking people to world culture in art, music, science, education, philosophy, and religion. Taught in German. <br>Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or better.

Fall 2020  NUR7102  7102  Adv Path Across Lifespan  NUR  Nursing 3  An in-depth scientific knowledge base is explored relevant to selected pathophysiological states across the lifespan confronted by graduate nurses. This course provides a basis for the foundation of clinical decisions related to selected diagnostic tests and the initiation of therapeutic regimens. Pathophysiology is correlated to clinical diagnoses and management.

Fall 2020  SOC3500  3500  Sociological Theory  SOC  Sociology 3  Introduction to sociological theory focused primarily on the ideas, concepts, assumptions, imagery and classical roots of major contemporary theoretical orientations. Integrated Writing course.

Fall 2020  OIS1040  1040  Professional Devel IV  OIS  Office Information Systems 1  Professional development in office procedures, dress, personality, leadership, and other aspects of business development.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR7200</td>
<td>Emergent &amp; Acute Care</td>
<td>ATR</td>
<td>3</td>
<td>Preparation for, recognition of, and management of emergency medical conditions utilizing current evidence-based clinical best practices.</td>
</tr>
<tr>
<td>SPN2220</td>
<td>Inter Sp II for Medical</td>
<td>SPN</td>
<td>3</td>
<td>Intermediate level Spanish course with service component. Grammar, vocabulary, oral and written communication skills, cultural sensitivity training in the context of the medical profession. (£) Department Managed Prerequisite(s): Undergraduate level SPN 2210 Minimum Grade of D or (£).</td>
</tr>
<tr>
<td>EDT8120</td>
<td>Instr Design Digital ENG</td>
<td>EDT</td>
<td>3</td>
<td>Participants will learn the basic concepts and elements of an instructional design model. The course teaches the backward design approach and alignment to ensure that courses design focus on the big ideas. (£)</td>
</tr>
<tr>
<td>ENG0940</td>
<td>TESOL Internship</td>
<td>ENG</td>
<td>3</td>
<td>Supervision of students teaching English to speakers of other languages. (£) Department Managed Prerequisite(s): (Undergraduate level ENG 4740 Minimum Grade of B or Graduate level ENG 6740 Minimum Grade of B or Undergraduate level ENG 4745 Minimum Grade of B or Graduate level ENG 6745 Minimum Grade of B or Undergraduate level ENG 4760 Minimum Grade of B or Graduate level ENG 6760 Minimum Grade of B). (£)</td>
</tr>
<tr>
<td>HST7130</td>
<td>Seminar US Foreign Rel</td>
<td>HST</td>
<td>3</td>
<td>Examines history of United States public and private relations with the rest of the world from the mid-18th century to the present. Topics vary, and may include aspects of early republic, imperial, Cold War, and contemporary U.S. history. (£)</td>
</tr>
<tr>
<td>EC6440</td>
<td>Prob in Ec Development</td>
<td>EC</td>
<td>3</td>
<td>This course explores the problems of economic development in the third world and in economies in transition from socialism. Topics include hunger, unemployment, environmental degradation, privatization, gender, and ethnicity. (£) Department Managed Prerequisite(s): Graduate level EC 5210 Minimum Grade of C and Graduate level ECC 5220 Minimum Grade of C or (£).</td>
</tr>
<tr>
<td>WGS6200</td>
<td>Women Intl Persp.</td>
<td>WGS</td>
<td>3</td>
<td>Issues, approaches and topics in women and gender studies, with focus on racial, ethnic, cultural, and other differences among women outside of the U.S. Titles and topics vary. (£)</td>
</tr>
<tr>
<td>EGR1010R</td>
<td>Instr Math for Egr Apps Rec</td>
<td>EGR</td>
<td>0</td>
<td>Required recitation for EGR 1010. Integrated Writing course. (£)</td>
</tr>
<tr>
<td>STT7400</td>
<td>Categoric Data Analysis</td>
<td>STT</td>
<td>3</td>
<td>Standard techniques for analyzing and describing two-dimensional contingency tables. Logistic regression models and loglinear models developed for data structures involving categorical response variables, including model selection procedures, diagnostics, association graphs, and collapsibility. SAS procedures used for analysis of data sets. Multi-graph representations. Repeated categorical response data and generalized linear mixed effects models. (£) Department Managed Prerequisite(s): Graduate level STT 6620 Minimum Grade of D and Graduate level STT 6660 Minimum Grade of D or (£). (£)</td>
</tr>
<tr>
<td>SOM718</td>
<td>Year 2 Medical Study Part Time</td>
<td>SOM</td>
<td>1</td>
<td>School of Medicine (£)</td>
</tr>
<tr>
<td>EE3000</td>
<td>Solid State EE Materials</td>
<td>EE</td>
<td>3</td>
<td>Essential physical parameters of solids: elastic and thin-film properties (i.e. MEMS devices); electromechanical, piezoelectric and ferroelectrics properties; paramagnetism and ferromagnetism; electron transport properties (metals and semiconductors); electronic bandgap and bandgap engineering; and the essential role of crystallinity in enhancing desired parameters (i.e. dielectric function in ferroelectrics or electron mobility in semiconductors). (£)</td>
</tr>
<tr>
<td>EE4800</td>
<td>Ug Special Topics in EE</td>
<td>EE</td>
<td>1</td>
<td>Undergraduate special topics in electrical engineering. Topics vary. (£)</td>
</tr>
<tr>
<td>CHM6680</td>
<td>Exp Nanomaterials</td>
<td>CHM</td>
<td>3</td>
<td>This course will provide a series of laboratory experiments similar to the state-of-the-art R&amp;D in nanotechnology and nanoscience. The experiments include 1) fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets; 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses etc; and 3) computational modeling of nanoscale physical phenomena. (£)</td>
</tr>
<tr>
<td>MGT7260</td>
<td>Staffing</td>
<td>MGT</td>
<td>3</td>
<td>Coverage of the staffing process. Topics include human resource planning, recruitment, selection, measurement in selection, legal issues in staffing, job analysis, decision making, and retention management. (£)</td>
</tr>
<tr>
<td>ED6660</td>
<td>AYA: Int Science C&amp;M</td>
<td>ED</td>
<td>3</td>
<td>Methods, curriculum, and materials for teaching adolescent school science: emphasis on philosophy, planning and implementation, evaluation, resources and facilities, and historical and contemporary curricular trends in science education. (£)</td>
</tr>
<tr>
<td>BMS8170</td>
<td>Biological Safety</td>
<td>BMS</td>
<td>2</td>
<td>Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA. (£)</td>
</tr>
<tr>
<td>EE4460</td>
<td>Microwave Egr II</td>
<td>EE</td>
<td>3</td>
<td>Fundamental of RF active components: modeling of RF active components; design impedance matching network; microwave transistor amplifier design; microwave transistor oscillator and mixer design; introduction to microwave system. (£)</td>
</tr>
<tr>
<td>HST6220</td>
<td>Russian/Soviet History</td>
<td>HST</td>
<td>3</td>
<td>Examines particular periods of Russian and Soviet history (e.g., the Soviet Union under Stalin) or topics (e.g., the Russian Revolution). Topics vary. (£)</td>
</tr>
<tr>
<td>BMS7422</td>
<td>Rehab Eng Systems II</td>
<td>BMS</td>
<td>3</td>
<td>Design and application of assistive devices used in rehabilitation of people with disabilities in various systems. Provides an understanding of the problems faced by people with disabilities, and the variety of possible solutions to these problems. (£)</td>
</tr>
<tr>
<td>PSY9075</td>
<td>Prediction Models</td>
<td>PSY</td>
<td>4</td>
<td>This course is designed to be an intensive investigation into prediction models used in psychology. The main goals of this course are to (a) expose students to path analysis structural equation modeling, multilevel modeling, and statistical learning frameworks, (b) train students to be proficient in using these frameworks to make predictions, and (c) give the students the expertise to think about appropriate statistical techniques for the demands they will face in the future. (£)</td>
</tr>
</tbody>
</table>
Fall 2020
BME1110 1110  Fundamentals of BIE  BME  Biomedical Engineering  1  Introduction to the disciplines of Biomedical, Industrial & Systems and Human Factors Engineering. Provides an overview of how engineers design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy. Consists of lecture classes and computer-based instrumentation lab sessions; includes freshman design experience with emphasis on teamwork and problem solving. Department faculty provide interesting insights in their areas of expertise.

UG  LL  Lecture/Lab  Combination

Fall 2020
EE6730 6730  Wireless Comm  EE  Electrical Engineering  3  This course provides an overview on various topics of wireless communication. Topics include cellular network concept, wireless communication channel and multi-path fading, digital modulation/demodulation techniques for wireless communication, performance analysis, equalization, diversity, and RAKE receiver, spreading spectrum technology and CDMA, cognitive radio and dynamic spectrum access, and wireless communication system simulation.

GR  LE  Lecture

Fall 2020
ECE4800 4800  ECE Professional Seminar  ECE  Education- Early Childhood  3  Seminar course prepares ECE teacher candidates for entering the field of teaching. Topics include: licensure, resume building, creating an interview portfolio, job search, interviewing techniques, teacher assessments, and dispositions and ethics surrounding teachers. Integrated Writing course.

UG  SE  Seminar

Fall 2020
EGR9010 9010  PhD Seminar  EGR  Engineering  1  PhD seminar course required of all students seeking the Ph.D. in Engineering. Graded pass/unsatisfactory.

GR  SE  Seminar

Fall 2020
KNS2410 2410  Intro to KNH  KNH  Kinesiology & Health  3  Introduces students to professional programs and careers in sport science, public health and teaching health and physical education. Emphasis on history, philosophical foundations, current topics and future directions.

UG  LE  Lecture

Fall 2020
EDL9940 9940  Adv Sem for Ed Leaders  EDL  Educational Leadership  1  A synthesizing course reviewing the concepts, skills, emerging trends, and best practices relating to the field of educational leadership.

GR  SE  Seminar

Fall 2020
CEG6303 6330  Microprop Embedded System  CEG  Computer Engineering  4  Introduction to small, special-purpose microprocessor systems. Topics include hardware design issues, software design and implementation, and real-time operating systems. <b>Department Managed Prerequisite(s): Undergraduate level CEG 3320 Minimum Grade of D or Graduate level CEG 5320 Minimum Grade of D-or-better</b>

GR  LE  Lecture

Fall 2020
PSY460 9460  Domestic Violence  PSI  Professional Psychology  3  Addresses research and clinical issues regarding domestic violence. Explores impact on and intervention with victims, perpetrators, children and adolescents, and society.

GR  LE  Lecture

Fall 2020
ASL3100 3100  Advanced ASL I  ASL  American Sign Language  4  Additional vocabulary and sentence structure acquisition pairs with expressive and receptive fluency as well as ASL discourse features.

UG  LE  Lecture

Fall 2020
BMB4210 4210  Biochem and Mol Bio I  BMB  Biochem & Molecular Biology  3  Basic principles of biochemistry and molecular biology of the cells at the molecular level. Emphasizes experimental procedures used to generate current understanding of the biochemistry of proteins, enzymes and nucleic acids.

UG  LE  Lecture

Fall 2020
ATH4010 4010  Kinship/Social Structure  ATH  Anthropology  3  An examination of the study of kinship as the basis for understanding social structure cross-culturally. Examines the central role kinship plays in stateless societies, how state formation utilized kinship analogs, and how kinship relates to issues of household organization and class and gender relations. Integrated Writing course.

UG  LE  Lecture

Fall 2020
ME4580 4560  Wind Power  ME  Mechanical and Materials Engr  3  Power in the wind, the wind turbine and its parts, performance of wind turbines, and economics of wind turbines will be presented. <b>Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D-or-better</b>

UG  LE  Lecture

Fall 2020
AFS3100 3100  Afr/Amer Exp in Ed  AFS  Afr/Amer Studies  3  Explores the diverse experiences of being African American and examines the effects of race on students' and teachers' experiences. Facilities examination of personal biases and effective methods for providing educational access for all.

UG  LE  Lecture

Fall 2020
ANT3120L 3120L  Human Structure Func II Lab  ANT  Anatomy  0  Required laboratory for ANT 3120.

UG  LB  Lab

Fall 2020
EE3310L 3310L  Devices and Circuits Lab  EE  Electrical Engineering  1  Laboratory supporting EE 3310 Electronic Devices and Circuits. <b>Department Managed Prerequisite(s): Undergraduate level EE 3310 Minimum Grade of C and Undergraduate level EE 3410L Minimum Grade of C and Undergraduate level MTH 2500 Minimum Grade of D or Undergraduate level EE 3510 Minimum Grade of D-or-better</b>

UG  LB  Lab

Fall 2020
EE4810 4810  Full-Time CPT in EE  EE  Electrical Engineering  1  Practical work experience in undergraduate level electrical engineering.

UG  IN  Internship

Fall 2020
BHE5410 6410  Tech Based Vent  BHE  Industrial & Hum Fac Engr  3  Train students on methods to develop breakthrough products with an entrepreneurial perspective and managerial outlook. Topics include advanced product development, protecting intellectual property, fostering strategic and creative thinking, effectively leading technology-driven teams.

GR  LE  Lecture

Fall 2020
KNS3600 3600  Catastrophe Response  KNH  Kinesiology & Health  3  Addresses emergency management education, including disaster preparedness and response strategies, for catastrophic events.

UG  LE  Lecture

Fall 2020
BIO3530 3530  Exercise Physiology  BIO  Biology  4  Acute and chronic metabolic and physiological responses of the human body to exercise in health and disease. Exercise physiology as applied to fitness and performance. Includes programs that distinguish between health-related fitness and physiology of maximal performance.

UG  LE  Lecture

Fall 2020
EDS6095 6095  Pract 1 Dyslexia Mthd&Intrvnt  EDS  Education-Special Education  1  Administration and interpretation of assessments to plan, implement, and communicate dyslexia remediation in a professional setting. Write professional case studies integrating assessment and tutoring data. Required: 30 hours field experience required.

GR  PR  Practicum

Fall 2020
TTW4670 6470  TTW Trn:Care Assess  TTW  Transition to Work  1  Students assigned to an experienced career assessment professional in the field for observing, discussing, researching, and practicing skills in the area of career assessment, particularly those related to transition of individuals with disabilities.

GR  IN  Internship

Fall 2020
CHM1010L 1010L  Intro to Chemistry Lab  CHM  Chemistry  0  Required laboratory for CHM 1010.

UG  LB  Lab

Fall 2020
STT6640 6640  Machine Learning  STT  Statistics  3  Classification. Resampling methods including bootstrapping. Regularization. Splines. Classification and regression trees. Bagging and boosting. Random Forest. Unsupervised learning including principal component analysis. Software used for this course includes R. <b>Department Managed Prerequisite(s): Graduate level STT 5600 Minimum Grade of D and Graduate level STT 5610 Minimum Grade of D-or-better</b>

UG  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO4730</td>
<td>Marine Biology</td>
<td>4.730</td>
<td>Oceanic ecosystem dynamics and the biological communities associated with different marine habitats. Emphasis on structural and physiological adaptations of organisms to their environment and interactions among different species (competition, predation, and mutualisms). Current threats to marine habitats. Includes a 1 week field trip to the North Carolina coast.</td>
</tr>
<tr>
<td>CEG6750</td>
<td>Information Security</td>
<td>6.750</td>
<td>A comprehensive study of security vulnerabilities in information systems and the basic techniques for developing secure applications and practicing safe computing. Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of C and Undergraduate level MTH 2300 Minimum Grade of D and Undergraduate level ESE 2211 Minimum Grade of D or Undergraduate level ESE 3700 Minimum Grade of D.</td>
</tr>
<tr>
<td>EES3470</td>
<td>Astronomy for K-12 Teachers</td>
<td>4.470</td>
<td>Introduction to astronomy and the space sciences from the viewpoint of the amateur astronomer. Emphasizes both aesthetic and scientific aspects, and the amateur's enthusiasm for the subject.</td>
</tr>
<tr>
<td>COM4470</td>
<td>Com Relations in Orgs</td>
<td>4.470</td>
<td>Examines factors that help and hinder effective professional relationships. Aims to increase understanding of interpersonal relationships and apply the knowledge to individual and organizational goals.</td>
</tr>
<tr>
<td>ART6050</td>
<td>Studies in Sculpture</td>
<td>6.050</td>
<td>Provides opportunities to explore specific problems and approaches to sculpture including cross-media and interdisciplinary studies. Titles vary.</td>
</tr>
<tr>
<td>EES3660</td>
<td>OSHA Compliance</td>
<td>6.660</td>
<td>Intended for persons having management responsibility for occupational safety and health; this course provides practical applications of the theories of safety and health laws, and suggestions for their real world application.</td>
</tr>
<tr>
<td>EES3660</td>
<td>Water and Solid Waste</td>
<td>3.600</td>
<td>Relationship of physical and biotic environments to design and operation of systems and procedures employed in maintenance and promotion of a quality environment. Emphasizes water quality control and methods and management of waste disposal.</td>
</tr>
<tr>
<td>CEG6920</td>
<td>Independent Study</td>
<td>8.920</td>
<td>Independent study in CEG.</td>
</tr>
<tr>
<td>LDR7450</td>
<td>Lit &amp; Research Design</td>
<td>7.450</td>
<td>This course provides students with the tools necessary to synthesize leadership literature; and plan, analyze, and report results from research projects related to leadership.</td>
</tr>
<tr>
<td>MBA7577</td>
<td>S-T Study Abroad</td>
<td>7.577</td>
<td>Faculty-supervised short-term study abroad. Students will be assigned readings about the economy, culture and business climate of the country to be visited prior to the tour. Students will also carry out a business analysis of firms to be visited on the tour. In consultation with the instructor, students will prepare a written report on a topic relevant to the tour.</td>
</tr>
<tr>
<td>ED7840</td>
<td>Intro to Foundations Educ</td>
<td>7.840</td>
<td>An inquiry into the historical, philosophical, cultural, and social trends and issues in education in a democratic society.</td>
</tr>
<tr>
<td>PTX900</td>
<td>Pharmacology Grad Res</td>
<td>9.000</td>
<td>As part of the Thesis Track Pharmacology &amp; Toxicology graduate students will participate in laboratory research.</td>
</tr>
<tr>
<td>ATR2840</td>
<td>Basic Skills in AT</td>
<td>2.840</td>
<td>Basic skills in Athletic Training.</td>
</tr>
<tr>
<td>SW6090</td>
<td>Selected Topics in SW</td>
<td>0.609</td>
<td>Selected topics related to current issues in social work practice: readings, research, and discussion. Topics vary.</td>
</tr>
<tr>
<td>FAS4790</td>
<td>Special Topics</td>
<td>4.790</td>
<td>Focus on a particular area of interest in food and agricultural systems.</td>
</tr>
<tr>
<td>PSY5210</td>
<td>Cognition and Learning</td>
<td>5.210</td>
<td>Psychological theories, methodologies, and applications in the areas of attention, perception, visual imagery, memory, executive function, decision making, and problem solving. Emphasis on how the brain performs cognitive functions.</td>
</tr>
<tr>
<td>MBM2500</td>
<td>Human Nutrition</td>
<td>2.500</td>
<td>Nutrition as an integrated science emphasizing biochemical and physiological principles. Topics include nutritional energetics, specific nutrients, and nutrition and physiology. Relation of basic concepts to clinical situations and to nutritional management of specific disease conditions.</td>
</tr>
<tr>
<td>PHL5060</td>
<td>Analytic Philosophy</td>
<td>5.060</td>
<td>A survey of the analytic tradition including philosophers such as Frege, Russell, Wittgenstein, Carnap, Quine, Davidson, Kripke, Putnam, Nagel and others.</td>
</tr>
<tr>
<td>SPS5120</td>
<td>Spanish Conversation I</td>
<td>5.120</td>
<td>Practice in oral use of Spanish emphasizing the culture of the Hispanic world.</td>
</tr>
<tr>
<td>MUS4810</td>
<td>Spanish Subjects</td>
<td>4.810</td>
<td>Directed research.</td>
</tr>
<tr>
<td>EES3680</td>
<td>Environ Law Scientists</td>
<td>6.680</td>
<td>Geared to environmental science students, the course discusses applicable common law principles before focusing on the variety of environmental statutes, implementing regulations and enforcement.</td>
</tr>
<tr>
<td>ART3170</td>
<td>Art</td>
<td>5.170</td>
<td>General surveys and intensive studies of periods, major movements, and artists in non-Western art.</td>
</tr>
<tr>
<td>NUR3263</td>
<td>Superv - Psych NP Studies</td>
<td>3.263</td>
<td>This course is the final in a sequence that focuses on the role of the psychiatric nurse practitioner as a counselor and the skills necessary to function effectively in that role, with emphasis on preparation to practice. Assertiveness, self-reflection, therapeutic communication, ethics, and professionalism are emphasized with increased focus on clinical reasoning. Advanced practice role development is incorporated. A case-study approach is utilized. Students meet with faculty in small groups.</td>
</tr>
<tr>
<td>REL3450</td>
<td>Daoism</td>
<td>3.450</td>
<td>Survey of the various expressions of Daoism in Chinese religious and intellectual history. Includes classical Daoist writings and contemporary expressions of Daoism.</td>
</tr>
<tr>
<td>PPH7410</td>
<td>Community Assessment</td>
<td>7.410</td>
<td>Community Practicum.</td>
</tr>
<tr>
<td>EDL8950</td>
<td>Principal Practicum</td>
<td>8.950</td>
<td>Provides experience in school leadership and administration at the building level. Candidates perform administrative tasks under the supervision of a licensed school building administrator.</td>
</tr>
</tbody>
</table>
Fall 2020  MTH3480  3480  Calculus Mid-Sch Tchr  MTH  Mathematics 3  Explores the big ideas in calculus — limit, derivative, and integral — with the goal of a solid conceptual understanding. Emphasizes applications, connections to algebra, and how these concepts appear in middle school math classrooms.

UG  LL  Lecture/Lab Combination

Fall 2020  MLB4830  4830  Immunohematology Prac  MLB  Medical Laboratory Science 3  Practical application of transfusion medicine techniques at a clinical site.

UG  PR  Practicum

Fall 2020  MLB4610  4610  Serology  MLB  Medical Laboratory Science 1  Study of antigens and the stimulation of antibodies in vivo, and the use of these reactions to perform in vitro testing to diagnose and monitor the course of disease.

UG  LE  Lecture

Fall 2020  AES3310  3310  Leadership Studies I  AES  Aerospace Studies 3  Advanced skills and knowledge in management and leadership. Cadets apply leadership and management techniques in a supervised environment.

UG  LE  Lecture

Fall 2020  MUS3420  3420  Form and Analysis  MUS  Music 3  Harmonic and formal analysis: motive, phrase, periods, and binary and ternary forms.

UG  LE  Lecture

Fall 2020  CTE4350  4350  Global Engagement  CTE  Career and Technical Education 3  Strengthening partnerships, coordinating efforts and increasing interaction within and outside the CTE community rather than learning and working in isolation. Enhancing students' abilities to engage in job-related problem solving and decision making in diverse cultures and environments. Integrated writing course.

UG  LE  Lecture

Fall 2020  MUA3410  3410  Applied Music  MUA  Music: Applied Music 4  Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.

UG  IS  Independent Study

Fall 2020  ENG0620  5020  T.A Practicum I  ENG  English 1  For English teaching assistants only. Continuing TAs are assigned to an instructional class that focuses on the teaching of writing in ENG 1100 for a supervised practicum experience.

GR  PR  Practicum

Fall 2020  LEP010  0310  Writing - Level 3  LEP  LEAP 0  Writing for high-intermediate ESL students. This course has a fee that is non-refundable once the term begins.

UG  LE  Lecture

Fall 2020  MTH770  7770  Gene Therapy  MT  Microbiology & Immunology 3  The molecular basis of gene therapy and the use of viral gene delivery systems for the treatment of human disease are examined. Gene therapy strategies are contrasted with various diseases, including cancer and AIDS.

GR  LE  Lecture

Fall 2020  HST6210  6210  British History  HST  History 3  Examines particular periods of British history (e.g., modern Britain) or topics (e.g., British constitutional history).

GR  LE  Lecture

Fall 2020  DAN1010  1010  Ballet 1  DAN  Dance 3  Introduction to vocabulary, techniques, and theories of ballet. Emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet training.

UG  ST  Studio

Fall 2020  ATR4840  4840  Adv Rehab Techniques  ATR  Athletic Training 3  Development of rehabilitation protocols for the physically active when injured/ill using advanced rehabilitation techniques.

UG  LL  Lecture/Lab Combination

Fall 2020  PSY4990  9490  Sex & Gender Ident  PSL  Professional Psychology 6  This course provides a sex-positive, interdisciplinary, feminist approach to diverse sexualities (orientations, identities, behaviors), and influences on sexual well-being as well as foundational concepts in serving transgender and gender diverse populations. Students will explore their values/biases and gain comfort and competence in addressing these issues in order to provide basic sex therapy interventions and transgender-affirming therapy consistent with ethical guidelines.

GR  LE  Lecture


GR  LE  Lecture

Fall 2020  PLS3010  3010  Mod Political Ideologies  PLS  Political Science 3  Systematic analysis of theories and variations of modern political ideologies, including democracy, socialism, fascism, and communism.

UG  LE  Lecture

Fall 2020  ART3280  3280  Intermediate Drawing  ART  Art 3  Development of personal concepts and aesthetic expression in drawing. Emphasis on individualized approach to drawing problems that arise from the work of students.

UG  LB  Lab

Fall 2020  CNL4670  4670  Group Background Theory  CNL  Counseling 3  Surveys the background, theory, function, techniques, and the uses of small groups in counseling.

UG  LL  Lecture/Lab Combination

Fall 2020  MLB4411  4411  Hemostasis Lab  MLB  Medical Laboratory Science 0.5  Blood vessel contraction, platelet activation and formation, and activation of coagulation factors, and their use in diagnosing coagulation defects and monitoring anticoagulant therapy. This course has a fee that is non-refundable once the term begins.

UG  LB  Lab

Fall 2020  LDR8030  8030  Fin Mgmt & Ldrship in Org  LDR  Leadership 3  Study of financial management in organizations, with an emphasis on financial planning, budgeting, reporting, analysis, and decision-making. Includes a comprehensive business planning exercise.

GR  LE  Lecture

Fall 2020  ISN1110  1110  Fundamentals of BIE  ISE  Industrial & Systems Engr 1  Introduction to the disciplines of Biomedical, Industrial & Systems and Human Factors Engineering. Provides an overview of how engineers design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy. Consists of lecture classes and computer-based instrumentation lab sessions; includes freshman design experience with emphasis on teamwork and problem solving. Department faculty provide interesting insights in their areas of expertise.

UG  LE  Lecture

Fall 2020  IBE3310  3310  Ergonomics  BIE  Industrial & Hum Fact Engr 3  Introduction to the application of ergonomics principles to the industrial environment. Includes ergonomic planning and implementation, the work environment, NIOSH work factors, work measurement and work-station and equipment design.

GR  LE  Lecture

Fall 2020  PHL0260  6260  Continental PHL Seminar  PHL  Philosophy 3  A focused, in-depth study of a narrow theme or topic in the continental and European philosophical traditions. Topics vary, but will focus on an issue in phenomenology, hermeneutics, critical theory, psychoanalytic theory, or continental social and political philosophy. Readings will focus on a small number of thinkers in the tradition, including philosophers such as Husserl, Heidegger, Maritain-Poiny, Levinas, Adorno, Benjamin, Marcuse, Foucault, Habermas, and Freud.
Fall 2020  EES4010  4010  Topics Earth & Env Sci  EES  Earth & Environmental Sciences  0.5  Advanced topics of current interest in the earth and environmental sciences. Topics vary but are expected to be appropriate for undergraduate students at the junior or senior level. May be taken for a letter grade or pass/unsatisfactory.

UG  LE  Lecture

Fall 2020  MUS4300  4300  Improving Rdg-Mus Cntnt Area  MUS  Music  3  Provides multi-age music teachers with reading and writing strategies to help solve problems encountered in grades K-12. Language set skills and strategies are taught to help students communicate more effectively across the curriculum.

UG  LE  Lecture

Fall 2020  ATH2200  3200  Special Topics: Cultural  ATH  Anthropology  3  Selected topics concerning the method and theory of anthropological thought and relationships to the allied disciplines of economics, linguistics, art, politics, and history. Emphasis on current trends influencing research in cultural anthropology. Topics vary.

UG  LE  Lecture

Fall 2020  EE4130  4130  Cont Control Systems  EE  Electrical Engineering  3  Introduction to continuous control systems. Block diagrams and signal-flow graphs, electromechanical modeling, time response, root locus, and design of PID controllers.

UG  LE  Lecture

Fall 2020  PHL4410  4410  Ethics Seminar  PHL  Philosophy  3  Ethical problems, theories, and methods. Topics vary. Integrated Writing course.

UG  SE  Seminar

Fall 2020  EES6170  6170  Coastal Processes  EES  Earth & Environmental Sciences  2  The course is primarily designed for in-service educators. It serves as an introduction to the seashore and ocean system, and the range of possibilities for teaching inquiry-based science that this venue offers. Topics include: the origins of ocean basins, sediment, the chemistry and physics of water, tides, the biology of selected sub- environments and oceans and the Earth system. The course is organized around a four-day field trip and a pre and post trip class meeting.

UG  LE  Lecture

Fall 2020  ED7610  7810  Litrcy Rscds: Prct III  ED  Education  3  Conduct the literacy research project designed in ED 7800. Collect and analyze the data. Final written project includes: findings, discussion, and conclusion (including limitations and implications). This course involves supervision.

GR  SE  Seminar

Fall 2020  ATR7000  7000  Orthopedic Anatomy  ATR  Athletic Training  3  Comprehensive review of the musculoskeletal system anatomy and its related structures; specifically the spine, shoulder, elbow, wrist and hand, hip and pelvis, knee, foot and ankle. Course will include cadaveric anatomy.

GR  LE  Lecture

Fall 2020  RHB3200  3820  Disability Justice  RHB  Rehabilitation  3  Focuses on disability culture, justice, and history, including community access, independent living/self-determination, and inclusion. Examines various disability policy frameworks and applications, person-centered perspectives on delivery of services and supports, and methods of facilitating change.

UG  LE  Lecture

Fall 2020  REL6930  6930  Seminar in Religion  REL  Religion  3  Intensive study and discussion of a significant topic in religious studies. Students will conduct semester long projects culminating in a seminar paper. Titles vary.

GR  SE  Seminar

Fall 2020  EES4280  4280  EES Colloquium  EES  Earth & Environmental Sciences  0.5  Weekly seminar in which research scientists from within and from outside the Department of Earth and Environmental Sciences present their research.

UG  SE  Seminar

Fall 2020  EES510  5101  Circuit Analysis I  EE  Electrical Engineering  3  The student will have the ability to apply Kirchhoff's laws, an understanding and ability to apply Thévenin and Norton's theorems, analyze and design circuits with operational amplifiers, analyze 1st and 2nd order circuits, apply linear differential equation techniques, and have an understanding of sinusoidal steady state analysis.

UG  LE  Lecture

Fall 2020  PHY7110  7110  Quantum Mechanics II  PHY  Physics  3  Continuation of PHY7100. Principles of non-relativistic quantum mechanics, Schrödinger's equation and matrix mechanics. Facility with applications to atomic, molecular, nuclear, solid state, spin, and biological systems.

GR  LE  Lecture

Fall 2020  ME8350  6350  Mechanics Viscous Fluids  ME  Mechanical and Materials Eng  4  Fundamental equations of viscous flow for laminar and turbulent flows including the Navier-Stokes equations. Boundary layer analysis. Department Managed Prerequisite(s) Undergraduate level ME 3350 Minimum Grade of D or Graduate level ME 5350 Minimum Grade of D or Graduate level ME 5350 Minimum Grade of D or Graduate level ME 5350 Minimum Grade of D or Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D.

GR  LE  Lecture

Fall 2020  HST6100  6100  Early Modern Europe  HST  History  3  Examines selected problems in European history from the late Middle Ages through the Counter-Reformation. Topics vary.

GR  LE  Lecture

Fall 2020  PLS6340  6340  Political Leadership  PLS  Political Science  3  Study of political attitude development and acquisition of basic political orientations and values, beginning with childhood and proceeding through adolescence and adulthood. Investigation of the role of various socializing agents.

GR  LE  Lecture

Fall 2020  SLH4580  4580  R&D Certification Prep  SLI  Sign Language Interpreting  3  Assists students in preparation for the Registry of Interpreters for the Deaf (RDI) national certification test. Ethical discussions, sign and voice performances and analyses, and review of written materials will be included.

UG  LE  Lecture

Fall 2020  HPR3050  3050  Teaching Net/Wall Games  HPR  Health Phy Educ & Recreation  3  Models best teaching practices in net/wall games such as badminton, tennis and volleyball. Students are required to demonstrate skill proficiency.

UG  LL  Lecture/Lab Combination

Fall 2020  SOM704  704  Year 3 Medical Study  SOM  School of Medicine  24  MD  CL  Clinical

Fall 2020  DAG3020  5020  DAGSI Registration  DAG  DAGSI  0.5  This course will provide an understanding of communications and IT infrastructures, their vulnerability as well as the size and complexity of security threats faced by enterprises. This course has a fee that is non-refundable once the term begins.

UG  LE  Lecture

Fall 2020  PLS6300  6300  Am Govt and Politics Sem  PLS  Political Science  3  Selected topics related to American government politics and processes. Emphasis on readings, discussion and research. Topics vary.

GR  SE  Seminar

Fall 2020  EGR7300  7300  Computation Eg Analysis  EGR  Engineering  3  Students will learn practical and efficient computational techniques that are routinely encountered in modeling, simulation and analysis of engineering problems.

GR  LE  Lecture

Fall 2020  MIS7900  7700  Info Sec & Assurance  MIS  Management Information Systems  3  This course survey will provide an understanding of communications and IT infrastructures, their vulnerability as well as the size and complexity of security threats faced by enterprises. This course has a fee that is non-refundable once the term begins.

GR  LE  Lecture

Fall 2020  PLS4370  4370  Criminal Procedure  PLS  Political Science  3  Constitutional protections of the individual confronting the criminal justice system. Case law pertaining to the Fourth Amendment (search and seizure), Fifth Amendment (self-incrimination), and Sixth Amendment (right to counsel).

UG  LE  Lecture

Fall 2020  ED6640  6640  Word St & Phon Int Spc  ED  Education  3  Knowledge of how people learn printed words, how to assess that knowledge and deliver the instructional procedures with appropriate materials.

GR  LL  Lecture/Lab Combination

Fall 2020  CEG6350  6350  OS Internals and Design  CEG  Computer Engineering  3  Overview of operating systems internals. File-system usage and design, process usage and control, virtual memory, multi user systems, access control. Course projects use C++ language. Department Managed Prerequisite(s) Undergraduate level CEG 3310 Minimum Grade of D or Graduate level CEG 5310 Minimum Grade of D or Undergraduate level CS 3300 Minimum Grade of D or Graduate level CS 5300 Minimum Grade of D or graduate level ME 5350 Minimum Grade of D.

GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
<th>Level</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM4200</td>
<td>Inorganic Chemistry I</td>
<td>CHM</td>
<td>4</td>
<td>Lecture</td>
<td>Principles and concepts of inorganic chemistry including the periodic table, atomic structure, chemical bonding, coordination compounds, and an introduction to group theory.</td>
<td>UG</td>
<td>Lecture</td>
</tr>
<tr>
<td>BIO6060</td>
<td>Evolutionary Biology</td>
<td>BIO</td>
<td>6</td>
<td>Lecture/Lab</td>
<td>Upper-level course in evolutionary biology for graduate students that have already achieved a basic background in evolution. Objectives of the course are to critically examine modern evolutionary research, with focus on recent theoretical and empirical developments. Topics include: speciation and species definitions, phylogenetics, molecular evolution, adaptation and natural selection, and sexual selection.</td>
<td>GR</td>
<td>Lecture</td>
</tr>
<tr>
<td>ART2060</td>
<td>Drawing I</td>
<td>ART</td>
<td>2</td>
<td>Lecture</td>
<td>Introduction to materials, techniques, and concepts of drawing. This course has a fee that is non-refundable once the term begins.</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>GER4050</td>
<td>Early German Literature</td>
<td>GER</td>
<td>4</td>
<td>Lecture/Lab</td>
<td>German literature from the earliest times to the Reformation. Focus is on selecting coursework and integrating it into lessons.</td>
<td>UG</td>
<td>Lecture</td>
</tr>
<tr>
<td>DSC4410</td>
<td>Tech Based Ventures</td>
<td>ISE</td>
<td>4</td>
<td>Lecture/Lab</td>
<td>Train students on methods to develop breakthrough products with an entrepreneurial perspective and managerial outlook. Topics include advanced product development, protecting intellectual property, fostering strategic and creative thinking, effectively leading technology-driven teams.</td>
<td>UG</td>
<td>Lecture</td>
</tr>
<tr>
<td>CS7920</td>
<td>Independent Study in CS</td>
<td>CS</td>
<td>1</td>
<td>Lecture</td>
<td>Independent study in computer science.</td>
<td>GR</td>
<td>IS</td>
</tr>
<tr>
<td>DAN1240</td>
<td>Jazz for the Actor I</td>
<td>DAN</td>
<td>12</td>
<td>Lecture</td>
<td>Designed to teach fundamental jazz dance technique to the non-dance major and to develop potential in creative movement, increase musical awareness, and improve professional audition skills for all theatre-related activities.</td>
<td>UG</td>
<td>ST</td>
</tr>
<tr>
<td>EES3450</td>
<td>Concepts EES I ECE/MCE</td>
<td>EES</td>
<td>4</td>
<td>Lecture</td>
<td>Introductory survey of geoscience. Rocks and minerals, plate tectonics, geologic time, oceanography and meteorology, planetary science. Lecture is interspersed with hands-on activities intended to reinforce concepts and provide the students with ideas for teaching their own classes. Students will develop lesson plans on several topics.</td>
<td>UG</td>
<td>LL</td>
</tr>
<tr>
<td>EDE4350</td>
<td>Data Driven Decisions</td>
<td>EDL</td>
<td>3</td>
<td>Lecture</td>
<td>Exploring the use of appropriate, meaningful data for making instructional, curricular, and assessment decisions as a normative professional standard.</td>
<td>GR</td>
<td>LL</td>
</tr>
<tr>
<td>CNL6700</td>
<td>Internship</td>
<td>CNL</td>
<td>8</td>
<td>Internship</td>
<td>This field-based experience provides human services master's degree students with advanced clinical practice and supervision in their major specialty areas. Department-managed prerequisites: Graduate level CNL 6010 Minimum Grade of B and Graduate level CNL 6020 Minimum Grade of B and Graduate Level CNL 6030 Minimum Grades of B and Graduate Level CNL 7250 Minimum Grade of B and Graduate Level CNL 7240 Minimum Grade of B and Graduate Level CNL 7270 Minimum Grade of B and Graduate Level CNL 7280 Minimum Grade of B and Graduate Level CNL 7290 Minimum Grade of B and Graduate Level CNL 8650 Minimum Grade of B.</td>
<td>GR</td>
<td>IN</td>
</tr>
<tr>
<td>AES2500</td>
<td>GMC Lead Lab</td>
<td>AES</td>
<td>25</td>
<td>Lab</td>
<td>Students who have completed GMC coursework but did not receive a slot for Field Training can enroll in this course to remain proficient and will have one more chance to obtain a Field Training slot the following summer.</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>CEG4090</td>
<td>Special Topics</td>
<td>CEG</td>
<td>4</td>
<td>Special Topics</td>
<td>Special topics in computer engineering.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>EC4450</td>
<td>Political Econ of Women</td>
<td>EC</td>
<td>4</td>
<td>Lecture</td>
<td>Provides feminist understanding of women's economic roles and contributions in the context of globalization. Explores importance of social location - race, gender, class, nationality - in economic processes shaping family life, paid employment, and international market relations.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>FR3980</td>
<td>Studies in Select Subject</td>
<td>FR</td>
<td>39</td>
<td>Lecture</td>
<td>Individual research project approved and supervised by a full-time faculty member. Taught in French. Department-managed prerequisites: Undergraduate level FR 3120 Minimum Grade of D or Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3210 Minimum Grade of D.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PHIL3140</td>
<td>Theories of Knowledge</td>
<td>PHIL</td>
<td>3</td>
<td>Lecture</td>
<td>Examination of the possibility of knowledge, limits, methods and value. Readings vary but may include Plato, Descartes, Hume, Russell, Moore, Gettier, Nozick, Bonjour, Quine, Kripke, Putnam and Williamson. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>MUS6020</td>
<td>Intro Res in Music Ed</td>
<td>MUS</td>
<td>6</td>
<td>Lecture</td>
<td>A comprehensive introduction to research in Music Education and its value and contribution to the development of historical data, pedagogy, ethnographic research and understanding of contemporary issues in music instruction and performance.</td>
<td>GR</td>
<td>LE</td>
</tr>
</tbody>
</table>
Fall 2020  BIO6800 6800  Conservation Biology  BIO  Biology 3  The goal of this class is to provide you an entry into the field of conservation biology. Since conservation biology is an interdisciplinary field, we will touch upon topics from many disciplines, such as biology-related ecology, genetics, statistics, botany, zoology, biogeography, but also social studies, economics, and political science. As an applied science, conservation biology necessarily works in the fault lines between pure science that attempts to be value-free and objective, and management that attempts to balance the needs and ideologies of all stakeholders and may even employ advocacy that attempts to influence the public and decision making using the best knowledge and techniques available. Given the two challenging aspects of this class, namely its interdisciplinary and applied nature, the format will also be unusual, blending traditional lecture-style instruction with class discussion, activities and projects. Examination of the scientific theory and applied research focused on the sustained preservation of global biological diversity.

Fall 2020  MUS3580 3580  Keyboard Musicianship  MUS  Music 1  Provides vocal performance education majors with functional and technical keyboard skills.  UG  LE  Lecture

Fall 2020  SLI4950 4950  Practicum II  SLI  Sign Language Interpreting 3  Second practicum placement in community, business or post secondary educational setting under the direct supervision of a mentor interpreter. 150 hour minimum on-site placement hours.  GR  PR  Practicum

Fall 2020  MBA7500 7500  Leadership and Ethics  MBA  MBA 3  To understand and develop leadership skills as well as ethical behavior and the importance of both within an organization.  GR  LE  Lecture

Fall 2020  PHY7300 7300  Solid State - Structure  PHY  Physics 3  Topics from the physics of the solid state related to structure as chosen by the instructor. These may include but are not limited to: crystallography, particle beam analysis of crystal structure, lattice dynamics, theories of specific heat and sound, defects in structures, defect dynamics, and mechanisms of mass transport.

Fall 2020  CEG4324 4324  Digital Circuit Design  CEG  Computer Engineering 3  Digital design with behavioral level VHDL, application of VHDL to the design, analysis, and synthesis of digital integrated circuits; field programmable gate arrays (FPGAs) and design and application of digital integrated circuits using FPGAs. CAD tools, devices and boards will be used in the lab portion of the course. Topics include registers, counters, memory devices, register-level design, microcomputer system organization. Students must show competency in design of digital systems.

Fall 2020  CS7830 7830  Machine Learning  CS  Computer Science 3  Revises the development of machine learning paradigms. Introductory topics include parameter adjustment methods, signature tables, and the application of genetic algorithms to artificial intelligence problem domains.  GR  LE  Lecture

Fall 2020  CEG6910 6910  Bulletin IV  CEG  Dance 3  Advanced work in classical ballet technique stressing the development of musicality and virtuosity.  UG  ST  Studio

Fall 2020  PHY1006L 1006L  Astronomy Laboratory  PHY  Physics 1  Astronomical observations and experiments.  UG  LB  Lab

Fall 2020  DCO0050 9050  Adv Barch Methods I  DOS  Doctor Org Studies 3  Individual and group study of ongoing social sciences research.  GR  SI  Seminar

Fall 2020  ME4750L 4750L  Mat. Characterization Lab  ME  Mechanical and Materials Eng 0  Required laboratory for ME-4750.

Fall 2020  NUR7306 7306  Info Tech Nsg & HbH Sys  NUR  Nursing 2  Systematic assessment of clinical and administrative information needs of health care systems. Examines the technology and strategies needed to support nursing and health care in dynamic environmental systems.

Fall 2020  KNH1460B 1460B  Rape Def Strat: Intermed  KNH  Kinesthesiology & Health 1  Intermediate level of skills and knowledge in Rape Defense Strategies: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020  ED6350 3650  Music Ed Methods Field Exp  ED  Education 1  Candidates, mentored by a music educator, assist in the planning, organizing, delivering, and assessing of instruction in a music classroom (any PK-12) setting applying pedagogical content knowledge from music education methods courses.

Fall 2020  ENG6760 6760  TESOL Assessment  ENG  English 3  Investigates key concepts and underlying theories in the field of language assessment. Looks at purposes and types of assessment with a focus on the development and use of authentic assessment for English language learners.

Fall 2020  RHB3030 3030  Employ People Disability  RHB  Rehabilitation 3  Overview of career development and placement techniques. Various methods of accessing the career market, occupation information, and various strategies used to assist people in becoming employed.

Fall 2020  ANO340 6340  Biological Safety  ANO  Anatomy 2  Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.

Fall 2020  ED8830 8830  Theoretic Views Ed Psych  ED  Education 3  Focuses on the principal theoretical frameworks that guide learning and motivation as well as the measurement and assessment processes in educational settings.

Fall 2020  CEG4130 4130  Pers Softw Dev Process  CEG  Computer Engineering 3  Discusses software development as it relates to the individual, software process measurement, design and code reviews, software quality measurement, design, and design verification. Each student will participate in the development of a software project.

Fall 2020  PLSl625 6225  Washington DC Internship  PLS  Political Science 3  Internships in Washington, D.C. for academic credit. Interns are expected to work at least 12-15 hours per week and write an assessment of the experience at the end of the semester.

Fall 2020  TH2500 2500  Script Analysis  TH  Theatre 3  Introduces students to a variety of methods for examining theatrical texts.

Fall 2020  IS6490 4990  Independent Study in ISE II  ISE  Industrial & Systems Engr 3  Undergraduate independent studies in advanced Industrial and Systems Engineering. Topics vary.

Fall 2020  FR6640 6640  FR Canadian Lt & Film  FR  French 3  French Canadian literature and film in its socio-historical context, with focus on works of Acadian and Quebecois poets, novelists and playwrights (such as Maillot, Tremblay, Thiriauld) and filmmakers (such as Forest, Caisson, Belanger, Miron, Saia and Filiatrault). Taught in French.  GR  LE  Lecture
Fall 2020  IHE7820  7820  Engr Supply Chain Sys  BHE  Industrial & Hum Fac Engr  3  Advanced topics in the design of supply chain systems and planning for their operations. Emphasis on model development and solution using operations research techniques. Applications in forecasting, facility location, warehouse design, and integrated distribution planning.  <b>Department Managed Prerequisite(s):</b> Graduate level IHE 6711 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  BME7930  7930  Non-Thesis Resarch in BME  BME  Biomedical Engineering  1  M.S. Non-Thesis Research in Biomedical Engineering  GR  IS  Independent Study

Fall 2020  PL54230  4230  Fin Mgt Pub Orga  FLS  Political Science  3  Local fiscal institutions and analytical tools for designing and evaluating fiscal policies. Reviews financial reporting and accounting, the municipal bond market, pension systems, state and local taxes, user charges, and intergovernmental relations.  <b>Department Managed Prerequisite(s):</b> Graduate level PL 3180 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  FTN3280  3280  Entrepreneurial Finance  FIN  Finance  3  Financing of small and medium sized businesses from the perspective of both the entrepreneur and investors. Study how the financing decisions of small and medium sized private companies differ from those of public firms. They will also see how the methods used will be found in Financial Management I are applied in practice.  <b>Department Managed Prerequisite(s):</b> Graduate level FTN 6120 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  NUR7562  7621  Supervis-Pych NP Students  NUR  Nursing  1  This course is the first in a series that focuses on the role of the psychiatric nurse practitioner as a counselor and the skills necessary to function effectively in that role, beginning with assessment and diagnosis. Assertiveness, self-expression, therapeutic communication, ethics, and professionalism are emphasized. Advanced practice role development is incorporated. A case-study approach is utilized. Students meet with faculty in small groups.  <b>Department Managed Prerequisite(s):</b> Graduate level NUR 5120 Minimum Grade of D/<br>GR  PR  Practicum

Fall 2020  IHE5830  7380  Topics in Public History  HST  History  3  Intensive analysis of topics related to the theory and practice of public history such as decorative arts, material culture, history of photography, history of technology, historic site interpretation, ethics and laws for archives and museums, family history, American studies, pop culture, and outreach. Topics vary.  GR  LE  Lecture

Fall 2020  BHE9590  8950  Dissertation Resarch IHE  BHE  Industrial & Hum Fac Engr  1  Ph.D. Dissertation Research in Industrial and Human Factors Engineering  GR  IS  Independent Study

Fall 2020  ENG3010  3010  Topics in Reading  ENG  English  3  Approaches and topics in the field of literary study.  <b>Department Managed Prerequisite(s):</b> Graduate level ENG 6200 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  DMV9999  9999  For Administrative Use Only  DMV  DMV Consortium  0  <b>Department Managed Prerequisite(s):</b> Graduate level DMV 6320 Minimum Grade of D/<br>UG  OT  Other

Fall 2020  ART2080  2080  3D Foundations  ART  Art  3  Introduction to basic processes, materials, and concepts of sculpture. This course has a fee that is non-refundable once the term begins.  <b>Department Managed Prerequisite(s):</b> Graduate level ART 6521 Minimum Grade of D/<br>UG  LB  Lab

Fall 2020  MKT4400  4400  Services Marketing  MKT  Marketing  3  Explores the seven Ps of marketing relating to the marketing of services. Explores emerging theories and strategies for effective implementation.  <b>Department Managed Prerequisite(s):</b> Graduate level MKT 6420 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  BHE6810  6810  Prod & Serv Sys  BHE  Industrial & Hum Fac Engr  3  Explores quantitative techniques as applied to planning and control of systems in production and service industries. Applications include inventory control, scheduling, waiting time & variability management and production/workforce planning.  <b>Department Managed Prerequisite(s):</b> Graduate level BHE 6120 Minimum Grade of D and Graduate level IHE 6711 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  ARA4310  4310  Classical Arabic Texts  ARA  Arabic  3  A text-based course introducing students to the history and development of the earliest Arabic prose writings (7th-11th century).  <b>Department Managed Prerequisite(s):</b> Undergraduate level ARA 3210 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  ED56270  6270  Practicum: PK SP NEEDS  EDS  Education - Special Education  2  Educators with prior teaching license, under the direct supervision of an experienced Intervention Specialist, are assigned to a school for field based experience in pre-K special education classroom.  GR  IN  Internship

Fall 2020  ME4210  4210  Mechanical Vibration  ME  Mechanical and Materials Engr  3  Modeling and analysis of single and multi-degree of freedom systems under fixed and forced vibratation and impact, Lagrangian and matrix formulations, energy methods, and introduction to random vibrations. (2.5 hours lecture, 1 hour lab/hour)  <b>Department Managed Prerequisite(s):</b> Undergraduate level ME 3210 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  ML2010  2010  French Culture  ML  Modern Languages  3  An introduction to French cultural life through significant historical events, literary works, art, cuisine, music, and film.  GR  LE  Lecture

Fall 2020  URS5040  6400  Comm. Regional Planning  URS  Urban Affairs  3  Explores links between urban planning and urban administration, and planning as a profession and a process.  GR  LE  Lecture

Fall 2020  CEG4400L  4400L  Comp Networks & Security Lab  CEG  Computer Engineering  0  Required laboratory for CEG 4400.  <b>Department Managed Prerequisite(s):</b> Graduate level CEG 6400 Minimum Grade of D/<br>UG  LB  Lab

Fall 2020  TH2250  2250  Th Grph II Media Color  TH  Theatre  3  Black and white media and basic color theory, materials, and techniques used in designing for the theatre.  <b>Department Managed Prerequisite(s):</b> Graduate level TH 5000 Minimum Grade of D/<br>UG  ST  Studio

Fall 2020  PHY4100  4100  Physics Lab Techniques  PHY  Physics  2  Proficiency with general laboratory and measurement techniques, knowledge of physical sensors and data reduction techniques.  Application to simple physical systems.  <b>Department Managed Prerequisite(s):</b> Graduate level PHY 6140 Minimum Grade of D/<br>UG  LB  Lab

Fall 2020  URS4320  4320  Managing Volunteer Org  URS  Urban Affairs  3  Management principles for volunteer organizations including program design, recruitment, retention, training, placement and assessment.  <b>Department Managed Prerequisite(s):</b> Graduate level URS 6200 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  CS5180  5180  Comparative Languages  CS  Computer Science  3  This course introduces fundamental concepts and paradigms underlying modern programming languages, to enable better appreciation, comparison and evaluation of languages. For concreteness, it covers the details of an object-oriented language, a functional language, a logic language, and a multi-paradigm scripting language. Basics of interpreters and compilers explored through programming assignments.  <b>Department Managed Prerequisite(s):</b> Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D/<br>GR  LE  Lecture

Fall 2020  EC5450  6450  Political Econ of Women  EC  Economics  3  Provides feminist understanding of women's economic roles and contributions in the context of globalization. Explores importance of social location - race, gender, class, nationality - in economic processes shaping family life, paid employment, and international market relations.  <b>Department Managed Prerequisite(s):</b> Graduate level EC 5210 Minimum Grade of C and Graduate level EC 5220 Minimum Grade of C/<br>GR  LE  Lecture

Fall 2020  LE1010  1010  Criminal Law for Law Enf  LE  Law Enforcement  3  Administrative structure, procedures, and policies of various law enforcement organizations. Review personnel regulations and professional development.  <b>Department Managed Prerequisite(s):</b> Graduate level LE 5360 Minimum Grade of D/<br>UG  LE  Lecture

Fall 2020  ME6590  6590  Adv. Clean Coal Tech.  ME  Mechanical and Materials Engr  3  Historical perspective on coal; sources of coal in the world; future dependence on coal for energy; power production using coal; general process description; principles of combustion, conventional combustion reactors, environmental impact; fluidized bed reactors, process improvements in minimizing emissions; and discussions on future innovations in for clean coal technology.  <b>Department Managed Prerequisite(s):</b> Graduate level ME 3360 Minimum Grade of D or Graduate level ME 3560 Minimum Grade of D/<br>GR  LE  Lecture
| Fall 2020 | PLS4340 | Political Leadership | PLS | Political Science | 3 | Development of political attitudes and values among leaders, activists, and the public. Relationship between personality, political leadership, behavior, and policy. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 | BME4950 | Undergrad Resrch BME II | BME | Biomedical Engineering | 1 | Undergraduate research in advanced biomedical engineering. Topics vary. | UG | IS | Independent Study |
| Fall 2020 | LDR3010 | Prog Eval Theory & Models | LDR | Leadership | 3 | Study of program evaluation theory and approaches. Students will review existing program evaluation approaches and develop a program evaluation plan. | GR | LE | Lecture |
| Fall 2020 | ED32720 | Ev Буд Prac: Ctr Expl | EDS | Education - Special Education | 3 | Evidence-based practices, transitions, environmental interventions; philosophy, policies, laws; community differences in language, culture, family regarding growth, development, characteristics in education of students with exceptional learning needs. Field experiences required. | UG | LE | Lecture |
| Fall 2020 | BIO4110L | The Aquatic Environment | BIO | Biology | 0 | Required laboratory for BIO 4110. | UG | LB | Lab |
| Fall 2020 | SPN2210 | Intern Spn I for Medical | SPN | Spanish | 3 | Intermediate-level Spanish course with service component. Grammar, vocabulary, oral and written communication skills, cultural sensitivity training in the context of the medical profession. Service-learning course.<b> Department Managed Prerequisite(s): Undergraduate level SPN 1020 Minimum Grade of D or AP Spanish Language 3<b>/60. | UG | LE | Lecture |
| Fall 2020 | MUS4520 | Piano Literature II | MUS | Music | 3 | A survey of the literature of the piano and its predecessors--clavichord, harpsichord, and the pianoforte—from the early English Virginal music to the present time. | UG | LE | Lecture |
| Fall 2020 | SPN2010 | Intermediate Spanish I | SPN | Spanish | 3 | Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Taught in Spanish.<b> Department Managed Prerequisite(s): Undergraduate level SPN 1020 Minimum Grade of C or AP Spanish Language 3<b>/60. | UG | LE | Lecture |
| Fall 2020 | PLS7981 | Strategic Intelligence | PLS | Political Science | 3 | This course examines the process whereby the president and national security policymakers are strategic intelligence in foreign policy. The process is examined from its historical inception up to contemporary practice. | GR | SE | Seminar |
| Fall 2020 | PTX8008 | Pharm Short Course | PTX | Pharmacology/Toxicology | 1 | This course was developed to give the medical students in the Clinical Investigation M.S. track the opportunity to become familiar with pharmacology. This course includes lecture style meetings as well as in-depth understandings of clinical research in the current literature. | GR | LE | Lecture |
| Fall 2020 | ENG740 | TESOL Practice/Material | ENG | English | 3 | Develops skills in designing curricula through creating and adapting appropriate materials and activities, as well as evaluating and effectively using existing practices and materials available to the teacher of ESL/EFL. | UG | LE | Lecture |
| Fall 2020 | ATR3600 | Therapeutic Modalities | ATR | Athletic Training | 3 | Theory and practical application of therapeutic modalities to athletic injuries. Modalities may include superficial heat and cold, hydrotherapy, massage, traction, intermittent compression units, ultrasound, electro-stimulation, and microwave and shortwave diathermy. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | CS3900 | Spec Topics in Comp Sci | CS | Computer Science | 1 | Special Topics in Computer Science. | UG | LE | Lecture |
| Fall 2020 | SCM7940 | Tot Qul Mgt & Lean Sup I | SCM | Supply Chain Management | 3 | Process and quality improvement, Six Sigma principles, value stream mapping, Baldridge assessment, benchmarking performance measurement and lean principles. This course has a fee that is non-refundable once the term begins. | GR | LE | Lecture |
| Fall 2020 | CHM8970 | Chemistry Research | CHM | Chemistry | 1 | Original research in a CHM faculty laboratory. | GR | IS | Independent Study |
| Fall 2020 | ENG4990 | Honors Tutors Tutorial | ENG | English | 2 | Second in a two-semester sequence for senior English majors who are doing an English honors project.<b> Department Managed Prerequisite(s): Undergraduate level ENG 4980 Minimum Grade of D<b>/60. | UG | IS | Independent Study |
| Fall 2020 | NUR7004 | Theoretical Findins Nurs | NUR | Nursing | 3 | Analysis of nursing and other selected concepts, models, and theories as related to nursing practice, administration, and education in development and application of nursing science. | GR | LE | Lecture |
| Fall 2020 | PSY6730 | Hearing Capacstion | PSY | Psychology | 3 | Communication-intensive seminar integrating knowledge on the perception of hearing. | GR | SE | Seminar |
| Fall 2020 | HST4650 | 19th-Century US History | HST | History | 3 | Examine distinct periods in the 19th century (e.g., Civil War and reconstruction) and major topics such as slavery. Topics vary. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 | CS7060 | Numerical Analysis I | CS | Computer Science | 4 | Solutions of systems of linear and nonlinear equations, numerical solution of matrix eigenvalue problems, interpolation and numerical integration, numerical solution of initial and boundary value problems for differential equations.<b> Department Managed Prerequisite(s): Graduate level MTH 6550 Minimum Grade of D<b>/60. | GR | LE | Lecture |
| Fall 2020 | SPN5440 | Spanish Amer Culture | SPN | Spanish | 3 | A comprehensive review of the diverse cultures of Hispanic America. | GR | LE | Lecture |
| Fall 2020 | PL5630 | Soviet Successor States | PL5 | Political Science | 3 | Examines the political role in the former Soviet Union, with emphasis on the legacy of communism and the role of economics and politics in the transition to democracy. | GR | LE | Lecture |
| Fall 2020 | ED4220 | MCE Teach. Prac/Prac/Lm | ED | Education | 3 | Focuses on the historical and underlying philosophy of the middle school concept based on the unique nature of pre-adults and adolescents. Current instructional and curricular practices are viewed in relation to this philosophy. | UG | LE | Lecture |
| Fall 2020 | PSYB260 | Decision Making | PSY | Psychology | 3 | The course covers the major theoretical viewpoints of judgment and decision making in the literature. The emphasis is on understanding the nature of human decision making and the implications on designing decision aids, training, and policy making.<b> Department Managed Prerequisite(s): Undergraduate level PSY 3310 Minimum Grade of D or Undergraduate level PSY 4650 Minimum Grade of D<b>/60. | GR | LE | Lecture |
| Fall 2020 | NUR6114 | Nursing Elective | NUR | Nursing | 1 | Determined by the specific faculty offering the elective. The purpose of the graduate nursing elective is to offer undergraduate and graduate students opportunities to explore specific topics in greater depth. | GR | LE | Lecture |
| Fall 2020 | MUE4770 | Chamber Orchestra | MUE | Music: Ensembles | 1 | Instrumental ensemble, consisting primarily of strings and varying combinations of wind and percussion instruments, devoted to the study and performance of music written for that medium. Audition required. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | CS1180L | Computer Science I Lab | CS | Computer Science | 0 | Required laboratory for CS 1180. Integrated Writing course. | UG | LB | Lab |
| Fall 2020 | ME7150 | Radiation Heat Transfer | ME | Mechanical and Materials Eng | 3 | Fundamentals and application of radiation heat transfer, radiation between gray and nongray bodies, network techniques, radiation through absorbing media, and radiation between gases and surrounding surfaces. Finite difference solution for radiation problem.<b> Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D or Graduate level ME 5360 Minimum Grade of D<b>/60. | GR | LE | Lecture |
Fall 2020
TH4360  4360  Graphics II: Rendering  TH  Theatre  3  Further development of skills used in creating theatrical renderings, costume plates and lighting sketches. Figure drawing, depiction of light and shadow, and traditional and non-traditional media and techniques.  UG  LL  Lecture/Lab Combination  
Fall 2020
PSY920  3920  Behavioral Neurosci II  PSY  Psychology  3  Learning and memory, reinforcerment systems, inhibitive behavior, sensory and motor systems, psychopharmacology, and addictive processes.  UG  LE  Lecture  
Fall 2020
CL4230  4230  Clinical Pathology Sem  CL  Clinical Laboratory Science  1.5  Discussion of clinical findings through case studies.  UG  SE  Seminar  
Fall 2020
EC7100  7100  Math Methods for Econ  EC  Economics  3  This course will introduce students to the major mathematical methods that are used to represent economic theories in modern economics, and how these methods are used to analyze problems found in economics.  GR  LE  Lecture  
Fall 2020
KNE4110A  1180A  Dance: Swing  KNE  Kinesiology & Health  1  Fundamental skills and knowledge of Dance: Swing. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab  
Fall 2020
PHY1010  1010  Undergrad Phy Seminar II  PHY  Physics  1  Provides undergraduate physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program. Continuation of PHY 1000.  UG  SE  Seminar  
Fall 2020
PTX9007  8007  Career Plannng-Pharm&Tox  PTX  Pharmacology/Toxicology  1  Success in one’s academic and professional career can be enhanced by taking an active and intentional role in planning future steps and goals. Students in this course will be exposed to the many different career paths that are available in the field of Pharmacology and Toxicology and will work to discover the roles and activities that they find most suitable and rewarding. Students will learn how to best identify and obtain job positions appropriate for their skills set in their field of interest. Students will develop their own individual development plan (IDP) to maximize their potential for career enhancement and satisfaction.  GR  LE  Lecture  
Fall 2020
PHL4720  4720  Philosophy of Social Sci  PHL  Philosophy  3  Analysis of views concerning concept and theory formation in the social sciences, problems in objectivity and value, justification of Verstehen, mechanism vs. teleological explanations, and reductionism.  UG  LE  Lecture  
Fall 2020
EDS6260  6260  Practicum: ECIS  EDS  Education - Special Education  2  Educators with prior teaching licenses, under direct supervision of an experienced intervention specialist, are assigned for field experience in grades preK-3rd special education classrooms.  GR  IN  Internship  
Fall 2020
PHY5500  5500  Advanced Physics Lab - I  PHY  Physics  2  Laboratory projects designed to introduce the participant to modern physics laboratory techniques by doing standard measurements or reproducing historic experiments.  GR  LB  Lab  
Fall 2020
EDS6281  6281  Prof Seminar: ECIS  EDS  Education - Special Education  0.5  Seminar focus will prepare candidates for state licensure requirements. Topics include: planning for instruction and assessment, instruction and engaging learners, assessing learning, and creating a portfolio.  GR  SE  Seminar  
Fall 2020
EES6160  6160  Stratigraphy & Sed.  EES  Earth & Environmental Sciences  4  Clastic and carbonate sedimentary rocks, their stratigraphy, texture, provenance, and classification. Principles, rules, and geologic and geophysical correlation techniques. Fluid flow sediment transport and deposition, sedimentary structures, and depositional environments. Three hours lecture, two hours lab.  GR  LE  Lecture  
Fall 2020
ME2600  2600  Metallurgy  ME  Mechanical and Materials Eng  1  Experimental methods characterizing the microstructure of solids. Emphasis on optical microscopy and the effects of processing on properties and microstructure.  GR  LE  Lecture  
Fall 2020
PSY8750  8750  Job Attitudes  PSY  Psychology  3  An overview of the theoretical, methodological and empirical literature on job attitudes.  GR  LE  Lecture  
Fall 2020
TH3000  2000  Acting/Teach Practicum  TH  Theatre  1  Designed to give actors and technicians/designers an opportunity to receive academic credit for significant involvement in departmental or approved, supervised professional productions. Project will carry specific requirements and obligations to be agreed upon in writing by faculty supervisors and the student.  UG  PR  Practicum  
Fall 2020
PHY7040  7040  Physics of Philosophy  PHY  Physics  3  The various overarching ideas in physics that give unity to the subject. Historical bases of these ideas are included. Topics include but are not limited to the experimental basis of physics, fundamental limits on measuring and of knowing, the physical nature of the cosmos, determinism, relativity, the quantum - continuum transition, the nature of space and time, entropy (H theorem), Bell's theorem, Loschavlov's theorem.  GR  SE  Seminar  
Fall 2020
TH3210  3210  Scene Painting I  TH  Theatre  3  Introduction to the materials and techniques used in traditional scene painting, from basic skills (including wet-blending, spattering, scumbling) to the manipulation of light, shadow and texture to create three-dimensional effects.  UG  LL  Lecture/Lab Combination  
Fall 2020
EGR1980R  1980R  Special Topics in EGR Rec  EGR  Engineering  0  Required recitation for EGR 1980.  UG  RE  Recitation  
Fall 2020
SW6950  6950  SW Foundation Topics  SW  Social Work  0  Topics include content in human behavior in the social environment, social welfare policies and programs, social work practice, and social work research.  GR  LE  Lecture  
Fall 2020
FR6810  6810  Ind Read for Grad Students  FR  French  3  Independent reading for graduate students. Taught in French.  GR  IS  Independent Study  
Fall 2020
ME6840  6840  Mat Sel for Mech Design  ME  Mechanical and Materials Eng  3  Principles of materials-limited design. Lectures, case histories, open-ended assignments and computer based materials selection tools. Procedures for selection of optimum material(s) under constraints resulting from functional, reliability, safety, cost and environmental issues.  GR  LE  Lecture  
Fall 2020
BME4960  4960  Dept Honors Research BME  BME  Biomedical Engineering  1  Research in biomedical engineering in fulfillment of departmental honors requirements. Topics vary.  UG  IS  Independent Study  
Fall 2020
SW4750  4750  Child Welfare I  SW  Social Work  3  Frameworks for categorizing child welfare problems. Historical and current examination of legislation, policies, programs, and services to address child welfare needs including the role of the child welfare worker.  UG  LE  Lecture  
Fall 2020
RHB2010  2010  Intro to Rehab Services  RHB  Rehabilitation  3  Philosophy, history and legislation of rehabilitation services and career options. Students visit rehabilitation agencies and interact with populations and agencies they may serve as a rehabilitation provider.  UG  LE  Lecture  
Fall 2020
CS7070  7070  Numerical Analysis II  CS  Computer Science  4  Finite difference and finite element methods for partial differential equations, including elliptic, parabolic and hyperbolic.  GR  LE  Lecture
Fall 2020  KSH1270B  1270B  H2O Kickboxing  KSH  Kinesiology & Health  1  Fundamental skills and knowledge of H2O Kickboxing. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  HLM7800  7800  Independent Study  HUM  Humanities  1  Individual study in the humanities under the direction of a faculty supervisor. Generally requires regular conferences with supervisor and research writing.  GR  IS  Independent Study
Fall 2020  ED6350  6350  MCE: Math Car & Meth  ED  Education  3  A study of curriculum, materials, and methodology for teaching mathematics in the middle school, grades 4 through 9. This includes lesson planning, assessment, differentiation, technology, and pedagogical content knowledge.  GR  LL  Lecture/Lab Combination
Fall 2020  EC7800  7800  Ec Problema Seminar  EC  Economics  3  Titles vary. Six hours of seminar must be selected from the following topics: economics of the workforce; regional and urban problems; environmental issues; technological change; economic development; economics of poverty; and income maintenance. Completion of introductory statistics course or equivalent 600-level survey course required. (b) Department Managed Prerequisite(s): Graduate level MBA 5220 Minimum Grade of D or (Undergraduate level EC 2040 Minimum Grade of D and Undergraduate level EC 2050 Minimum Grade of D) (b);
Fall 2020  CNE7281  7281  Systems Theory  CNE  Counseling  2  Considers principles and techniques of marriage and family counseling from a variety of theoretical orientations.  GR  LE  Lecture
Fall 2020  EDL9750  9750  Directed Study  EDL  Educational Leadership  1  Designed for students enrolled in a program requiring a research study. Students and their assigned program advisors collaboratively determine the course requirements.  GR  IS  Independent Study
Fall 2020  PXA990  9990  Undergraduate Research  PXT  Pharmacology/Toxicology  1  Experimental learning in assigned clinical and research laboratories. Students present papers, and seminars are given by professionals and a variety of experts from a clinical and research fields.  LG  IS  Independent Study
Fall 2020  EC2050  2050  Principle Macroeconomics  EC  Economics  3  Fundamental principles of macroeconomics as an aid in understanding modern society.  UG  LE  Lecture
Fall 2020  CNE6030  6030  Stats Res for Counseling  CNE  Counseling  3  Surveys counseling and rehabilitation research, evidence-based practice, program evaluation, needs assessment, descriptive, inferential, qualitative, quantitative, and single-case designs statistical analysis, and ethical and culturally relevant strategies for interpreting and reporting human services research.  GR  LE  Lecture
Fall 2020  SW4850  4850  Gero Cert Project  SW  Social Work  3  Applied research in an agency setting that serves older adults under the guidance of the gerontology certificate director. (b) Department Managed Prerequisite(s): Undergraduate level SW 4620 Minimum Grade of D or Undergraduate level SOC 4820 Minimum Grade of D (b);
Fall 2020  EGR7920  7920  MEIE Team Project II  EGR  Engineering  3  Second semester of team project for Master in Engineering Innovation and Entrepreneurship program. Students work in teams to support the development of a new technology-based organization in concert with local businesses, researchers, inventors and entrepreneurial resources. Factors considered include technology, customers, feasibility, competition, financing and cost. (b) Department Managed Prerequisite(s): Graduate level EGR 7910 Minimum Grade of D and Graduate level IHE 7910 Minimum Grade of D (b);
Fall 2020  ME4730  4730  Engineering Ceramics  ME  Mechanical and Materials Eng  3  Ceramic and refractory raw materials and products; atomic structure and bonding, structure of crystalline phases and glasses; structural imperfections; diffusion and permeability in oxides, and processing of ceramics. (b) Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C (b);
Fall 2020  MUS1110  1110  Vocal Technique and Diction  MUS  Music  1  Vocal English and Italian diction taught with an emphasis on the IPA phonetic language. Discussion and development of vocal technique, terminology, and anatomy.  UG  LE  Lecture
Fall 2020  URS4330  4330  Strategic Planning  URS  Urban Affairs  3  Theory and practice of strategic thinking, planning, and management in public and nonprofit organizations.  UG  LE  Lecture
Fall 2020  KNH4550  4550  Seminar Sport Science  KNH  Kinesiology & Health  1  Monitors and supports the professional progress of sports science program students. Enhances sports science students' preparation for a certification exam and career development.  LG  SE  Seminar
Fall 2020  CTE6250  6250  Curriculum & Assessment  CTE  Career and Technical Education  3  Investigative ways in which schools approach curriculum, assessment and continuous improvement. Includes alignment of standards with curriculum, instruction and assessments, increased attention to student learning and increased faculty collaboration.  GR  LE  Lecture
Fall 2020  THH450  450  Singing for Actor VII  TH  Theatre  1  Private singing lessons for acting, theatre studies and dance majors only.  UG  ST  Studio
Fall 2020  ATR3030  3030  Therapeutic Exercise  ATR  Athletic Training  3  Knowledge, skills, and dispositions required of the entry-level certified athletic trainer to plan, implement, document, and evaluate the efficacy of therapeutic exercise programs for the rehabilitation/reconditioning of injuries to and illnesses of the physically active.  UG  LL  Lecture/Lab Combination
Fall 2020  DANS801  801  Interned Tap Dance II  DAN  Dance  1  Group classes exploring Tap Dance technique.  UG  ST  Studio
Fall 2020  HED736  736  Methods Pub Health Ed  HED  Health Education  3  Comprehensive overview of the practical tools and skills commonly used by public health education specialists in a variety of settings.  UG  LE  Lecture
Fall 2020  EEE4440  4440  Electronic Integ Systems  EE  Electrical Engineering  3  Theory and applications of integrated circuits. Bipolar and field effect transistor amplifier design and analysis, multi-stage and feed back amplifiers, ideal and real operational amplifiers, frequency response and compensation, active filters, comparators, and waveform generators.  UG  LE  Lecture
Fall 2020  ENG210  210  British Texts to 1660  ENG  English  3  Representative works of major English writers of the medieval period, and the 16th and 17th centuries.  UG  LE  Lecture
Fall 2020  HLM7990  7990  Continuing Registration  HUM  Humanities  1  Limited to students who have completed coursework toward the Master of Humanities degree and must maintain registered status.  GR  IS  Independent Study
Fall 2020  LAT3550  3550  Readings in Roman Poetry  LAT  Latin  3  Roman lyric and elegiac poetry: Virgil's Eclogues; Catullus, Horace, Propertius, Tibullus, and Ovid. Topics include meters and style of Latin lyric, amatory tradition, and the influence of Hellenistic poetry.  UG  LE  Lecture
Fall 2020  EES4350  4350  Field Mapping  EES  Earth & Environmental Sciences  2  Geologic phenomena studied and mapped in the field. Mapping techniques are utilized in a series of exercises of increasing complexity. Standard methods are utilized for observing, describing, interpreting and mapping rock units and their structure.  UG  LL  Lecture/Lab Combination
Fall 2020  EC6460  6460  Gender Econ Policy Intl  EC  Economics  3  Overview of feminist analysis of economic policy in developing and developed nations. Topics include: valuing women's unpaid work, gender bias in public spending, tax policy, property rights, population policy, and regulation of advertising. (b) Department Managed Prerequisite(s): Graduate level EC 5210 Minimum Grade of C and Graduate level EC 5220 Minimum Grade of C (b);
Fall 2020  PHY3300  3300  Intro to Astrophysics  PHY  Physics  3  Selected topics from solar system and extraterrestrial astronomy and astrophysics. Topics include celestial coordinate systems and mechanics, Kepler's laws, the sun, planetary formation, stellar structure and evolution, galaxies, cosmology, and extrasteroid planets.  UG  LE  Lecture
Fall 2020  EES4370  4370  Seismic Processing  EES  Earth & Environmental Sciences  4  Theory and practice of computer processing of seismic reflection data. Deals with seismic data formats, seismic data manipulation, filtering, velocity analysis, stacking and migration, all in both land and marine contexts. Hands-on experience with industry-standard software packages.  UG  LL  Lecture/Lab Combination

Fall 2020  ISMB400  8400  Dissertation Research  ISM  Interdiscip. Appl. Sci. and Math  1  The research work to be performed will be supervised by an ISM Program Faculty member. The scope and milestones required for the dissertation research shall be decided upon by the faculty member in consultation with the student.  GR  IS  Independent Study

Fall 2020  PSY8720  8720  Work Motivation  PSY  Psychology  2  Work motivation theories are examined in terms of their empirical support and practical usefulness. Factors and processes influencing effort, intentions, performance, and other job behaviors are discussed. (b) Department Managed Prerequisite(s): Graduate level PSY 8620 Minimum Grade of D-/GR  SE  Seminar

Fall 2020  MUS1450  1450  Vocal Ped & Choral Meth  MUS  Music  1  An overview of vocal technique, literature, and performance for the instrumental music education major.  UG  LE  Lecture

Fall 2020  CHM1070  1070  Chemistry: Energy & Environ  CHM  Chemistry  4  Examines gases and liquid states and thermochemistry as a basis for understanding air and water quality and fossil and nuclear fuels. Attention to the chemistry of the solar system. Integrated Writing course.  UG  LE  Lecture

Fall 2020  OHS2150  2150  Job Search/Port Dev  OIS  Office Information Systems  3  Job hunting skills, resume writing, interviewing techniques, and effective employment seeking skills.  UG  LL  Lecture/Lab Combination

Fall 2020  PLS4330  4330  Public Opinion  PLS  Political Science  3  Opinion formation in American politics; relationship of opinion to public policy; voting behavior in American elections; role of mass media and political interest groups in policy process; and development of political attitudes and values.  UG  LE  Lecture

Fall 2020  UR6430  6430  Administrative Law  URS  Urban Affairs  3  Examines the constitutional foundations of administrative law and the legal context of federal, state and local administrative rule making and adjudication.  GR  LE  Lecture

Fall 2020  AES1990  1990  AES Independent Study  AES  Aerospace Studies  1  Independent study.  UG  IS  Independent Study

Fall 2020  E&N6100  6100  Human Physiology  E&N  Physiology & Neuroscience  4  An overview of human/mammalian organ physiology. Fundamental mechanisms and the experimental basis for current understanding is emphasized. Prerequisite: Introductory biology, chemistry, physics, or permission of instructor.  UG  LE  Lecture

Fall 2020  ED54800  4080  Dyslexia&Multi-Sensory Instr  EDS  Education - Special Education  3  Provides insight in-depth knowledge regarding dyslexia: history, theory, brain-based research, methodologies, instructional strategies, effective instruction, assistive technology, structured language and phonics knowledge, research-supported instructional procedures and an overall holistic understanding of learners with dyslexia.  UG  LE  Lecture

Fall 2020  MS2040  2040  Intro to Business Stats  MS  Management Science  3  Statistical methods used in analysis of business problems, including theory and application of frequency distributions, measures of central tendency and variability, probability distributions, expectation, sampling and estimation, and one-sample hypothesis testing.  UG  LE  Lecture

Fall 2020  EED3200  3200  Soc Stu Methods P-5  EED  Elementary Education P-5  3  Principles, resources, technology, critical thinking skills, and social science research for P-5 social studies, as well as the teaching of U.S. and Ohio history.  UG  LE  Lecture

Fall 2020  PLS4200  4200  Politics and the Novel  PLS  Political Science  3  (Also listed as ENG 3010) Study and critiques of political themes in works of selected 20th century authors, including social roles, activism, political awareness, power, government and conflict at the individual, institutional and international level.  UG  LE  Lecture

Fall 2020  LEP0130  0130  Grammar - Level 1  LEP  LEAP  0  Grammar for beginning ESL students. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture

Fall 2020  KNI1140  1140  Dance: Ballet  KNI  Kinesiology & Health  1  Fundamentals skills and knowledge of Dance: Ballet. Competency-based course. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  STT4240  4240  Stat Quality Control  STT  Statistics  3  Statistical process control for attributes and variables data: probability distributions, sampling plans, control charts, statistical control, process capability, process improvement, tolerance intervals, evolutionary operation, and applications.  UG  LE  Lecture

Fall 2020  PSY4610  4610  Human-Comp Interface Cap  PSY  Psychology  3  Communication intensive seminar integrating knowledge on human-computer interface issues. Integrated Writing course.  UG  SE  Seminar

Fall 2020  ED4370  4370  Math Methods for MCE  ED  Education  3  A study of curriculum, materials, and methodology for teaching mathematics in the middle school, grades 4-9. This includes lesson planning, assessment, differentiation, technology, and pedagogical content knowledge.  UG  LE  Lecture

Fall 2020  EC4830  4830  Independent Reading  EC  Economics  1  Independent study in economics or allied disciplines.  UG  IS  Independent Study

Fall 2020  ED54900  4900  Dyslexia Methods & Assessment  EDS  Education - Special Education  3  Explore various assessment to administer, analyze, and interpret specifically for learners with dyslexia. Apply assessment knowledge and skills to a struggling learner to create a case study assessment report and plan for specific classroom accommodations.  UG  LE  Lecture

Fall 2020  SOC4110  4110  Applications Rich Mthld  SOC  Sociology  3  Advanced social research techniques. Students design and carry out a full-scale research project within a seminar-like class setting. Integrated Writing course.  UG  LE  Lecture

Fall 2020  BMB1000  1000  Freshman Seminar in BMB  BMB  Biochem & Molecular Biology  0.5  Introduction to BMB faculty and the facilities at WSU. Development of a learning portfolio to facilitate student growth and development and BMB program success. Introduction to the scientific practices encompassed in the Next Generation Science Standards (NGSS).  UG  LE  Lecture

Fall 2020  SCM4250  4250  Supply Chain Info Mgmt  SCM  Supply Chain Management  3  Practices and technologies for managing supply chain information in organizations. Business processes underlying supply chains, information analysis, intra- and inter- organizational information systems, business process automation, and business intelligence for supply chain activities between an organization and its partners.  UG  LE  Lecture

Fall 2020  FAS2610  2610  Livestock Management  FAS  Food and Agricultural Systems  3  Evaluation of livestock management systems based on animal welfare, environment protection, worker safety and food safety. Topics include proper animal treatment, safe handling of animals, biosecurity, medication, livestock records, facility management, workplace safety, and environmental stewardship.  UG  LL  Lecture/Lab Combination

Fall 2020  ED3040  3040  MCE Gen ELA Inst  ED  Education  3  Methods for teaching 4th, 5th, and 6th grade language arts pertinent to the Ohio Learning Standards ELA with emphasis on content, developmentally appropriate pedagogy, curriculum, and materials.  GR  LE  Lecture

Fall 2020  GER2020  2020  Intermediate German II  GER  German  3  Grammar review, reading, and discussion of selected texts with practice speaking and writing the language. (b) Department Managed Prerequisite(s): Undergraduate level GER 2010 Minimum Grade of D-/GR  LE  Lecture

Fall 2020  ASM7073  7073  Health Services Admin  ASM  Aerospace Medicine  3  This course provides an overview of the US health care system including public and private institutions and agencies, federal and state regulations, and methods of financing. Topics of focused study include the major contemporary forces affecting the health care delivery system.  GR  LE  Lecture
Fall 2020
HEA 9230  9230  Instruction in Higher Ed  HEA  Higher Education Admin  3  Designed to facilitate the application of theory to practice in teaching in colleges and universities. Students will explore diverse pedagogical approaches and develop an understanding of the professional role of the faculty member.  GR  LE  Lecture
Fall 2020
FR 6110  6110  FR Instruc Practicum I  FR  French  1  Peer teachers observe elementary and/or intermediate level classes, interacting with students, teaching mini-units on culture, language, and literature, incorporating into lessons the principles of the Proficiency Method and the National Standards for Language Teaching.  GR  PR  Practicum
Fall 2020
NUR 7355  7355  Practicum in Neg Ed  NUR  Nursing  4  Observation, participation, and practice in teaching nursing concepts. Application of previous learning with emphasis on the nurse educator role. Clinical practicum required.  GR  SE  Seminar
Fall 2020
URS 6240  6240  Pub. Sec. Lab. Relations  URS  Urban Affairs  3  Examines collective bargaining, the negotiation process, impasse resolution, and contract and grievance administration in local government.  GR  LE  Lecture
Fall 2020
ATR 7150  7150  Clinical Practice I  ATR  Athletic Training  2  Clinical experience with a preceptor to practice; apply and master a variety of entry-level skills learned in the previous semester. Evaluation will occur in both the clinical and classroom settings.  GR  PR  Practicum
Fall 2020
KHE 780  1780  Weight Training  KHE  Kinesiology & Health  1  Fundamental skills and knowledge of Weight Training. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020
HST 6810  6810  African-American History  HST  History  3  Examines topics drawn from the African-American experience; may include black ideology and leadership, racial tension in urban society, and the civil rights movement. Topics vary.  GR  LE  Lecture
Fall 2020
MKT 4690  4690  Big Data and Predictions  MKT  Marketing  3  Students learn specific data analytic methodologies such as predictive analytics, data mining, text mining, sentiment analysis, topic analysis and Big Data related applications. This course is largely practice oriented, with students learning experientially by being introduced to cutting-edge marketing analytical tools, and then applying them through in-class exercises and case analyses, generating data-driven managerial recommendations.  UG  LE  Lecture
Fall 2020
EDS 4670  4670  Collaboration for Inclusion  EDS  Education - Special Education  3  Co-teaching techniques with an emphasis on differentiation, as well as collaborative consultation and communication strategies to enhance instruction for diverse learners. Integrated Writing course.  UG  LE  Lecture
Fall 2020
EE 5010L  5010L  Circuit Analysis I Lab  EE  Electrical Engineering  1  To assist students with learning to apply Kirchoff's laws, to have an understanding of and an ability to apply Thévenin and Norton's theorems, to analyze and design circuits, to analyze 1st and 2nd order circuits, to apply linear differential equation techniques, and to have an understanding of sinusoidal steady state analysis.  GR  LB  Lab
Fall 2020
PSI 8420  8420  Crisis Intervention  PSI  Professional Psychology  3  Theory and definition of crisis; individual and community support systems and crisis programs in hospitals, suicide and crisis centers, and office, family, and other settings.  GR  LL  Lecture/Lab
Fall 2020
EGR 3980R  3980R  Special Topics In EGR Rec  EGR  Engineering  0  Required recitation for EGR 3980.  GR  LL  Lecture/Lab
Fall 2020
MUE 4500  4500  Symphonic Band  MUE  Music: Ensembles  1  Performs hand music of all styles. Open to all students with intermediate to advanced experience. Audition required.  UG  RE  Recitation
Fall 2020
AFS 5990  5990  Special Topics  AFS  Afr /Afr Amer Studies  3  Selected topics relevant to historical and current issues in African and African American Studies  UG  LE  Lecture
Fall 2020
SOC 6990  6990  Studies in Selected Subj.  SOC  Sociology  1  Problems, approaches, and topics in the field of sociology. Topics vary.  GR  LE  Lecture
Fall 2020
MTH 4570  4570  Combinatorics and Graphs  MTH  Mathematics  4  Permutations, combinatorics, generating functions, recurrence relations, and Polya's theorem of counting; methods, results, and algorithms of graph theory, with emphasis on graphs as mathematical models applicable to organizational and industrial situations.  UG  LE  Lecture
Fall 2020
MTH 4990  4990  Problems in Microbiology  MI  Microbiology & Immunology  2  Physiological and biochemical processes unique to microorganisms and the host response to microbes.  UG  LE  Lecture
Fall 2020
EES 4330  4330  Global Biogeochem Cycles  EES  Earth & Environmental Sciences  3  Examines how elements cycle through and between the biosphere, hydrosphere, lithosphere, and atmosphere, and related environmental issues such as global change, aquatic nutrient pollution, and acid rain. Integrated Writing Course.  UG  LE  Lecture
Fall 2020
DMV 2010  2010  DMV Registration  DMV  DMV Consortium  0.5  Principles and concepts of inorganic chemistry, including the periodic table, atomic structure, bonding, coordination compounds, and an introduction to group theory.  UG  LE  Lecture
Fall 2020
CHM 5200  5200  Adv Inorganic Chem I  CHM  Chemistry  3  This course covers basic theories, methods and algorithms of atomic computer simulations of materials, using lecture and computer labs. Classical, semi-empirical, and ab initio quantum mechanical methods are explained. Department Managed Prerequisite(s): Undergraduate level CHM 2700 Minimum Grade of D-<
Fall 2020
ME 6830  6830  Comp Materials Science  ME  Mechanical and Materials Eng'  3  Course covers basic theories, methods and algorithms of atomic computer simulations of materials, using lecture and computer labs. Classical, semi-empirical, and ab initio quantum mechanical methods are explained. Department Managed Prerequisite(s): Undergraduate level CHM 2700 Minimum Grade of D-<
Fall 2020
BE 6120  6120  Prob for Engrr  BE  Industrial & Hum Fac Eng'  3  Introduction to probability distributions, measures of association, inferences on responses, and basic experimental design. Emphasis on application of statistical tools. Department Managed Prerequisite(s): Undergraduate level CHM 2700 Minimum Grade of D-<
Fall 2020
SOC 3000  3000  Sociological Imagination  SOC  Sociology  3  Introduction to Sociology. Methods and concepts of sociological research. Department Managed Prerequisite(s): Undergraduate level CHM 2700 Minimum Grade of D-<
Fall 2020
SLJ 3600  3600  Sign/voice Interpret II  SLJ  Sign Language Interpreting  4  Students will be asked to build upon prior learning, caring for ill newborns/infants and their families. Complex cases and multiple patient scenarios will be stressed. Application of research findings, leadership on the interprofessional team, planning and execution of complicated discharges, and innovations in care are all essential competencies.  GR  LE  Lecture
Fall 2020
DAN 3040  3040  Ballet Musical Th III  DAN  Dance  2  Group classes continuing to introduce Musical Theatre majors to fundamentals of Ballet technique.  UG  ST  Studio
| Fall 2020 | MP3350 | 3350 | Screwwriting Short Film | MP | Motion Picture | 3 | Introduction to writing a short screenplay. Students will learn basic storytelling strategies for media production. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | IT2240 | 2240 | Fund of Weblog Design | IT | Information Technology | 3 | Creating a weblog for the purpose of communicating or promoting an idea and evaluating the effectiveness of a weblog using visitor comments and web analytics. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | KNH1050 | 1050 | Army Fitness Training II | KNH | Kinesiology & Health | 1 | Fundamental skills and knowledge of Army Fitness Training. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | EC7280 | 7280 | Economics of Innovation | EC | Economics | 3 | The course discusses the literature on technological change, economic growth, globalization and long wave cycles. Distinctions in allocating resources to provide knowledge goods and innovations are discussed. Topics include entrepreneurship, intellectual property, network economics, and technology clusters. | GR | LE | Lecture |
| Fall 2020 | CTE4250 | 4250 | Curriculums & Assessments | CTE | Career and Technical Education | 3 | Investigates ways in which schools approach curriculum, assessment and continuous improvement. Includes alignment of standards with curriculum, instruction and assessments, increased attention to student learning and increased faculty collaboration. | UG | LE | Lecture |
| Fall 2020 | HST4900 | 6000 | Ancient History | HST | History | 3 | Examine selected problems in Greek or Roman history to the death of Constantine in A.D. 337. Topics vary. | GR | LE | Lecture |
| Fall 2020 | CEG5960 | 6360 | Distrb Sys & Cloud Comp | CEG | Computer Engineering | 3 | Study of process communication, core distributed algorithms, distributed file systems, cloud computing, and massive scale data-parallel processing. | GR | LE | Lecture |
| Fall 2020 | THI3450 | 3450 | Acting III | TH | Theatre | 3 | Training in approaches to a range of texts by playwrights from the early and late Modern period such as Ibsen, Chekhov, Shaw, Williams, Miller, O’Neill and others. Emphasis on understanding the acting conventions associated with these styles. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | PSH9560 | 9560 | Rehabilitation Psych | PSI | Professional Psychology | 3 | Introduction to the field of rehabilitation psychology focusing on current psychological theories and treatment interventions utilized by rehabilitation psychologists and the role of psychological factors in the treatment of function, psychological, and social impacts of disability. | UG | LE | Lecture |
| Fall 2020 | MUE4690 | 4690 | Wind Symphony | MUE | Music: Ensembles | 1 | The university's most select symphonic band organization, this ensemble performs compositions ranging from traditional classics to innovative contemporary literature, including transcriptions and original works. Audition and instructor permission required. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | BHE7340 | 7340 | Hum Factors Mobile Comp | BHE | Industrial & Hum Fac Engr | 3 | Human factors and user experience concepts related to mobile computing. Application of mobile computing to domains such as consumer electronics, education, healthcare, and military will be covered, as well as an overview of several industry practices. Students will learn to use mobile application frameworks, design for the mobile environment, and become comfortable developing simple applications and interactions in the Android mobile development environment. | GR | LE | Lecture |
| Fall 2020 | HST7460 | 7460 | Seminar Med Military Hist | HST | History | 3 | Examines aspects of the history of military affairs in Europe, the United States, and of the wider world from the 16th century to the present. Topics vary. | GR | SE | Seminar |
| Fall 2020 | PHY4900 | 4800 | Classical Mechanics | PHY | Physics | 3 | Introduction to classical theoretical physics. Emphasis on mechanics and mathematical techniques. | UG | LE | Lecture |
| Fall 2020 | PSY5702 | 7020 | Dsgn | PSY | Psychology | 4 | Continuation of PSY 7010. | GR | LL | Lecture/Lab Combination |
| Fall 2020 | ME5120 | 5120 | Mechanics of Materials | ME | Mechanical and Materials Engr | 3 | Introduction to stress and deformation in deformable solids. Topics include axial loading, torsion, pure bending, shear stresses in beams, design of beams under transverse loading, thin-wall pressure vessels, transformation of stress, stresses under combined loadings, deflection of beams and buckling. | GR | LE | Lecture |
| Fall 2020 | NUR4150 | 4150 | Independent Study | NUR | Nursing | 1 | Faculty-directed, individualized study of student-selected topics. | UG | IS | Independent Study |
| Fall 2020 | ED6460 | 6460 | AYA Intern Pl I: Mib IS | ED | Education | 1 | Candidates, mentored by a science educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a 7-12th grade setting applying pedagogical content knowledge from science content and methods courses. | GR | IN | Internship |
| Fall 2020 | BME7112 | 7112 | Proc of Medical Images | BME | Biomedical Engineering | 3 | Digital image processing and its application to medical images. Topics include image display, compression, filtering, spatial versus frequency domain techniques, edge detection, morphological operations, registration and classification. | GR | LE | Lecture |
| Fall 2020 | GER4160 | 4160 | German Lt 18th Cent | GER | German | 3 | Representative works of Goethe and Schiller. | UG | LE | Lecture |
| Fall 2020 | PTX6010 | 6010 | Intro to Biochemistry | PTX | Pharmacology/Toxicology | 3 | This course provides an introduction to the application of biochemistry to pharmacology. Students will learn fundamental concepts in the structural and thermodynamic aspects of the organization of proteins. | GR | LE | Lecture |
| Fall 2020 | SCM3300 | 3300 | Quality & Process Mgmt | SCM | Supply Chain Management | 3 | Principles of process and quality improvement using Six Sigma principles, value stream mapping, and Balanced Scorecard. | GR | LE | Lecture |
| Fall 2020 | PKN7920 | 7920 | Mechanics of Cell Death | P&N | Physiology & Neuroscience | 2 | Signalling and Molecular mechanisms of Apoptotic Cell Death and relationship to human diseases. | UG | LE | Lecture |
| Fall 2020 | CHM4370 | 4370 | Electroanalytical Chem | CHM | Chemistry | 2 | Fundamental principles of electrochemistry and the application of electrochemical methods to chemistry and chemical analysis. | UG | LE | Lecture |
| Fall 2020 | MS2050 | 2050 | Quant Business Modeling | MS | Management Science | 3 | Development and interpretation of inferential statistical models applied to business. Estimation models, decision analysis and hypothesis testing models and regression models. Use of statistical software. | UG | LE | Lecture |
Fall 2020 ACC7440 7440 Attestation Top/Research ACC Accountancy 3 This course provides in depth coverage of professional standards and audit procedures applied to specific business processes, including statistical sampling techniques, tests of controls, substantive tests of transactions and balances and analytical procedures. GR LE Lecture
Fall 2020 PSY5830 5830 Cognitive Neuro Methods PSY Psychology 4 The course will provide an introduction to the research methods used in cognitive neuroscience, giving students a hands-on-experience with the design of neuroscientific experiments, data collection, data analysis, as well as communication of data through writing. GR LE Lecture
Fall 2020 SW4890 4890 SW Field Seminar II SW Social Work 3 Faculty-field liaison utilizes individual and group feedback to assist students in applying generalist social work practice knowledge while planning, implementing, and processing activities at their practicum sites. 3 Department Managed Prerequisite(s): Undergraduate level SW 4860 Minimum Grade of D and Undergraduate level SW 4870 Minimum Grade of D- or better. UG SE Seminar
Fall 2020 EE6130L 6130L Control Systems Lab EE Electrical Engineering 1 Laboratory supporting EE 6130. Students will experience hands on learning in lab environment. Application and testing of control system theory with computational systems. GR LB Lab
Fall 2020 CS1160 1160 Intro to Comp Program CS Computer Science 4 Basic concepts of programming using the Python programming language. 3 Department Managed Prerequisites: Undergraduate level MTH 1220 Minimum grade of D or Undergraduate level MTH 1400 Minimum grade of D or Undergraduate level MTH 2410 Minimum grade of D or Undergraduate level SST 1600 Minimum Grade of D or Undergraduate level SST 2640 Minimum Grade of D- or better. UG LL Lecture/Lab Combination
Fall 2020 DAN2210 2210 Intermediate Jazz II DAN Dance 2 Second-year intermediate jazz dance technique. Focus on technical diversity, musicality, artistry, and performance while improving body flexibility, strength, and kinesthetic awareness. UG ST Studio
Fall 2020 PLS4990 4990 Legal Judging PLS Political Science 3 Examine how the Supreme Court should interpret the Constitution and how this idea has developed over time. Looks at the history of the Supreme Court and also the theoretical and empirical perspectives on legal judgment. Integrated Writing course. UG LE Lecture
Fall 2020 MBA7520 7520 Intl. Mgt. Ops & Environ MBA MBA 3 This course surveys the practices and principles involved in managing a business across national boundaries. Emphasizes the importance of the international framework including the international monetary system and foreign exchange markets. Also covers environmental constraints and how functional business disciplines are changed in a global context. GR LE Lecture
Fall 2020 EES4720 4720 Epidemic & Community Hlth EES Earth & Environmental Sciences 3 Communicable and occupational diseases of contemporary importance. Epidemiological investigation, environmental considerations, and control procedures. UG LE Lecture
Fall 2020 NUR7202 7202 Acute Adult Hlth Prob II NUR Nursing 8 Focus is on the complex symptom management related to acute and emergent physiological alterations in endocrine, gastrointestinal, genitourinary, hemodynamical, immunological and neurological function. Health promotion, maintenance and restoration are emphasized. UG SE Seminar
Fall 2020 COM4820 4820 Senior Honors Project COM Communication 1 Independent studies course that allows students to pursue research that culminates in a senior honors thesis or project. UG IS Independent Study
Fall 2020 EE6120 6120 Industrial Controls EE Electrical Engineering 3 For each student to gain a working knowledge of industrial controls and automation. Focus is on developing an understanding of wiring diagram creation, hardware selection, and programmable logic controller design and operation. GR LE Lecture
Fall 2020 PSY3830 3830 Cognitive Neuro Methods PSY Psychology 4 Research methods used in cognitive neuroscience. Hands-on experience with the design of neuroscientific experiments, data collection, data analysis, as well as communication of data through writing. Integrated Writing course. UG LE Lecture
Fall 2020 DOC9030 9030 Systems Change Org Set DOS Doctor Org Studies 3 Doctoral level course in application of systems and theories of change, with a focus on leadership and policy implications in community, government, non-profit, and educational settings. GR LE Lecture
Fall 2020 BMB7520 7520 Molecular Biochem II BMB Biochem & Molecular Biology 3 Survey course emphasizing an experimental and problem-solving approach to metabolism, nucleic-acid function, protein synthesis, membranes and hormones. GR LE Lecture
Fall 2020 P&N4990 4990 Spec. Prob in Physiology P&N Physiology & Neuroscience 1 Exploration of potential careers in physiology. Studies may vary from working with instructor on an ongoing physiological research project to analysis of data obtained from completed research project. UG IS Independent Study
Fall 2020 KNH2550 2550 Applied Ex Physiology KNH Kinesiology & Health 3 Practical applications in exercise physiology for the physical educator, coach, and athlete trainer. Methods of conditioning, training, implementation, and other special considerations included. UG LL Lecture/Lab Combination
Fall 2020 NUR7104 7104 Adv Hlth Asmnt Lifespan NUR Nursing 3 Application of cognitive processes and psychomotor skills needed for comprehensive health assessment. Emphasis is on health history, physical, developmental, and nutritional assessment; and identification of common client problems across the life span. GR LL Lecture/Lab Combination
Fall 2020 EE6100 6100 Nano/Micro Fabrication EE Electrical Engineering 3 This course covers the history, design, and fabrication of CMOS and micro-electro-mechanical systems (MEMS). Typical fabrication methods cover CMOS, front-end-of-line (FEOL), back-end-of-line (BEOL), surface and bulk micromachining. Typical VLSI devices and selected RF MEMS are covered. UG LE Lecture
Fall 2020 CSD4790 4790 CSD Special Topics CSD Community Services Development 3 Focused study in an area of interest in community services and development. UG LE Lecture
Fall 2020 BMS7135 7135 Photon Emission Imaging BMS Biomedical Sciences 3 Principles of imaging procedures based on radioactive isotopes. Topics include radioactive isotopes, gamma camera physics, single-photon-emission tomography, and positron-emission tomography. Each topic covers instrumentation, image production, and major applications. GR LE Lecture
Fall 2020 ED4560 4560 Science Methods for MCE ED Education 3 Curriculum and materials for teaching middle school science with emphasis on an integrated constructivist approach for middle school science classroom, grades 4-8. Includes development of appropriate objectives, planning, resources and facilities, evaluation, and trends. UG LE Lecture
Fall 2020 BIO3520L 3520L Human Biomechanics Lab BIO Biology 0 Required laboratory for BIO 3520. UG LB Lab
Fall 2020 PLS4490 4490 Gender Violence Inf Pol PLS Political Science 3 Cross-cultural examination of gender violence. Considers the range of violence, its sources, and solutions. Topics include domestic abuse, rape, female genital surgeries, prostitution, and reproductive rights. Integrated Writing course. UG LE Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Year</th>
<th>Course Title</th>
<th>Department</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNS7830</td>
<td>Fall 2020</td>
<td>Biomechanics</td>
<td>KNS</td>
<td>Biomechanics and functional anatomy of the human body, with application of biophysical principles to normal joint structure and function, pathomechanics, and clinical analysis of posture, gait, and other movements. Includes instruction in measurement methods.</td>
</tr>
<tr>
<td>KNS1300A</td>
<td>Fall 2020</td>
<td>Hiking</td>
<td>KNS</td>
<td>Fundamental skills and knowledge of hiking. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>KNS1800B</td>
<td>Fall 2020</td>
<td>Weight Training: Women</td>
<td>KNS</td>
<td>Fundamental skills and knowledge of Weight Training: Women. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>SCM4770</td>
<td>Fall 2020</td>
<td>Special Studies in SCM</td>
<td>SCM</td>
<td>Topics vary.</td>
</tr>
<tr>
<td>KNS4300A</td>
<td>Fall 2020</td>
<td>Lifeguard Training</td>
<td>KNS</td>
<td>Intermediate level of skills and knowledge in lifeguard training. Competency-based approach. Students should check competency levels posted in physical education building before enrolling.</td>
</tr>
<tr>
<td>MKT3200</td>
<td>Fall 2020</td>
<td>Principles of Selling</td>
<td>MKT</td>
<td>Introduces professional selling in the business environment. Includes sales ethics and professionalism, persuasive communication, buying motives, and the professional selling process.</td>
</tr>
<tr>
<td>EDT6800</td>
<td>Fall 2020</td>
<td>Integrate TechLearning</td>
<td>EDT</td>
<td>Educational Technology</td>
</tr>
<tr>
<td>EES6010</td>
<td>Fall 2020</td>
<td>Topics Earth &amp; Env Sci</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
</tr>
<tr>
<td>SW4735</td>
<td>Fall 2020</td>
<td>Child Welfare II</td>
<td>SW</td>
<td>Social Work</td>
</tr>
<tr>
<td>SOC6660</td>
<td>Fall 2020</td>
<td>Sociology of Sexuality</td>
<td>SOC</td>
<td>Sociology</td>
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<tr>
<td>ART5280</td>
<td>Fall 2020</td>
<td>Drawing</td>
<td>ART</td>
<td>Art</td>
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<tr>
<td>GEO3700</td>
<td>Fall 2020</td>
<td>Regional Geography</td>
<td>GEO</td>
<td>Geography</td>
</tr>
<tr>
<td>CHI1050</td>
<td>Fall 2020</td>
<td>Clasnum Comm for ITAs</td>
<td>ENG</td>
<td>English</td>
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<tr>
<td>ME6080</td>
<td>Fall 2020</td>
<td>Design Optimization</td>
<td>ME</td>
<td>Mechanical and Materials Eng</td>
</tr>
<tr>
<td>BIO4960</td>
<td>Fall 2020</td>
<td>Internship Exercise Bio</td>
<td>BIO</td>
<td>Biology</td>
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<tr>
<td>BMB9000</td>
<td>Fall 2020</td>
<td>Advanced Seminar</td>
<td>BMB</td>
<td>Biochem &amp; Molecular Biology</td>
</tr>
<tr>
<td>ART2000</td>
<td>Fall 2020</td>
<td>Studies in Art</td>
<td>ART</td>
<td>Art</td>
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<tr>
<td>CHM3120</td>
<td>Fall 2020</td>
<td>Quantitative Analysis</td>
<td>CHM</td>
<td>Chemistry</td>
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<tr>
<td>BMS9540</td>
<td>Fall 2020</td>
<td>Quant Workload Analysis</td>
<td>BMS</td>
<td>Biomedical Sciences</td>
</tr>
<tr>
<td>PHY1060</td>
<td>Fall 2020</td>
<td>Astronomy</td>
<td>PHY</td>
<td>Physics</td>
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<tr>
<td>GER4500</td>
<td>Fall 2020</td>
<td>Senior Honors Project</td>
<td>GER</td>
<td>German</td>
</tr>
<tr>
<td>MIL1020</td>
<td>Fall 2020</td>
<td>Intro to Tactical Ldrshp</td>
<td>MIL</td>
<td>Military Science</td>
</tr>
<tr>
<td>ED6610</td>
<td>Fall 2020</td>
<td>Practicum: TESOL</td>
<td>ED</td>
<td>Education</td>
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<tr>
<td>CHI2210</td>
<td>Fall 2020</td>
<td>Intro Chinese Characters</td>
<td>CH</td>
<td>Chinese</td>
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<tr>
<td>URS3708</td>
<td>Fall 2020</td>
<td>MPA Applied Res. Project</td>
<td>URS</td>
<td>Urban Affairs</td>
</tr>
<tr>
<td>PL8621</td>
<td>Fall 2020</td>
<td>Pre-Law Internship</td>
<td>PLS</td>
<td>Political Science</td>
</tr>
<tr>
<td>FR3810</td>
<td>Fall 2020</td>
<td>Applied Elem Fr Instruct</td>
<td>FR</td>
<td>French</td>
</tr>
<tr>
<td>PL86740</td>
<td>Fall 2020</td>
<td>Pol of Women &amp;Terror</td>
<td>PLS</td>
<td>Political Science</td>
</tr>
</tbody>
</table>
Fall 2020  CTE4800  4800  Safe, Supportive Lang Env  CTE  Career and Technical Education  3  Strategies to enhance the safety and success of students and educators. Includes classroom/lab management, conflict resolution, safe work environments for minors, and development of a safety plan.  UG  LE  Lecture
Fall 2020  MTH6810  6810  Independent Reading  MTH  Mathematics  1  Selected readings in mathematics.  GR  IS  Independent Study
Fall 2020  PHY4640  6460  Int. Phys Sci & Math II  PHY  Physics  4  Integration of physics and mathematics, fulfilling science and math standards, physics education issues, inquiry teaching practices, and assessment. Applications of these to electricity, magnetism, waves, and optics.  GR  LL  Lecture/Lab Combination
Fall 2020  ENG3560  3560  Writing Workshop  ENG  English  3  Advanced strategies for teaching writing to adolescent and middle school students with an emphasis on genres and workshop pedagogy.  UG  LE  Lecture
Fall 2020  PHL3760  3760  Philosophy of Mind  PHL  Philosophy  3  Central issues in the philosophy of mind, including mind and brain, identity theory, nature of consciousness and qualia, immortality, agency and other topics. Integrated Writing course.  UG  LE  Lecture
Fall 2020  SOC6070  6070  Directed Readings  SOC  Sociology  1  Readings in areas of specialized interest. Topics vary.  GR  IS  Independent Study
Fall 2020  BI034110  4110  The Aquatic Environment  BIO  Biology  5  Detailed coverage of the physical-chemical and biological aspects of inland aquatic ecosystems. Origins and physical and chemical properties of lakes and rivers and the influences of physical-chemical parameters (light, heat, nutrients) on biological processes. Emphasizes the identity and functions of organisms in aquatic ecosystems. Integrated Writing Course.  UG  LE  Lecture
Fall 2020  CEG6426  6426  Legal Aspects Cyber Sec  CEG  Computer Engineering  3  Examines some of the most pressing threats to data and systems, the major legal and practical responses, and the policy issues they raise, with a particular focus on military divisions, corporations, not-for-profit organizations, and civilian government agencies.  GR  LE  Lecture
Fall 2020  CHM1220L  1220L  General Chemistry Lab II  CHM  Chemistry  2  Examination of the principles of General Chemistry II through experimentation.  UG  LB  Lab
Fall 2020  ED6700  6700  Student Learning & Motiv  ED  Education  3  Understand theories of learning and motivation as well as appropriate prek-12 assessment in the context of principles from the field of educational psychology.  GR  LE  Lecture
Fall 2020  P&N4420  4420  Intro Neurophysiology  P&N  Physiology & Neuroscience  3  Physiological mechanisms that subserve the functions of the nervous system. Topics include the biophysics of neuronal information, intercellular communications, motor control, sensory systems, and developmental neurology.  UG  LE  Lecture
Fall 2020  RBH3020  3020  Pharmacology for Rehab  RBH  Rehabilitation  3  Introduction to pharmacological information and the variable effects of medication on a person.  UG  LE  Lecture
Fall 2020  ECE3510  5010  ECEG Prin, Pract & Learn  ECE  Education - Early Childhood  3  Historical and underlying philosophy of the middle school concept based on the unique nature of pre-adolescents and adolescents. Current instructional and curricular practices are viewed in relation to this philosophy.  GR  LE  Lecture
Fall 2020  ML3980  3980  Studies in Sekt Subj  ML  Modern Languages  1  Individual research project approved and supervised by a full-time faculty member.  UG  LE  Lecture
Fall 2020  CS1000  1000  Technology and Society  CS  Computer Science  3  Examines and evaluates the consequences of technology on individuals, organizations and society to recognize its benefits, potential, and limitations. Emphasizes current social, ethical, legal and philosophical topics to understand the Digital Revolution impacts society. Integrated Writing course.  UG  LL  Lecture/Lab Combination
Fall 2020  GER4270  4270  19th Cent German Poetry  GER  German  3  Readings and reports in 19th-century poetry. Representative works of Heine, Dostoev-Chuikoff, Morike, Dehmel, Lilienau, and others.  UG  LE  Lecture
Fall 2020  EDL9740  9740  7400  Intro Math Egr Appl Lab  EDL  Educational Leadership  3  Special topics in Mechanical Engineering or Materials Science and Engineering. Titles vary.  GR  LE  Lecture
Fall 2020  BME7110  7110  Biomedical Signals  BME  Biomedical Engineering  3  Study of various techniques for the analysis and processing of biomedical signals. Main topics include time-domain and frequency-domain analysis of continuous and discrete signals, random signals and random processes, Principal Component Analysis, adaptive filtering, classical and modern spectral estimation.  UG  LE  Lecture
Fall 2020  ME6495  6495  Special Problems in ME  ME  Mechanical and Materials Engg  1  Special topics in Mechanical Engineering or Materials Science and Engineering. Titles vary.  GR  LE  Lecture
Fall 2020  ENG4420  4420  4420  The Aquatic Environment  ENG  English  5  Detailed coverage of the physical-chemical and biological aspects of inland aquatic ecosystems. Origins and physical and chemical properties of lakes and rivers and the influences of physical-chemical parameters (light, heat, nutrients) on biological processes. Emphasizes the identity and functions of organisms in aquatic ecosystems. Integrated Writing Course.  UG  LE  Lecture
Fall 2020  EDL5740  5740  Life, Law, and Spec Pop  EDL  Educational Leadership  3  Emphasis will be on legal issues for special populations, including emerging trends on policies and procedures for exceptional learners. Laws that affect program administration will be addressed.  GR  SE  Seminar
Fall 2020  BME3800  3800  Biofluids and Tissue Eng  BME  Biomedical Engineering  3  Study of the behavior of blood within the circulatory system, the cardiovascular system, and the role of the heart.  UG  LE  Lecture
Fall 2020  ME6860  6860  6860  Thermal Engg  ME  Mechanical and Materials Engg  3  Thermodynamics of I.C. engines, combustion thermodynamics, friction, heat and mass losses, and computer control of the modern fuel-injected I.C. engine.  UG  LE  Lecture
Fall 2020  MIL4010  4010  Adaptive Leadership  MIL  Military Science  3  Students are assigned the duties and responsibilities of an Army staff officer and must apply the fundamentals of principles of training, training management, Army writing style and military decision making to weekly training meetings. Students plan, execute and assess BOTC training, weekly training meetings, student projects, homework assignments and recruiting events. Students are expected to train, mentor, and evaluate underclass ROTC students while being mentored and evaluated by ROTC cadre.  UG  LE  Lecture
Fall 2020  ACC5747  5747  Current Topics Accdg.  ACC  Accountancy  3  This course is an overview of issues directly impacting the accounting profession or issues impacting business that indirectly affect the accounting profession.  GR  SE  Seminar
Fall 2020  PLS3250  3250  African Amer Politics  PLS  Political Science  3  Explores what makes African American politics distinctive from American politics and the prerequisites for effective political and economic leadership in the black community. Major theme is black power. Integrated Writing course.  UG  LE  Lecture
Fall 2020  EGR1010L  1010L  Instr Math Egr Appl Lab  EGR  Engineering  0  Required laboratory for EGR 1010. Integrated Writing course.  UG  LB  Lab
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Description</th>
<th>Mode</th>
<th>Department</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>SLI3520</td>
<td>3</td>
<td>Independent Study</td>
<td>LE</td>
<td>SLI</td>
<td>Sign Language Interpreting</td>
<td></td>
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<tr>
<td>PHV4700</td>
<td>4</td>
<td>Topics in Physics</td>
<td>PHY</td>
<td>PHV</td>
<td>Physics</td>
<td>selected topics in physics.</td>
</tr>
<tr>
<td>PHV3990</td>
<td>9</td>
<td>Research</td>
<td>PHY</td>
<td>PHV</td>
<td>Physics</td>
<td>provides students opportunities for directed study or laboratory work in a specialized field of interest. intended for thesis preparation. may be repeated.</td>
</tr>
<tr>
<td>FR4540</td>
<td>4</td>
<td>19th Century Short Story</td>
<td>FR</td>
<td>French</td>
<td>French</td>
<td>study of short stories by such authors as Mérimée, Gautier, Balzac, Daudet, Flaubert, Stendhal, Maupassant, and Villiers de l'Isle Adam. taught in French.</td>
</tr>
<tr>
<td>STT3610</td>
<td>3</td>
<td>Applied Statistics II</td>
<td>STT</td>
<td>Statistics</td>
<td>Statistics</td>
<td>introduction to statistics, standard statistical methods for estimation of parameters and hypothesis testing, introduction to regression analysis and analysis of variance techniques, exposure to data analysis using packaged computer programs.</td>
</tr>
<tr>
<td>CHM1010</td>
<td>1</td>
<td>Intro to Chemistry</td>
<td>CHM</td>
<td>CHM</td>
<td>Chemistry</td>
<td>Fundamentals of chemistry: composition and structure, properties and transformations of matter. for students who have not completed high school chemistry.</td>
</tr>
<tr>
<td>EES2150</td>
<td>2</td>
<td>Global Change</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
<td>Earth &amp; Environmental Sciences</td>
<td>Introduction to Earth systems, using modules that are based on environmental events such as volcanic eruptions, hurricanes, and climate change. an online laboratory component allows students to see how scientists use real time data sets to understand Earth systems.</td>
</tr>
<tr>
<td>FR3820</td>
<td>3</td>
<td>Applied Elem Fr Ictr</td>
<td>FR</td>
<td>French</td>
<td>French</td>
<td>French majors and minors assist FR 1010 or FR 1020 course instructors in conducting classes. Taught in French.</td>
</tr>
<tr>
<td>MGT7710</td>
<td>7</td>
<td>Fundamentals of Proj Mgt</td>
<td>MGT</td>
<td>Management</td>
<td>Management</td>
<td>An introduction to the management of projects, to include project selection, planning, budgeting, scheduling, execution, and control. Reviews the 'triple constraint' of project management: cost, schedule, and technical performance. Covers typical project life cycles, risk management, earned value management, characteristics of successful project managers, and the structure and dynamics of winning project teams.</td>
</tr>
<tr>
<td>KNH1620A</td>
<td>2</td>
<td>Stretch &amp; Tone/Pilates</td>
<td>KNH</td>
<td>Kinesiology &amp; Health</td>
<td>Kinesiology &amp; Health</td>
<td>Fundamental skills and knowledge of Stretch &amp; Tone/Pilates. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>BME3731</td>
<td>3</td>
<td>Fail Analysis Med Device</td>
<td>BME</td>
<td>Biomedical Engineering</td>
<td>Biomedical Engineering</td>
<td>Failure modes of medical devices. Common medical devices such as total joint replacement implants, fixation plates and screws, intermediate rails, pose makers, other implantable products. Procedures to conduct failure cause investigations within the guidelines developed by regulatory agencies.</td>
</tr>
<tr>
<td>BMS5421</td>
<td>3</td>
<td>Rehab Eng Systems I</td>
<td>BMS</td>
<td>Biomedical Sciences</td>
<td>Biomedical Sciences</td>
<td>Introduces the complex structure of the rehabilitation engineering service delivery systems practiced in the United States. Covers basic disability areas, current laws, resources, and rehabilitation technology.</td>
</tr>
<tr>
<td>CEG4970</td>
<td>4</td>
<td>Independent Study</td>
<td>CEG</td>
<td>Computer Engineering</td>
<td>Computer Engineering</td>
<td>independent study in computer engineering topics.</td>
</tr>
<tr>
<td>PSY2002</td>
<td>1</td>
<td>Psychology</td>
<td>PSY</td>
<td>Psychology</td>
<td>Psychology</td>
<td>A variable elective topic in psychology. Topics vary.</td>
</tr>
<tr>
<td>PHIL350</td>
<td>3</td>
<td>Theories Human Nature</td>
<td>PHL</td>
<td>Philosophy</td>
<td>Philosophy</td>
<td>theories of human nature.</td>
</tr>
<tr>
<td>CNE6210</td>
<td>3</td>
<td>Crisis Counseling</td>
<td>CNL</td>
<td>Counseling</td>
<td>Counseling</td>
<td>Introduces students to the background, theory, practice, and needs of crisis intervention within the helping professions. a variety of crisis intervention models are explored, as are the various community resources available to the crisis intervention worker.</td>
</tr>
<tr>
<td>CEG6120</td>
<td>1</td>
<td>Managing Socio/Dev Proces</td>
<td>CEG</td>
<td>Computer Engineering</td>
<td>Computer Engineering</td>
<td>Disasses software development processes, models, and techniques necessary to successfully develop large-scale software and presents the capability maturity model (CMM). Students will participate in the development of a software project.</td>
</tr>
<tr>
<td>CEG7550</td>
<td>7</td>
<td>Computer Vision</td>
<td>CEG</td>
<td>Computer Engineering</td>
<td>Computer Engineering</td>
<td>algorithms for low- and mid-level vision, including noise filtering, edge detection, image segmentation, texture analysis, feature extraction, stereo depth perception, camera calibration, 3-D reconstruction, shape from shading</td>
</tr>
<tr>
<td>BIO6730</td>
<td>3</td>
<td>Marine Biology</td>
<td>BIO</td>
<td>Biology</td>
<td>Biology</td>
<td>Lectures cover ocean ecosystem-dynamics and the biological communities associated with different marine habitats. emphasis is placed on structural and physiological adaptations of organisms to their environment and interactions among different species (competition, predation, and mutualism). current threats to marine habitats are discussed. the course includes a 1 week field trip to the north Carolina coast.</td>
</tr>
<tr>
<td>TH1580</td>
<td>1</td>
<td>Singing Min Theatre II</td>
<td>TH</td>
<td>Theatre</td>
<td>Theatre</td>
<td>private singing lessons for musical theatre.</td>
</tr>
<tr>
<td>KNH2540</td>
<td>2</td>
<td>Psychology of Sport</td>
<td>KNH</td>
<td>Kinesiology &amp; Health</td>
<td>Kinesiology &amp; Health</td>
<td>provides information to help the prospective teacher, coach, or sports medicine professional to effectively apply behavioral science principles to the performance aspects of sport and human movement.</td>
</tr>
<tr>
<td>URS4310</td>
<td>3</td>
<td>Philosophy/Grantmaking</td>
<td>URS</td>
<td>Urban Affairs</td>
<td>Urban Affairs</td>
<td>philanthropy, fundraising, grant writing and grant making. includes series of experiential learning activities demonstrating how nonprofit organizations secure financial resources. culminates with students awarding grants to local organizations.</td>
</tr>
<tr>
<td>PHL1040</td>
<td>4</td>
<td>Major Philosophers</td>
<td>PHL</td>
<td>Philosophy</td>
<td>Philosophy</td>
<td>In-depth examination of the works of a major philosopher. Topics vary. integrated Writing course.</td>
</tr>
<tr>
<td>ME6170</td>
<td>2</td>
<td>Mechanics of Composites</td>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
<td>Mechanical and Materials Engr</td>
<td>in-depth examination of the works of a major philosopher. topics vary. integrated Writing course.</td>
</tr>
<tr>
<td>SPN6830</td>
<td>3</td>
<td>Latin American Business</td>
<td>SPN</td>
<td>Spanish</td>
<td>Spanish</td>
<td>This course studies, in both English and Spanish, fundamental concepts of doing business, managing and marketing in Latin America. Examines cultural, institutional and behavioral and management systems and their operation in Latin America.</td>
</tr>
<tr>
<td>KNH1760A</td>
<td>4</td>
<td>Walk-Jog-Run</td>
<td>KNH</td>
<td>Kinesiology &amp; Health</td>
<td>Kinesiology &amp; Health</td>
<td>Fundamental skills and knowledge of Walk-Jog-Run. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
<td>Grade</td>
<td>Location</td>
<td>Type</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>BMS7111</td>
<td>Adv Biomedical Signals</td>
<td>3</td>
<td>Integrated study of the three-dimensional distribution of rock units. Deformational structures such as folds, faults, joints, cleavage, foliation, and lineation and their superposition are used to unravel the history of deformation, and to understand the stress fields that produced the observed strain and structures. Tectonics is the structural evolution of regional patterns of deformation at the scale of mountain ranges. Integrated writing course.</td>
<td></td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>ECE7450</td>
<td>Experimental Nanoscience</td>
<td>3</td>
<td>This course will provide a series of laboratory experiments similar to the state-of-the-art R&amp;D in nanotechnology and nanoscience. The experiments include 1) fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets, 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses etc; and 3) computational modeling of nanoscale physical phenomena. Department Managed Prerequisite(s): Undergraduate level PHY 2400 Minimum Grade of D and Undergraduate level PHY 2400L Minimum Grade of D.</td>
<td></td>
<td>UG</td>
<td>Lab</td>
</tr>
<tr>
<td>HIS3810</td>
<td>Urban Affairs</td>
<td>3</td>
<td>Places American public administration traditions and practices into comparative perspective. Examines the extent to which globalization has affected the practice of public administration around the world and global trends that have become apparent in administrative reform today.</td>
<td></td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>ME6680</td>
<td>Mechanical and Materials Engineering</td>
<td>4</td>
<td>Methods of true experiments, data analysis and APA-style writing. Uses methods from representative fields of psychology to collect, summarize and visualize data. Integrated Writing course.</td>
<td></td>
<td>UG</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY1020</td>
<td>Psychology</td>
<td>4</td>
<td>Research Methods Pray II</td>
<td></td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>SPN210</td>
<td>Diversity Integration I</td>
<td>3</td>
<td>This course will focus on developing and practicing the ability to have difficult dialogues and engaging in intersectional analyses necessary to build a posture of cultural humility as a foundational skill toward clinical competence with diverse groups. This course will be the first in a sequence of three diversity intensive courses. These dialogues will ask students to engage in self-reflection and intersectional analyses of multiple identities as mechanisms that inform human suffering and power, privilege and difference and similarities and differences that impact analytical and relationship skills. We will also be looking at social constructions that inform the social political landscape. The ability to dialogue and engage in an authentic intersectional analyses is considered an essential skill in preparation for clinic work with diverse marginalized and privileged populations. We consider the ability to maintain a critical dialogue to be a foundational skill and an intervention in and of itself.</td>
<td></td>
<td>GB</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>SPN5210</td>
<td>Donahue for Grad Students</td>
<td>3</td>
<td>Oral and written composition in Spanish; writing techniques and grammar review. Taught in Spanish.</td>
<td></td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>REL3940</td>
<td>Religion</td>
<td>3</td>
<td>Introduction to 20th century philosophical and literary movement. Emphasis on concrete existence and passions over abstract rationality, conception of self as a product of radically free acts of self-creation, affirmation of uncertainty and absurdity as inescapable elements of the human condition, and rejection of traditional ethical systems.</td>
<td></td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PEM6000</td>
<td>Experimental Nanoscience</td>
<td>3</td>
<td>This course will provide a series of laboratory experiments similar to the state-of-the-art R&amp;D in nanotechnology and nanoscience. The experiments include 1) fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets, 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses etc; and 3) computational modeling of nanoscale physical phenomena. Department Managed Prerequisite(s): Undergraduate level PHY 2400 Minimum Grade of D and Undergraduate level PHY 2400L Minimum Grade of D.</td>
<td></td>
<td>GB</td>
<td>Lab</td>
</tr>
<tr>
<td>PHI9550</td>
<td>Play Therapy</td>
<td>4</td>
<td>This course teaches graduate students about the essential elements and principles of play therapy including history, theory and modalities, techniques, applications, and skills. Emphasis will be on non-directive, directive, and empirically-based approaches.</td>
<td></td>
<td>GB</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>EE4420</td>
<td>Industrial Controls</td>
<td>3</td>
<td>Writing diagram creation, hardware selection, and programmable logic controller design and operation.</td>
<td></td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MUE4950</td>
<td>Chamber Singers</td>
<td>3</td>
<td>Development of advanced vocal and social skills. Emphasis on advanced vocal chamber literature from 15th through 20th centuries. Audition required.</td>
<td></td>
<td>GB</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>BME6703R</td>
<td>Medical Imaging Recitation</td>
<td>0</td>
<td>Required recitation for BME 6703.</td>
<td></td>
<td>GB</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEG6899</td>
<td>Dissertation Defense</td>
<td>6</td>
<td>Examination on the PhD dissertation. The written dissertation is submitted and must be successfully defended in the oral exam conducted by the dissertation committee.</td>
<td></td>
<td>GB</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>PSY6030</td>
<td>Practicum in Applied Psychology</td>
<td>0</td>
<td>Supervised work in an applied psychological setting consistent with students’ individual interests (e.g., mental health agency, industrial, or organizational setting). Graded pass/unsatisfactory.</td>
<td></td>
<td>GB</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>BMS7111</td>
<td>Adv Biomedical Signals</td>
<td>3</td>
<td>Characteristics and measurement of various biomedical signals; time-domain and frequency-domain, continuous and discrete signal representations; applications of digital and random signal processing methods to various biomedical signals.</td>
<td></td>
<td>GB</td>
<td>Lecture</td>
</tr>
<tr>
<td>ATH5030</td>
<td>Peoples/Cult United Stat</td>
<td>3</td>
<td>Focuses on the anthropological approaches to the study of culture in the United States. Confronts how to both recognize that your own culture is but one out of many, and how to systematically study the underpinnings of differences within one's own culture.</td>
<td></td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>IT2500</td>
<td>Promotional Design</td>
<td>3</td>
<td>Designing, writing, and using creative ideas in developing advertisements with consideration of cultural diversity.</td>
<td></td>
<td>GB</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>ECE7450</td>
<td>Comp Theories of Ch Dev</td>
<td>3</td>
<td>Comparative study of philosophies of child development and the practical application of these theories in ECE classrooms.</td>
<td></td>
<td>LE</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>BIO7010</td>
<td>Selected Topics in Bio</td>
<td>1</td>
<td>Topics vary.</td>
<td></td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE4460L</td>
<td>4460L</td>
<td>Microwave Eeg Ee Lab</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>1</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BHE6711</td>
<td>6711</td>
<td>Optics Meth BHE</td>
<td>BHE</td>
<td>Industrial &amp; Hum Fac Engr</td>
<td>4</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>DMV7010</td>
<td>7010</td>
<td>DMV Registration DMV</td>
<td>DMV</td>
<td>DMV Consortium</td>
<td>0.5</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY2920</td>
<td>2920</td>
<td>Hormones and Behavior PSY</td>
<td>Psychology</td>
<td>3</td>
<td>An overview of hormone-behavior relationship in humans and animals. Topics include sexual differences, puberty, reproductive behavior, parental behavior, aggression, and cognition.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMI8650</td>
<td>7630</td>
<td>Comp Tools/Strategy BMI</td>
<td>BMI</td>
<td>Biochem &amp; Molecular Biology</td>
<td>2</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ESS130</td>
<td>8130</td>
<td>Dissertation Research ES</td>
<td>Environmental Sciences</td>
<td>1</td>
<td>Planning and execution of scholarly original research of a quality that is publishable in a refereed scientific journal. Research must be communicated to the Supervisory Committee in written form and defended by public oral examination.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE6620L</td>
<td>6620L</td>
<td>Dig Inter Ckt Design Lab EE</td>
<td>Electrical Engineering</td>
<td>1</td>
<td>Realizations, testing and evaluation of digital integrated circuits with particular emphasis on programmable logic devices.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>DO9980</td>
<td>9980</td>
<td>Quality Prep Org Studies Doc</td>
<td>DOS</td>
<td>Doctor Org Studies</td>
<td>1</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED3100</td>
<td>3100</td>
<td>African Amer Exp in Ed ED</td>
<td>Education</td>
<td>3</td>
<td>Explores the diverse experiences of being African American and examines the effect of Blackness on students' and teachers' experiences. Facilitates examination of personal biases and effective methods for providing educational access for all.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ANT7110</td>
<td>7110</td>
<td>Human Gross Anatomy ANT</td>
<td>Anatomy</td>
<td>6</td>
<td>(Also listed as IMS 8730.) Lectures and dissection of human cadaver donor.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>NUR3460</td>
<td>3460</td>
<td>Nursing Care of Children NUR</td>
<td>Nursing</td>
<td>1</td>
<td>Focuses on critical reasoning and care of children, adolescents, and families. Delivery of holistic, family-centered care that incorporates understanding of growth and development, culture, pathophysiological changes, and family transitions. (2 or 4 credits)</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ECO5520</td>
<td>5520</td>
<td>Entrepreneurship Basics ECO</td>
<td>Center for Economic Educ.</td>
<td>2</td>
<td>K-12 teachers are provided with a basic foundation to teach entrepreneurship; it is designed for teachers with minimal requisite knowledge of economics, business and entrepreneurship. Topics include business plans, investing, picking the right business and others. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED6750</td>
<td>6750</td>
<td>AYA, Int Math C&amp;M II ED</td>
<td>Education</td>
<td>3</td>
<td>This course will examine curriculum, materials, and teaching methods for secondary mathematics teaching. This includes course development, assessment, differentiation, technology, and content for probability and statistics courses.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>FIN7120</td>
<td>7120</td>
<td>Investing in Securities FIN</td>
<td>Finance</td>
<td>3</td>
<td>Concepts, theories, and techniques underlying the development of investment policies and strategies.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE6540L</td>
<td>6540L</td>
<td>VLSI Design Lab EE</td>
<td>Electrical Engineering</td>
<td>1</td>
<td>Work station based experience designingasic devices for evaluation and testing.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED4080</td>
<td>4080</td>
<td>4080 and Word Study ED</td>
<td>Education</td>
<td>1</td>
<td>In-depth analysis of how people learn the printed word, and how to assess that knowledge with appropriate phonics and phonics-related assessment and materials. Students will apply knowledge through phonics lesson design, delivery and analysis.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MTH4460</td>
<td>4460</td>
<td>Modeling Mid Sch Tchr MTH</td>
<td>Mathematics</td>
<td>4</td>
<td>Learning to think quantitatively through solving pure and applied mathematics problems and modeling real-world problems. Focuses on working with the steps involved in modeling real-life situations and understanding how modeling and problem solving differ.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MTE6400</td>
<td>6400</td>
<td>History of Mathematics MTE</td>
<td>Mathematics Teacher Education</td>
<td>3</td>
<td>Mathematics as an on-going human activity. Historical development and contributions from diverse cultures of: number systems; measurement; algebra; Euclidean and non-Euclidean geometries; calculus; discrete mathematics; and statistics and probability.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>TH2570</td>
<td>2570</td>
<td>Singing Mia Theatre III TH</td>
<td>Theatre</td>
<td>2</td>
<td>Private singing lesson for musical theatre.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMES7600</td>
<td>7660</td>
<td>Lean Proc Improv for Eng BMES</td>
<td>Biomedical Sciences</td>
<td>3</td>
<td>Introduction to the practical application of lean manufacturing and Kaizen techniques in multiple environments. Includes case studies and team projects based on real world problems and solutions.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>KNH2120B</td>
<td>1208B</td>
<td>H2O Moves with Snap KNH</td>
<td>Kinesiology &amp; Health</td>
<td>1</td>
<td>Fundamental skills and knowledge of H2O Moves with Snap. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MGT4750</td>
<td>4750</td>
<td>Small Business Mgt MGT</td>
<td>Management</td>
<td>3</td>
<td>An examination of the competencies required of small business managers including hiring and motivating employees and balancing stakeholders' interests.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EGR4980</td>
<td>4980</td>
<td>Special Topics in EGR EGR</td>
<td>Engineering</td>
<td>1</td>
<td>Special topics in Engineering and Computer Science</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHL5830</td>
<td>5830</td>
<td>Faith &amp; Reason PHL</td>
<td>Philosophy</td>
<td>3</td>
<td>Issues in the philosophy of religion. Topics vary.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ANT2100L</td>
<td>2100L</td>
<td>Human Anatomy &amp; Phys I Lab ANT</td>
<td>Anatomy</td>
<td>0</td>
<td>Required laboratory for ANT 2100.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>TH3350</td>
<td>3350</td>
<td>Costume Crafts TH</td>
<td>Theatre</td>
<td>3</td>
<td>Creative, innovative, and often inexpensive alternatives for the creation of jewelry appliance, embellishments, armor, crowns, and basic millinery techniques for theatrical production.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ASM7871</td>
<td>7871</td>
<td>Space Medicine I ASM</td>
<td>Aerospace Medicine</td>
<td>3</td>
<td>Space Medicine I will introduce Aerospace physicians to the unique environment of medical operations involved in sub-orbital, orbital, and beyond earth orbit space flight operations.</td>
</tr>
</tbody>
</table>
Fall 2020
ES7180  7180  Chem Processes in Environ  ES  Environmental Sciences  3  Skills are developed to predict behavior and movement of chemical contaminants in atmospheric, aquatic and soil systems. Physical and chemical properties of contaminants and environmental interactions are evaluated to determine their ultimate fate.  GR  LE  Lecture
Fall 2020
MUA7100  7100  Applied Music  MUA  Music: Applied Music  1  Open only to Graduate Students. All students must have auditioned for and have received departmental approval before registering for applied music.  GR  IS  Independent Study
Fall 2020
STT4170  4170  Short Term Actuarial Math II  STT  Statistics  3  Continuation of the material introduced in STT4160. This course will continue to teach the steps involved in the statistical modeling process and how to apply these steps in an actuarial context. Tools will be introduced for the calibration and evaluation of the models. Topics covered include Credit, Pricing and Reserving, and Insurance and Reinsurance coverages. Course covers the SOA syllabus for exam STAM when combined with STT 4160.  UG  LE  Lecture
Fall 2020
ARAS110  5110  Arabic Conversation I  ARAB  Arabic  3  A language practicum for intermediate students of Arabic, designed to expand conversational skills in Modern Standard Arabic. <8> Department Managed Prerequisite(s): Undergraduate level ARAB 2020 Minimum Grade of D-<>.  GR  LE  Lecture
Fall 2020
ECO5270  5270  Credit  ECO  Center for Economic Educ.  2  New legislation makes financial literacy relevant in today's society and mandates it be taught to school children. This course will provide relevant teaching materials to aid in teaching the topic of credit with an in-depth examination that will enhance your understanding, increasing your ability to articulate the material to your students. Credits will span from the basics of credit to bankruptcy, and even strategically foreclosing on one's home mortgage. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture
Fall 2020
EES1030L  1030L  Paleobiology Dinosaurs Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 1030.  UG  LB  Lab
Fall 2020
ATH400  4660  Sem Woodland Archaeology  ATH  Anthropology  3  Intensive review of the prehistoric Woodland period (600 B.C. - A.D. 900) of eastern North America. Covers major regional cultures such as Adena and Hopewell, and explores such topics as social and political organization, site architecture, mortuary customs, and exchange systems.  GR  SE  Seminar
Fall 2020
BME9390  8930  Non-Dissert Resch in BME  BME  Biomedical Engineering  1  Ph.D. Non-Dissertation Research in Biomedical Engineering.  GR  IS  Independent Study
Fall 2020
MLB4330  4330  Hematology Practicum  MLB  Medical Laboratory Science  3  Introduction to practical application of hematology techniques at a clinical site.  UG  PR  Practicum
Fall 2020
PLS3260  3260  Black Women and Politics  PLS  Political Science  3  Role of race and gender in the political activities of black women in the US, Africa, and the diaspora. Integrated Writing course.  UG  LE  Lecture
Fall 2020
MUA3110  3110  Applied Music  MUA  Music: Applied Music  1  Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.  UG  IS  Independent Study
Fall 2020
EES6160L  6160L  Stratigraphy & Sed. Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 6160.  GR  LB  Lab
Fall 2020
CEG2171L  2171L  C++ Prog for Sci & Egr Lab  CEG  Computer Engineering  0  Required laboratory for CEG 2171. Integrated Writing course.  UG  LB  Lab
Fall 2020
DAN3050  3050  Ballet Musical Th IV  DAN  Dance  2  Group class for musical theatre majors to develop more advanced ballet techniques.  UG  ST  Studio
Fall 2020
BIE3540  3540  Intro to Comp for ISE  ISE  Industrial & Systems Engr  3  Introduction to the development of automated data analysis tools built on existing software and computational models, specifically the Visual Basic for Applications (VBA) language in the Microsoft Excel environment. Applications of linear programming, discrete event simulation, and operations research methods in decision support roles are discussed.  UG  LI  Lecture/Lab Combination
Fall 2020
MP4550  4550  Adv. Studies in Media  MP  Motion Picture  3  Advanced media studies. Topics vary.  UG  LE  Lecture
Fall 2020
PLS4540  4540  Politics of Middle East  PLS  Political Science  3  Introduction to governments and politics of the Middle East with special attention to cultural and historical background and the Arab-Israeli conflict. Integrated Writing course.  UG  LE  Lecture
Fall 2020
BIE7930  7930  Non-Thesis Resch in IIE  IIE  Industrial & Human Fac Engr  1  M.S. Non-Thesis Reseach in Industrial and Human Factors Engineering.  GR  IS  Independent Study
Fall 2020
ART3780  3780  Modeling/Casting Process  ART  Art  3  Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using clay as a sculptural material. This course has a fee that is non-refundable once the term begins.<8> Department Managed Prerequisite(s): Undergraduate level ART 2080 Minimum Grade of D-<>.  UG  LB  Lab
Fall 2020
ENG4460  4460  Studies Lit Genre/Theme  ENG  English  3  Intensive study of literary genres (e.g., poetry, the novel, satire) or of literary themes. Intended to develop an understanding of formal and structural aspects of literature. Integrated Writing course.  UG  LE  Lecture
Fall 2020
PLS7980  7980  Graduate Project  PLS  Political Science  1  Graduate research project that combines knowledge gained through coursework with field experience.  GR  IS  Independent Study
Fall 2020
PSW920  920  Con & Inter in Pri Ca Se  PSY  Professional Psychology  3  To provide students with explicit (textbook) and tacit (experiential) knowledge of behavioral health service delivery. Students are introduced to the role of the counselor before registering for applied music.  GR  LE  Lecture
Fall 2020
PLS4640  4640  Israel and Palestine  PLS  Political Science  3  Examines the political history of Israelis and Palestinians, their differing narratives that frame their worldview and how they see the conflict.  UG  LE  Lecture
Fall 2020
HED2320  2320  Core Public Health  HED  Health Education  3  Public health infrastructure, including resources, agencies, and determinants of health that influence the health status of individuals and communities.  UG  LE  Lecture
Fall 2020
URS4410  4410  Cities and Technology  URS  Urban Affairs  3  Studies evolving relationship between technology and urban growth, physical form, government, and politics. Explores how technological fixes for complex urban problems have shaped urban development and politics.  UG  LE  Lecture
Fall 2020
PSY6740  6740  Space and Time Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on space and time.  GR  SE  Seminar
Fall 2020
SCM7890  7890  Global Logistics & Trade  SCM  Supply Chain Management  3  Explores issues involved in management and design of global supply chain. Topics include trade agreements, quality considerations, total cost calculations, intentional transportation, security issues and third party recognizes. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture
Fall 2020
MP3320  3320  Film Authorship  MP  Motion Picture  3  Intensive study of the work of one or more film directors or other creative personnel. Topics vary.  UG  LE  Lecture
<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
<th>Type</th>
<th>Units Required</th>
<th>Prerequisites</th>
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<td>Fall 2020</td>
<td>PLS4820</td>
<td>State Legal Internship</td>
<td>PLS</td>
<td>3</td>
<td>UG</td>
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<td>Fall 2020</td>
<td>MU47200</td>
<td>Applied Music</td>
<td>MUA</td>
<td>2</td>
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<td>Fall 2020</td>
<td>MLB5420</td>
<td>Adv Clinical Chemistry</td>
<td>MLB</td>
<td>2</td>
<td>UG</td>
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<td>Fall 2020</td>
<td>BIO6720L</td>
<td>Ornithology Lab</td>
<td>BIO</td>
<td>3</td>
<td>GR</td>
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<td>Fall 2020</td>
<td>SPN6810</td>
<td>Ind Read Grad Students</td>
<td>SPN</td>
<td>3</td>
<td>GR</td>
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<td>Fall 2020</td>
<td>PSN3640</td>
<td>Sex &amp; Gender Ident</td>
<td>PSI</td>
<td>3</td>
<td>GR</td>
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<td>Fall 2020</td>
<td>BME4610</td>
<td>Clinical Engr Dev World</td>
<td>BME</td>
<td>3</td>
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<td>Fall 2020</td>
<td>BME7135</td>
<td>Photon Emission Imaging</td>
<td>BME</td>
<td>3</td>
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<td>Fall 2020</td>
<td>BMS5750</td>
<td>Comp Tool/Strategies BMS</td>
<td>BMS</td>
<td>2</td>
<td>GR</td>
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<td>Fall 2020</td>
<td>PN7100</td>
<td>Breakthroughs in Neurosci</td>
<td>PN</td>
<td>2</td>
<td>GR</td>
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<td>Fall 2020</td>
<td>HED7750</td>
<td>Application Research HPR</td>
<td>HED</td>
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<td>Fall 2020</td>
<td>SW6850</td>
<td>Gero-Cert Project</td>
<td>SW</td>
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<td>LAT2010</td>
<td>Intermediate Latin I</td>
<td>LAT</td>
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<td>Fall 2020</td>
<td>ED6080</td>
<td>Phonics and Word Study</td>
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<td>3</td>
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<td>Fall 2020</td>
<td>KNE1000B</td>
<td>1000B Special Topics</td>
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<td>Fall 2020</td>
<td>SOC6810</td>
<td>Health Vulnerable Pplms</td>
<td>SOC</td>
<td>3</td>
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<td>Fall 2020</td>
<td>PSY5900</td>
<td>Pay of Health Behavior</td>
<td>PSY</td>
<td>3</td>
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<td>Fall 2020</td>
<td>PSW6020</td>
<td>Adv Exp Design Programs</td>
<td>PSY</td>
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<td>Fall 2020</td>
<td>CEG5110</td>
<td>Intro Software Testing</td>
<td>CEG</td>
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<td>Fall 2020</td>
<td>MTH4310</td>
<td>Real Variables I</td>
<td>MTH</td>
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<td>Fall 2020</td>
<td>FIN3260</td>
<td>Risk and Insurance</td>
<td>FIN</td>
<td>3</td>
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<td>Fall 2020</td>
<td>BIO4300L</td>
<td>Population Genetics Lab</td>
<td>BIO</td>
<td>3</td>
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<td>Fall 2020</td>
<td>MUS7890</td>
<td>Continuing Registration</td>
<td>MUS</td>
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<td>Fall 2020</td>
<td>KNE1560A</td>
<td>Soccer Indoor</td>
<td>KNE</td>
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<td>Fall 2020</td>
<td>SLI3200</td>
<td>Current Topics in Deaf</td>
<td>SLI</td>
<td>3</td>
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<td>Course Code</td>
<td>Title</td>
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<td>Credits</td>
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<tr>
<td>MUA3210</td>
<td>Applied Music</td>
<td>MUA</td>
<td>3</td>
<td>Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.</td>
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<tr>
<td>REL4810</td>
<td>Independent Study</td>
<td>REL</td>
<td>4</td>
<td>Faculty-directed, individualized study on student-selected topics. Limited to majors and advanced students. Permission of department and a minimum 3.0 GPA required.</td>
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<tr>
<td>KNS420A</td>
<td>Orienteering/Land Navigation</td>
<td>KNS</td>
<td>14</td>
<td>Fundamental skills and knowledge of Orienteering/Land Navigation. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
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<tr>
<td>MUE2970</td>
<td>Music: Ensembles</td>
<td>MUE</td>
<td>2</td>
<td>A choral ensemble for students who desire to explore the musical style of gospel music and its roots and various forms. Includes performances of a body of literature associated with the African American church to the university and surrounding communities.</td>
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<tr>
<td>BMS9910</td>
<td>Special Topics</td>
<td>BMS</td>
<td>1</td>
<td>Selected topics in biomedical sciences.</td>
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</tr>
<tr>
<td>HST5500</td>
<td>Latin American History</td>
<td>HST</td>
<td>6</td>
<td>5000-level courses in Latin American history.</td>
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<tr>
<td>ME4350</td>
<td>Mechanics of Viscous Fluids</td>
<td>ME</td>
<td>4.5</td>
<td>3</td>
<td>This course will study how energy can be transformed from one form to another. The basic forms between which energy will be converted are mechanical, thermal, chemical, nuclear, and electrical. To demonstrate the conversion of energy from one form to another, the following types of devices and fuels will be studied: electric generators, MHD generators, wind turbines, ocean turbines, geothermal systems, fossil fuels, biofuels, and nuclear reactors. (b) Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D- or higher.</td>
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<tr>
<td>TH3220</td>
<td>Scene Painting I</td>
<td>TH</td>
<td>3</td>
<td>Further development of skills taught in Scene Painting I, with addition of transparencies, properties, set design, and carving architectural details in foam.</td>
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<tr>
<td>LDR7200</td>
<td>Emerging Issues in Leadership</td>
<td>LDR</td>
<td>3</td>
<td>Leadership</td>
<td>Focus on critical analysis of emerging, contemporary leadership issues. Students apply a broad range of current leadership literature to the research, development, and analysis of case studies.</td>
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<tr>
<td>EES5700</td>
<td>HAZWOPER Refresher</td>
<td>EES</td>
<td>5</td>
<td>700-level course. Refresher training covering management of hazardous materials and emergency response in the workplace or at spills or hazardous waste sites. This course satisfies the requirements for 8 hours of refresher training specified under OSHA 29 CFR 1910.120.</td>
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<tr>
<td>EGR3980</td>
<td>Special Topics in EGR</td>
<td>EGR</td>
<td>3</td>
<td>Special topics in Engineering and Computer Science.</td>
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<tr>
<td>EFL7110</td>
<td>Tch Rdr Sem: Midpoint</td>
<td>EFL</td>
<td>3</td>
<td>710-level course. Through a matrix organizational structure, students experience theory in selection, survey, journalistic practice, performance appraisal, persuasion, and counseling interviewing situations with the focus on human resource development.</td>
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<tr>
<td>ELD520</td>
<td>Stat &amp; Res Design</td>
<td>ELD</td>
<td>4</td>
<td>520-level course. Development of statistical techniques in basic and inferential statistics using statistical computing software and critical interpretation of educational research design and statistical analysis results.</td>
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<tr>
<td>ISE4000</td>
<td>Engineering Economy</td>
<td>ISE</td>
<td>4</td>
<td>600-level course. Introduction to analytical methods and techniques for optimizing the economic outcome of technical and managerial decisions. Includes time value of money, annual costs, present worth, future value, capitalized cost break-even analysis, and valuation and depreciation.</td>
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<tr>
<td>ME6850</td>
<td>Nano-scale Sci and Eng</td>
<td>ME</td>
<td>3</td>
<td>650-level course. Students will be introduced to Nano-scale science and engineering in terms of the nano-scale building blocks emphasizing carbon based nano-species, the characterization techniques emphasizing Raman Spectroscopy, and the nano-phenomena such as thermal, optical, electrical, chemical, and mechanical phenomena observed on the nano-scale. (b) Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D and Graduate level ME 3750 Minimum Grade of D- or higher.</td>
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<tr>
<td>COM440H</td>
<td>Interviewing</td>
<td>COM</td>
<td>4</td>
<td>3</td>
<td>440-level course. Through a matrix organizational structure, students experience theory in selection, survey, journalistic practice, performance appraisal, persuasion, and counseling interviewing situations with the focus on human resource development.</td>
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<tr>
<td>KNE2000A</td>
<td>Army Fitness Tr. III</td>
<td>KNE</td>
<td>2</td>
<td>00A-level course. Students will be introduced to basic and advanced military progression.</td>
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<tr>
<td>EDO440</td>
<td>AYA Intern Pt I: Mil ILA</td>
<td>ED</td>
<td>4</td>
<td>440-level course. Candidates, mentored by a language arts educator, will assist in the planning, organizing, delivering, and assessing of instruction in a 7-12th grade setting applying pedagogical content knowledge from language arts content and methods courses.</td>
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<tr>
<td>ATH6010</td>
<td>Kinship/Social Structure</td>
<td>ATH</td>
<td>3</td>
<td>601-level course. Introduction to the study of kinship as the basis for understanding social structure cross-culturally. Starts with the basic tools for classic kinship analysis, and proceeds to discuss the role of kinship plays in societies, how state formation utilized kinship analogs, and how kinship relates to issues of household organization, class and gender relations.</td>
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<tr>
<td>MEE550</td>
<td>Energy Based Analysis &amp; Design</td>
<td>MEE</td>
<td>3</td>
<td>550-level course. Energy conversion/Utilization systems and analysis and general design opportunities through open-ended problems with explicit considerations of system-level impacts, engineering tradeoffs, and system optimization. Analysis, modeling and design of engineering systems involving applications of thermodynamic, economics, heat transfer, and fluid flow. Exergy and thermodynamic analysis and optimization. The use of modern computational tools to model thermal performance characteristics of components and systems. Examples may be drawn from power plant processes, energy conversion, aircraft components, and systems as well as other areas of current interest. Integrated approach for systems evaluation of performance of selected energy conversion/Utilization systems. Course project. (b) Department Managed Prerequisite(s): Undergraduate level MEE 2300 Minimum Grade of D and Graduate level MEE 3350 Minimum Grade of C and Graduate level MEE 5360 Minimum Grade of C- or higher.</td>
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<tr>
<td>CS6800</td>
<td>Web Information Systems</td>
<td>CS</td>
<td>3</td>
<td>6800-level course. Covers topics in building Web-based applications involving variety of data, covers data, metadata, knowledge and ontologies, key Web languages and protocols; search engines, social networking, Web2.0, semantic web. Good programming skills are prerequisite. (b) Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D and Undergraduate level CS 3800 Minimum Grade of D- or higher.</td>
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</table>
Fall 2020

4680  Experimental Nanoscience

4800  Laboratory experiments 1) fabrication of nanomaterials; 2) characterization of physical and chemical properties; and 3) computational modeling of nanoscale physical phenomena. Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D or Graduate level CEG 6400 Minimum Grade of D and Undergraduate level PHY 2170 Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D (Grade of D). Department Managed Prerequisite(s): Undergraduate level ME 1020 Minimum Grade of D (Grade of D).

UG  LB  Lab

Fall 2020

3600  International Theory

Political Science

3  Influenntial classical and contemporary contending theoretical perspectives in international relations and their critique. Integrated Writing course.

UG  LE  Lecture

Fall 2020

1700  Laboratory experiments 1) fabrication of nanomaterials; 2) characterization of physical and chemical properties; and 3) computational modeling of nanoscale physical phenomena. Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D or Graduate level CEG 6400 Minimum Grade of D and Undergraduate level PHY 2170 Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D (Grade of D). Department Managed Prerequisite(s): Undergraduate level ME 1020 Minimum Grade of D (Grade of D).

UG  LB  Lab

Fall 2020

7550  Photovoltaics

Mechanical and Materials Eng

3  Basic principles of solar cells will be covered including semiconductors, electrons, and holes, and p-n junctions. Different types of solar cell materials including crystalline and amorphous cells as well as techniques for increasing their efficiency will be presented.

GR  LE  Lecture

Fall 2020

3600  International Theory

Political Science

3  Influenntial classical and contemporary contending theoretical perspectives in international relations and their critique. Integrated Writing course.

UG  LE  Lecture

Fall 2020

5700  International Theory

Political Science

3  Influenntial classical and contemporary contending theoretical perspectives in international relations and their critique. Integrated Writing course.

UG  LE  Lecture

Fall 2020

3550  International Theory

Political Science

3  Influenntial classical and contemporary contending theoretical perspectives in international relations and their critique. Integrated Writing course.

UG  LE  Lecture

Fall 2020

6260  Modern Practice I

Law

3  Teachers certified/licensed in special education, ESL, or bilingual education learn to apply Clay’s literacy processing theory to help students in the population of their specialty to develop effective early reading and writing systems.

GR  LE  Lecture

Fall 2020

4800  Gerontology Practicum

Social Work

3  Supervised learning under direction of the Gerontology Certificate Director and staff from a social service agency serving older adults. Prerequisite(s): Department Managed Prerequisite(s): Undergraduate level SW 4620 Minimum Grade of D or Undergraduate level SOC 4820 Minimum Grade of D (Grade of D).

UG  PR  Practicum

Fall 2020

4410  Biomedical Engineering

3  Application of first and second laws of thermodynamics to human, physiological and biological systems.

UG  LE  Lecture

Fall 2020

2211  Statistics for Engineers

Industrial & Systems Engr

3  Application of statistical techniques to engineering testing, development, and manufacturing. Basic principles of data collection and descriptive statistics; axioms of probability; discrete/continuous random variables and probability distributions; sampling theory; statistical inference; correlation/regression; analysis of variance.

UG  LE  Lecture

Fall 2020

3500  Internship

Public Personnel Admin

3  Faculty-directed, individualized study on student-selected topics. Limited to advanced students. Permission of the faculty and a minimum 3.5 GPA required.

GR  IS  Independent Study

Fall 2020

6630  Human Error Capstone

Psychology

3  Communication-intensive seminar integrating knowledge on human error.

GR  SE  Seminar

Fall 2020

3500  Internship

Public Personnel Admin

3  Faculty-directed, individualized study on student-selected topics. Limited to advanced students. Permission of the faculty and a minimum 3.5 GPA required.

GR  IS  Independent Study

Fall 2020

3460  Public Personnel Admin

3  Methods of employment, training, compensation, and employee relations in various levels of civil service. Examine organizations of public employers.

UG  LE  Lecture

Fall 2020

5600  Printmaking: Lithography

Art

3  Development of personalized concepts and individual aesthetic expression in printmaking with an emphasis in the area of lithography. This course has a fee that is non-refundable once the term begins.

GR  LB  Lab

Fall 2020

6630  Career Dev. Theory

5  Career Development theories are explored including application to specific client cases. Focus will be on developing helping skills and building effective relationship as well as technology resources available to career advisors.

GR  LE  Lecture

Fall 2020

6500  Mat. Characterization

Mechanical and Materials Eng

4  Principles of characterizing materials with respect to crystal structure, micro/nano structure, and chemical composition using particulate or wave-based probes (visible lights, X-rays, and energetic electrons). The interactions between the probes and materials are discussed. Characterization of both qualitative and quantitative level will be elucidated. Laboratory exercises are included.

GR  LL  Lecture/Lab Combination

Fall 2020

4120L  Industrial Controls Lab

Electrical Engineering

1  Hands-on experience in Industrial Controls, Automated Controls systems, plant modeling and control system performance. Prerequisite(s): Department Managed Prerequisite(s): Undergraduate level CEG 2170 Minimum Grade of D or Undergraduate level CS 1160 Minimum Grade of D or Undergraduate level CS 1160 Minimum Grade of D or Undergraduate level CS 1160 Minimum Grade of D (Grade of D).

UG  LB  Lab

Fall 2020

2020  Topics in Writing

English

3  Exploration of topics and approaches in the field of Writing with focus on developing mastery and enjoyment of the writing process.

UG  LE  Lecture

Fall 2020

4400  Computer Engineering

3  Advanced topics in Wireless Networking and Mobile Computing, including: queuing system analysis, network theory, multimedia coding and networking, emerging wireless and mobile technologies. Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D or Graduate level CEG 6400 Minimum Grade of D (Grade of D).

GR  LL  Lecture/Lab Combination

Fall 2020

2070  Basic & Intmd Algebra

Developmental Education

4  Review of arithmetic and basic algebra concepts and skills including operations involving signed numbers and fractions, factoring, polynomials, rational expressions and equations, exponents, radicals, quadratic equations, equations involving radicals or rational exponents, linear equations, and applications. This course has a fee that is non-refundable once the term begins.

UG  LE  Lecture

Fall 2020

3600  Ethics in Public Service

Urban Affairs

3  Study of what constitutes ethical behavior in public service, and the ethical role of public service professionals.

UG  LE  Lecture

Fall 2020

4800  Special Topics in Mgt

Management

1  Seminar in special topics such as organizational assessment, training and development, and personal career development. Topics vary.

UG  SE  Seminar
Procedures and operations of law enforcement at various levels from patrol to senior administration, emphasizing duties, responsibilities and leadership.

Examines selected aspects of Biblical literature from both literary and historical perspectives to explore the possible structures, functions, and meanings of this literature for its original community.

Identifies the diverse needs of students learning English as a foreign language and the most effective curriculum development, resources, and teaching techniques to address these needs. (UG) Department Managed Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D (ENG 4710 can be taken concurrently).

Application of geographic methodology to social, political and environmental problems utilizing remote sensed images. Development of capacity to interpret remote sensed data and complete an analysis of data.

Principles of characterizing materials with respect to crystal structure, micro/nano structure; and chemical composition using particle or wave-based probes (visible lights, X-rays, and energetic electrons). The interactions between the probes and materials are discussed. Characterization at both qualitative and quantitive level will be discussed. Laboratory exercises are included. (UG) Department Managed Prerequisite(s): Undergraduate level ME 2600 Minimum Grade of D and Undergraduate level ME 2700 Minimum Grade of C.

An introduction to anthropological perspectives of sex and gender, including attributes associated with "maleness" or "femaleness" and norms and ideals regarding appropriate roles, behaviors and sexualities. The course presents a wide range of European, Islamic, or Byzantine civilizations.

Focuses on theoretical issues and practical problems of teaching English at all levels, including developing media and resources, and improving attitudes and behavior.

Covers intervention specialist's duties, responsibilities and leadership.

Nanoscience and nanotechnology. Topics include introduction to quantum mechanics, fabrication, characterisation, materials, electronic properties, optical properties, magnetic properties, devices, MEMS, NEMS.

Analyze hardware security/trust and be able to implement various countermeasures to improve trust for hardware IC systems. Methodologies that threaten HW IC systems, countermeasures to improve trust for HW IC systems, improving Trust for both ASIC and FPGA based systems.

Introduction to the various genres of young adult literature with an emphasis on the selection and analysis of books for adolescents.

Analyze hardware security/trust and be able to implement various countermeasures to improve trust for hardware IC systems. Methodologies that threaten HW IC systems, countermeasures to improve trust for HW IC systems, improving Trust for both ASIC and FPGA based systems.
Fall 2020  CHI3120  3120  Adv Chinese Conversation  CHI  Chinese  3  Continuation of Chinese 3110 pursuing a balance of the four basic language skills: reading, writing, listening, and speaking in Chinese with a focus on conversation.  
  Department Managed Prerequisite(s): Undergraduate level CHI 3110 Minimum Grade of D-/<br/>  UG  LE  Lecture

Fall 2020  LDR7090  7090  Org. Intent & Sustanabi  LDR  Leadership  3  This course focuses on theoretical and practical models for understanding international and sustainable organizational development. Central to this focus is the understanding of the relationships of both technical and adaptive leadership to organizational outcomes.  
  GR  LE  Lecture

Fall 2020  BMI7370  7370  Medical Devices  BMI  Biomedical Engineering  3  For students who are interested in acquiring a broad-based knowledge in the human factors of medical instrumentation and devices. Approaches the design and implementation of medical technology from the perspective of patient safety and product usability. Topics to be covered will range from design guideline considerations, tools for usability analysis, and emerging trends and technologies.  
  Department Managed Prerequisite(s): Graduate level BIE 6300 Minimum Grade of D or Undergraduate level BIE 4300 Minimum Grade of D-/<br/>  GR  LE  Lecture

Fall 2020  FR5110  5110  French Conversation  FR  French  3  Practice in oral use of French emphasizing the culture of the French-speaking world. Taught in French.  
  GR  LE  Lecture

Fall 2020  NUR7005  7005  Nurs Res & Eval for Pract  NUR  Nursing  3  Critical analysis of the components, methodology, and state of the art of research for nursing to plan change for best practice.  
  GR  LE  Lecture

Fall 2020  ISE6410  4320  Hum.Sys Int & Uah Engg  ISE  Industrial & Systems Engr  3  Theoretical paradigms in human-system interaction and their application to interface design. Advanced interface technologies, such as multimodal input/output, hypertext, and knowledge-based systems.  
  UG  LE  Lecture

Fall 2020  BMS7270  7270  Proteins and Enzymes  BMS  Biomedical Sciences  3  Also listed as BMB 7270. Current concepts in protein structure and function and the mechanism of enzymatic catalysis.  
  GR  LE  Lecture

Fall 2020  BIO3200  3200  Intro to Immunology  BIO  Biology  3  Principles and concepts of immunology. Organization of the immune system, Cellular and molecular mechanisms used by the immune system to protect organisms from disease. Practical application of immunological advances in basic and medical science.  
  UG  LE  Lecture

Fall 2020  PSY9020  8020  Stress, Cognition, Hllh  PSY  Psychology  1  Seminars with in-depth coverage of special topics in human factors. Topics vary. Permission of Instructor. May be taken for a letter grade or pass/unsatisfactory.  
  GR  SE  Seminar

Fall 2020  CHI2020  2020  Intermediate Chinese II  CHI  Chinese  3  Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language.  
  Department Managed Prerequisite(s): Undergraduate level CHI 2010 Minimum Grade of D-/<br/>  UG  LE  Lecture

Fall 2020  MUS1310  1310  Beg Guitar Class I  MUS  Music  1  Focuses on the development of good playing habits through melody and chord playing. Tuning, care of the guitar, and tablature reading covered. various guitar styles demonstrated. Students provide own instruments. Electric guitars not suitable.  
  UG  LE  Lecture

Fall 2020  PSI0950  9540  Dev. Behavioral Peda II  PSI  Professional Psychology  3  Part two of a two-semester course addressing a wide range of developmental and behavioral difficulties from conception through late adolescence. Part two places emphasis on assessment, management, and treatment of developmental and behavioral factors involved in the causation or maintenance of pediatric concerns such as various medical diagnoses with behavioral components such as diabetes and asthma, childhood obesity, and regulatory disorders (sleeping, discipline difficulties, sleep, feeding/weighting). Additional focus will be placed on adherence to medical regimen, quality of life, pain assessment and management, and evidence-based approaches.  
  GR  LE  Lecture

Fall 2020  KNH1100  1100  Bowling  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of Bowling. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.  
  UG  LB  Lab

Fall 2020  PSY4920  4920  Clinical Neuro Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on clinical neuroscience. Integrated Writing course.  
  UG  SE  Seminar

Fall 2020  PTX8020  8020  Pharmac&Tox-DNA Damaging Agents  PTX  Pharmacology/Toxicology  3  A large number of therapeutic, occupational, and environmental agents cause damage to genomic DNA and exert various toxic and mutagenic effects in human cells. This course explores the molecular and cellular mechanisms of DNA damage formation and the pathways that cells employ to repair and respond to genomic damage. Topics will also cover the human diseases and disorders that result from defects in the DNA damage response as well as the application of DNA damaging agents for therapeutic purposes.  
  GR  LE  Lecture

Fall 2020  SAA7610  7610  Student Dev Theory  SAA  Student Affairs in Higher Ed  3  Studies theories of student development and their use in research and practice in student affairs, focusing specifically on college students.  
  GR  LE  Lecture

Fall 2020  LE1100  1100  Police Academy I  LE  Law Enforcement  3  Ohio Police Training Academy curriculum. Introduction to basic training, the criminal justice system, report writing and the Ohio Revised Code. Basic firearms training and physical conditioning. Requires admission to Grand Lake Law Enforcement Academy.  
  UG  LL  Lecture/Lab Combination

Fall 2020  ATH6410  6410  Historical Archaeology  ATH  Anthropology  3  Reviews the archaeology of the post-European discovery period in North America. Discussions focus on such topics as the Colonial period, plantation systems and the archaeology of slavery, nineteenth-century cities, industrial sites, and urban sites. May include a small analysis project utilizing excavated materials from Ohio historic sites.  
  GR  LE  Lecture

Fall 2020  TH4340  4340  Theatrical Rigging  TH  Theatre  2  Design and use of rigging systems in theatrical settings. Proper selection and use of rigging hardware and equipment and fall protection.  
  UG  LL  Lecture/Lab Combination

Fall 2020  PSI9650  9650  Supervision  PSI  Professional Psychology  3  Focuses on issues related to clinical supervision in psychology; i.e., the process and complexities of supervision, ethical issues, multicultural issues and considerations, and supervision theory and research.  
  GR  LE  Lecture

Fall 2020  ED9000  9000  Learning Thesis  ED  Education  3  This course guides implementation of individual Master's thesis projects in education. The course includes inquiry and data gathering through analysis and solution identification, writing of thesis, and final presentation.  
  GR  IS  Independent Study

Fall 2020  EGR7010  7010  Linear Systems  EGR  Engineering  3  Graduate level linear engineering methods in finite and infinite dimensions.  
  GR  LE  Lecture

Fall 2020  UVC1090  1090  SD Prior Long Assessment  UVC  University College  0  Helps students identify areas of learning to have evaluated for college-level equivalency. Guides students in this self-paced curriculum through the preparation and compilation of all components required for the evaluation of a portfolio of prior learning through LearningCounts.org.  
  UG  IS  Independent Study

Fall 2020  ART5690  5690  Printmaking: Screenprinting  ART  Art  3  Development of personalized concepts and individual aesthetic expression in printmaking with an emphasis in the area of screenprinting. This course has a fee that is non-refundable once the term begins.  
  GR  LB  Lab
Fall 2020
KSNH8990 8990  Phys Ed Research
KSNH  Kinesiology & Health  1  Under the supervision of a thesis committee and chair, students select a physical education problem, prepare a proposal detailing the research question, complete the research, write their thesis with full documentation and defend their work before the committee.
GR  IS  Independent Study

Fall 2020
HST7350 7350  Seminar Middle East Hist
HST  History  3  Examines aspects of the history of the Middle East from the 7th century to the present. Topics vary.
GR  SE  Seminar

Fall 2020
URS3210 3210  City Politics
URS  Urban Affairs  3  Overview of urban and metropolitan politics and problems. Examination of how cities and metropolitan areas are governed; the changing structure of local government, the powers afforded localities, opportunities for citizen participation, and possibilities for regional cooperation. Study of key urban service areas: schools, land use and zoning, parks and recreation, economic development, urban planning, etc.
UG  LE  Lecture

Fall 2020
ED4540 4540  AYA Math Methods
ED  Education  3  Curriculum, methods, and materials in the teaching of mathematics for grades 7-12, including lesson planning, assessment, differentiation, technology, and content for algebra and geometry courses.
UG  LE  Lecture

Fall 2020
ENG4880 4880  Fiction Writing Capstone
ENG  English  3  Students will produce a portfolio integrating knowledge, skills, and principles regarding the writing and revision of original fiction.
UG  SE  Seminar

Fall 2020
EES4340 4340  Mapping Methods
EES  Earth & Environmental Sciences  2  Basic skills of mapping and measurement with a Bruttom compass as applied to field studies in the earth and environmental sciences. Key skills include pace and compass traverse mapping, triangulation, bearing and reverse bearings, measurement of lines and planes.
UG  LE  Lecture

Fall 2020
CEG4330 4330  Microproc Embedded Sys
CEG  Computer Engineering  4  Introduction to small, special-purpose microprocessor systems. Topic include hardware design issues, software design and implementation, and real-time operating systems.
UG  LE  Lecture

Fall 2020
NUR7105 7105  Pop Hlth
NUR  Nursing  3  This course synthesizes methods of population assessment and planning to construct population-appropriate interventions for health care delivery systems. The focus is on safe, quality, and culturally-appropriate advanced nurse practice activities to meet emerging world needs.
GR  LE  Lecture

Fall 2020
PLS3230 3230  Government of Ohio
PLS  Political Science  3  Organization and functions of the government of Ohio with special attention to development, social structure, legal status, electoral processes, and fiscal problems. Integrated Writing course.
UG  LE  Lecture

Fall 2020
CNL7240 7240  Career Counseling & Dev
CNL  Counseling  3  Presents career development as a series of vocational and other life choices in the process of self-realization, and also considers the effects of rapid social and technological change on this process.
GR  LE  Lecture

Fall 2020
THU160 3160  Singing for Actor VI
TH  Theatre  1  Private singing lessons for acting, theatre studies and dance majors only.
UG  ST  Studio

Fall 2020
EES5990 5990  Spec Probs Earth Env Sci
EES  Earth & Environmental Sciences  0.5  Research and problems designed for specific needs and talents of students at the graduate level. May be taken for a letter grade or pass/unsatisfactory.
GR  IS  Independent Study

Fall 2020
SCM4810 4810  Intern in Management Sci
SCM  Supply Chain Management  3  Faculty-supervised internship in management science. Students work in a firm or public agency, participate in seminars, and submit reports for completion of the course.
UG  IN  Internship

Fall 2020
EGR5350 5350  Tech Comm for EGR & CS
EGR  Engineering  3  A modular approach to oral and written communication of complex technical information to an expert audience. Course includes describing technical mechanisms, processes designing, and using tables, graphs, charts, and figures; producing technical proposals, progress reports, feasibility reports, and formal reports; and doing technical briefings.
UG  LE  Lecture

Fall 2020
ATH6300 6300  Special Topics-Biologic
ATH  Anthropology  3  Intensive study of selected graduate-level topics in Biological or Medical anthropology. Topics vary.
GR  LE  Lecture

Fall 2020
EGR6610 6610  Clinical Engr Dev World
EGR  Engineering  3  Students will be exposed to the culture of a developing country; learn how to live and interact with the local people; gain an appreciation for a culture different from their own and of the limited technical resources of educational and healthcare facilities in a developing country; learn how to install and repair medical and other technical equipment with simple tools. Minimum Grade of D=<
GR  LL  Lecture/Lab Combination

Fall 2020
LEP0630 0630  Grammar - Pre-LEAP
LEP  LEAP  0  Grammar for low-beginning ESL students. This course has a fee that is non-refundable once the term begins.
UG  LE  Lecture

Fall 2020
PLS4824 4824  Local/Community Internship
PLS  Political Science  3  Intern 12-15 hours per week in a local governmental office. Jobs include working with city managers, mayors, and other city leaders to meet local needs and help with specific projects.
UG  IN  Internship

Fall 2020
KSNH1800 1800  Weight Training
KSNH  Kinesiology & Health  1  Fundamental skills and knowledge of Weight Training: Women. Competency-based approach. Course may accommodate disabled students when appropriate.
UG  LB  Lab

Fall 2020
DOO5090 5090  Adv Qual Mbl Seminar
DOO  Doctor Org Studies  3  This course focuses on the qualitative research process from research topic, design, implementation, analyses, and findings. Included is emphasis on the researcher as the research instrument and exploration of theoretical frameworks.
GR  SE  Seminar

Fall 2020
IBD3150 3150  Invertebrate Zoology
BIO  Biology  5  Introduction to the evolution, diversity, and ecology of invertebrate animals. Major patterns in the evolution of form and function of animal bodies. Examination of old and new theories about relationships among animal groups.
UG  LE  Lecture

Fall 2020
SPN6120 6120  SPN Instn Practicum II
SPN  Spanish  3  Peer teachers observe and assist in elementary and/or intermediate level classes; continuation of practicum from SPN6110. Minimum Grade of D=<
GR  PR  Practicum

Fall 2020
EC7260 7260  Contemp Political Econ
EC  Economics  3  A political, social and economic analysis that questions, critiques, and provides alternative perspectives to orthodox economic theory. Studies groups, their systematic interrelations, and their impact on political, economic and social structures, practices, and outcomes. Minimum Grade of D=<
GR  SE  Seminar

Fall 2020
MGT4400 4400  Performance Management
MGT  Management  6  Setting objectives, observing performance, and giving and receiving ongoing feedback. Performance management requires that employees’ activities and outputs are congruent with organizational goals, thus creating a direct link between employee performance and organizational objectives.
UG  LE  Lecture

Fall 2020
BMS0870 870  Virology
BMS  Biomedical Sciences  3  (Also listed as Mbb 7310.) This course provides an introduction to the field of virology. The course emphasizes the intrinsic properties of viruses that cause human disease and their interaction with cells, multiplication, genetics, and tumor induction.
GR  LE  Lecture

Fall 2020
ARA5110 5110  Arabic Conversation I
ARA  Arabic  3  A language practicum for intermediate students of Arabic, designed to expand conversational skills in Modern Standard Arabic. Minimum Grade of D=<
UG  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td></td>
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<tr>
<td>PSI9960</td>
<td>9960</td>
<td>Selected Topics</td>
</tr>
<tr>
<td>PSI</td>
<td>Professional Psychology</td>
<td>1</td>
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<tr>
<td>Content selected by instructor in consultation with the Office of Academic Affairs.</td>
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<tr>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>Fall 2020</td>
<td>4380</td>
<td>Environmental Law Policy</td>
</tr>
<tr>
<td>PLS</td>
<td>Political Science</td>
<td>3</td>
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<tr>
<td>Environmental law and policy and the statutory framework, pertaining to environmental impact statements, the regulation of air and water pollution, the disposal and cleanup of toxic wastes, and workplace safety.</td>
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<tr>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>8520</td>
<td>Biomedical Experimental Design</td>
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<tr>
<td>ANT</td>
<td>Anatomy</td>
<td>2</td>
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<tr>
<td>There will be two primary assignments in this course: 1) the experimental design and 2) the oral presentation. As such, the focus of the weekly meetings will be to aid student’s understanding of how to develop valid written rationale, experimental design, predicted results and conclusions, and how to give effective oral presentations. Inclusion discussions will focus on elements of good experimental design, reinforcement of scientific writing, and elements of effective oral presentations in order to establish best practices associated with experimental design and oral presentation. These discussions will be supplemented with peer and instructor feedback on initial drafts. These tools will facilitate students completing their assignments effectively and in a timely manner.</td>
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<tr>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>7520</td>
<td>Hydrogen Energy</td>
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<tr>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
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<tr>
<td>This course focuses on hydrogen as a renewable and clean means of energy storage, and discusses hydrogen production and storage, as well as an overview of hydrogen energy conversion.</td>
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<tr>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>Fall 2020</td>
<td>320L</td>
<td>Dig &amp; Fdbck Cont Sys Lab</td>
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<tr>
<td>EE</td>
<td>Electrical Engineering</td>
<td>1</td>
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<tr>
<td>Laboratory to assist the students in the ability to develop analog and digital models of physical systems, perform transform domain analysis of signals and systems, analyze systems stability, apply pole plots and root locus method, and to analyze and design PID Controllers.</td>
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<tr>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>Fall 2020</td>
<td>4500</td>
<td>Latin American History</td>
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<tr>
<td>HST</td>
<td>History</td>
<td>3</td>
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<tr>
<td>Examines selected Latin American nations and regions (e.g., Mexico, Argentina) and particular topics (e.g., Authoritarianism) in detail. Topics vary. Integrated Writing course.</td>
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<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>2050</td>
<td>Russian Culture</td>
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<tr>
<td>ML</td>
<td>Modern Languages</td>
<td>3</td>
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<tr>
<td>Introduction to Russian culture and history with particular focus on the historic roots and cultural manifestations of Russia’s unique Eastern-Western character; the changes to the Russian life style and mentality after 1917 as seen in essay, short fiction, documentary and feature films, and visual art; and Russian cultural impact in the United States.</td>
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<tr>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>4700</td>
<td>ECL Lab</td>
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<tr>
<td>AES</td>
<td>Aerospace Studies</td>
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<tr>
<td>Students who have completed Professional Officer coursework but are not yet eligible to graduate enroll in this course to remain proficient until they graduate.</td>
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<tr>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>Fall 2020</td>
<td>6550L</td>
<td>Plant Systematics Lab</td>
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<tr>
<td>BIO</td>
<td>Biology</td>
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<td>Required laboratory for BIO 6550.</td>
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<tr>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>Fall 2020</td>
<td>7461</td>
<td>Rehab Eng Computers I</td>
</tr>
<tr>
<td>BMS</td>
<td>Biomedical Sciences</td>
<td>3</td>
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<tr>
<td>Introduces adaptive computer access hardware and software solutions for various disability populations in detail. Covers basic principles of programming with application to rehabilitation engineering. Lecture and lab are combined.</td>
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<tr>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>Fall 2020</td>
<td>2800</td>
<td>Writing Math Proofs</td>
</tr>
<tr>
<td>MTH</td>
<td>Mathematics</td>
<td>3</td>
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<tr>
<td>Introduction to logic and techniques used in mathematical proofs. Students gain experience in constructing proofs as they study sets, relations, functions, algebraic structures, and the properties of real numbers. Integrated Writing course.</td>
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<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>3710</td>
<td>Forensic DNA Profiling</td>
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<tr>
<td>BIO</td>
<td>Biology</td>
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<tr>
<td>Analysis of video addressing DNA profiling. Promotes critical thinking about science associated with forensic DNA profiling, particularly in criminal cases where DNA evidence plays an important role. Integrated Writing course.</td>
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<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>8130</td>
<td>Online Cross Interactive</td>
</tr>
<tr>
<td>EDT</td>
<td>Educational Technology</td>
<td>3</td>
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<tr>
<td>Examines the theory and practices of using educational technologies to ensure online courses include ample interaction. Class will include the knowledge and skills necessary to utilize some of these educational technologies.</td>
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<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>6510</td>
<td>Found Spec Ed</td>
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<tr>
<td>EDS</td>
<td>Education - Special Education</td>
<td>3</td>
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<tr>
<td>Introduction to law, research, and history of special education.</td>
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<tr>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>3010</td>
<td>Research Methods I</td>
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<tr>
<td>PSY</td>
<td>Psychology</td>
<td>4</td>
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<tr>
<td>Basics of experimentation, data analysis and writing using the American Psychological Association (APA) style. Integrated Writing course.</td>
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<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<td>Fall 2020</td>
<td>2700R</td>
<td>StructProp of Mat I Rec</td>
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<tr>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
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<td>Required recitation for ME 2700.</td>
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<tr>
<td>UG</td>
<td>RE</td>
<td>Recitation</td>
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<tr>
<td>Fall 2020</td>
<td>4150</td>
<td>Real Estate Fin &amp; App</td>
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<tr>
<td>FIN</td>
<td>Finance</td>
<td>3</td>
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<tr>
<td>In-depth study of real estate finance and the theory and practice of appraising real estate. Successful completion of this course meets part of the licensing requirements for real estate sales people in Ohio. Integrated Writing course.</td>
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<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>7020</td>
<td>Res Perspectives Chem</td>
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<tr>
<td>CHM</td>
<td>Chemistry</td>
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<tr>
<td>Lecture/reading course to acquaint new graduate students with the research being carried out by the faculty in the Department of Chemistry.</td>
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<tr>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>2040</td>
<td>Great Books - Classics</td>
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<tr>
<td>CLS</td>
<td>Classics</td>
<td>3</td>
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<tr>
<td>Introduction to interpreting literature, using selected texts from ancient Greece and Rome, viewed in their socio-historical contexts and read for their value in treating more general themes of the human experience. Integrated Writing course.</td>
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<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<td>Fall 2020</td>
<td>2560</td>
<td>Psychology of Tango</td>
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<tr>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
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<tr>
<td>Explores inquiries into Argentine tango from the perspective of psychological science, while providing dance instruction intended to complement those inquiries.</td>
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<td>Fall 2020</td>
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<td>Advanced Linear Algebra</td>
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<tr>
<td>Fall 2020</td>
<td>6990</td>
<td>Collegiate Chorale</td>
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<tr>
<td>MUE</td>
<td>Music: Ensembles</td>
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<tr>
<td>Development of choral and vocal skills. Emphasis on advanced choral concert repertoire representing a wide range of historical and compositional styles. Audition required.</td>
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<td>UG</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>Fall 2020</td>
<td>1000</td>
<td>Intro to Neuro Research</td>
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<tr>
<td>NEU</td>
<td>Neuroscience</td>
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<tr>
<td>Introduction to the primary neuroscience literature. Students will learn how to search for articles and begin to analyze the different components of them.</td>
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</tr>
<tr>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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</table>
Fall 2020  PPH7440  7440  Public Health Project  PPH  Population & Public Health  3  This course prepares students to manage small to medium sized health promotion and education projects within a public health organization. The course covers measuring program performance and impact; leading teams; exploring project management tools; fundamentals of human resources; building and maintaining partnerships (collaborations) and coalitions; and identifying and securing funding, and financial management of programs.  

Fall 2020  ENG3530  3530  Young Adult Literature  ENG  English  3  Introduction to various genres of young adult literature with an emphasis on the selection and analysis of books for adolescents.  

Fall 2020  EE7370  7370  Adv Electronic Warfare  EE  Electrical Engineering  3  Understand electronic warfare system architecture, understand and evaluate electronic warfare processing, understand and analyze low probability of intercept signals, perform second order cyclostationary analysis on RF signals, and simulate electronic warfare systems and operations.  

Fall 2020  NUR4460C  4460C  Lzhp Mgmt to Prof Nurs Clin  NUR  Nursing  0  Required clinical for NUR 4460.  

Fall 2020  ATR7750  7750  Clinical Practice IV  ATR  Athletic Training  2  Clinical experience with a preceptor to practice, apply and master a variety of entry-level skills learned in the previous semester. Evaluation will occur in both the clinical and classroom settings.  

Fall 2020  CEEG5910  5910  MSECE Thesis Research  CEEG  Computer Engineering  1  Master's thesis research in computer engineering.  

Fall 2020  FIN3210  3210  International Fin Mgt  FIN  Finance  3  Study of the international aspects of financial management. Topics include foreign exchange management, international capital budgeting, international financing, tax planning, and working capital management.  

Fall 2020  PHY2450  2450  Concepts in Physics  ECE  Physics  3.5  Fundamental concepts and applications of physics designed for early childhood education majors. Topics are integrated with mathematics and include laboratory experiences, demonstrations, and projects. Students may use either PHY 2450 or PHY 2460, but not both courses, to satisfy the requirements of the WSU Core.  

Fall 2020  PHL3990  3990  Studies Select Subjects  PHL  Philosophy  3  Problems, approaches, and topics in the field of philosophy. Topics vary.  

Fall 2020  ART4490  4490  Senior Painting Thesis  ART  Art  3  Production of cohesive, substantial body of work representing an investigation of a specific visual idea or problem. Culmination of undergraduate study in painting and foundation of an individual direction beyond the BFA experience.  


Fall 2020  ED6500  6500  Specific Studies in Educ  ED  Education  0.5  Provides developing professional educators instruction in current trends and issues in adolescence and young adult social studies.  

Fall 2020  FR8620  8620  Ind Read for Grad Students  FR  French  3  Independent reading for graduate students. Taught in French.  

Fall 2020  MGT4770  4770  Train, Devlp, Perf Mgt  MGT  Management  3  Introduction to the concepts, processes, and issues associated with training and development and performance management. Covers planning, designing, implementing, and evaluating training programs as well as creating a direct link between employee performance and organizational objectives.  

Fall 2020  CS5170  5170  Mobile App Development  CS  Computer Science  3  Focuses on projects to progressively demonstrate concepts and practical approaches to developing software for mobile devices focusing on iOS devices including any of iPhone, iPod Touch, or iPad. The course covers application design, Apple’s core technologies, animation, image processing, video processing, audio, 3D graphics, and built in sensors.  

Fall 2020  ME1040  1040  EGR Design & Solid Model  ME  Mechanical and Materials Engg  3  Fundamentals of blue-print reading, technical sketching, mechanical drawing, CAD, modeling and prototyping and computer-assisted analysis. Topics include safety, ethics, product liability, teamwork and personal responsibilities. Communication skills and economic considerations are stressed.  

Fall 2020  MUS3280  3280  Instrumental Music Ed Meth  MUS  Music  1  Teaches students the methodology, techniques, and strategies that will make them successful with elementary and middle and high school concert band programs.  

Fall 2020  NUR8900  8900  DNP Leadership Practicum  NUR  Nursing  2  In this course collaboration with faculty and mentors, students design an experience to facilitate application of knowledge gained in prior courses: theories and research related to informatics, population health, health policy, finances and leadership, specific to health systems. Field experiences reinforce classroom learning to the practice environment, namely leadership to support systems level approaches to promote population health.  

Fall 2020  ED9990  9990  Thesis  EDT  Educational Technology  1  The project may be a thesis or creative production and is prepared under the guidance of the student's advisory committee.  

Fall 2020  ED54190  4190  Dyslexia Interventions Methods  EDS  Education - Special Education  3  Practices and procedures used in developing curricula for individuals with dyslexia and dyslexic tendencies. Clinical application, classroom accommodation, and development/implementation of the IEP are discussed.  

Fall 2020  HPR4290  4290  K-12 Practicum  HPR  Health Phys Educ & Recreation  12  Supervised full-time student teaching in a K-12 school setting.  

Fall 2020  BMS9560  9560  Medical Ultrasonics  BMS  Biomedical Sciences  3  Fundamentals of medical ultrasonics: ultrasound generation, propagation, scattering, and attenuation in biological tissue. Traditional A-mode, B-mode, M-mode, Doppler techniques and advanced ultrasound imaging techniques.  

Fall 2020  ENG6640  6640  TopicsTech/Prof Writing  ENG  English  3  Courses, seminars, or workshops in specialized topics relating to business, technical, and professional writing.  

GR  LE  Lecture  

UG  CL  Clinical
Fall 2020
GER4170  4170  German Romanticism  GER  German  3  Study of the romantic movement with representative works of Schlegel, Novalis, Wackenroder, Tieck, Eichendorff, Hoffmann, and others. DEE Department Manager Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3260 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D.  UG  LE  Lecture

Fall 2020
NUR4990  4890  LiDship & Mgrmt  NUR  Nursing  3  Theories and strategies of leadership and management for the practice of professional nursing. Safety and quality improvement initiatives and improving quality patient outcomes. Leadership concepts, skills, and decision-making in nursing care, team coordination, and participation in evidence-based improvement/change projects. Fieldwork required.  UG  PR  Practicum

Fall 2020
EES6210  6210  Struct Gr6t & Textons  EES  Earth & Environmental Sciences  4  Study of the three-dimensional distribution of rock units. Deformational structures such as folds, faults, joints, cleavage, foliation, and fracture and the superposition are used to unravel the history of deformation, and ultimately to understand the stress fields that produced the observed strain and structures. Textons is the structural evolution of regional patterns of deformation at the scale of mountain ranges. Lecture/lab combined, 4 credit hours  GR  LL  Lecture/Lab Combination

Fall 2020
TH2440  2440  Acting II  TH  Theatre  3  Exploration of a role through intensive application of acting, movement, voice and speech and text analysis skills. Emphasis on deep personalization of character objectives and tactical range. Study of audition skills and techniques.  UG  LL  Lecture/Lab Combination

Fall 2020
TH1000  1000  Musical Theatre Voice  TH  Theatre  1  Weekly musical theatre singing lessons for acting, theatre studies and dance majors only.  UG  ST  Studio

Fall 2020
KHN1560  1560  Soccer: Indoor  KHN  Kinesiology & Health  1  Fundamental skills and knowledge of Soccer: Indoor. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020
HST6600  6600  History  HST  History  3  Examine Colonial, Revolutionary, and early Republic periods of American history. Topics vary.  GR  LE  Lecture

Fall 2020
KHN1610B  1610B  Strength & Tone  KHN  Kinesiology & Health  1  Fundamental skills and knowledge of Strength & Tone. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020
RUS2020  2020  Intermediate Russian II  RUS  Russian  3  Grammar review, reading, and discussion of selected texts with practice in speaking and writing. Taught in Russian. DEE Department Manager Prerequisite(s): Undergraduate level RUS 2010 Minimum Grade of D.  UG  LE  Lecture

Fall 2020
KHN1540B  1540B  Self Defn for Women  KHN  Kinesiology & Health  1  Fundamental skills and knowledge of Self Defense for Women. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020
PSY4640  4640  Psych Religion Capstone  PSY  Psychology  3  Communication-intensive seminar examining differences between science and religion as ways to explain reality. Integrated Writing course.  UG  LE  Lecture

Fall 2020
TH3330  3330  Computer Graphics TH I  TH  Theatre  3  Introduction to computer aided drafting programs. Basic skills developed through several projects including orthographic projections, designer's elevations, groundplans and light plots.  UG  LE  Lecture/Lab Combination

Fall 2020
AES4340  4340  SLC Lab  AES  Aerospace Studies  0  Preparation for progression active duty. Cadets take leadership roles in execution of leadership labs for the cadet wing. Students hone leadership fundamentals to a level commensurate to entry into the active duty Air Force. Requires participation in two weekly physical training sessions.  UG  LB  Lab

Fall 2020
CEG4180  4180  Obj-Directed ProgDesig  CEG  Computer Engineering  3  Study of object-oriented design and programming. Programming topics emphasize the core concepts of encapsulation, inheritance, polymorphism, and dynamic binding. Additional topics include class organization, software maintenance, and design of reusable components.  UG  LE  Lecture

Fall 2020
RHB7020  7020  Medical Aspects Seminar  RHB  Rehabilitation  3  Chronic illness and disability are conceptualized with the goal of helping clients achieve optimal functioning. Several conditions are reviewed such as traumatic brain injury, intellectual and developmental disorders. Pharmacological issues are also studied.  GR  LE  Lecture

Fall 2020
PHL4010  4010  Independent Study  PHL  Philosophy  1  Faculty-directed, individualized study on student-selected topics. Limited to advanced students. Permission of faculty and a minimum 3.5 GPA required.  GR  IS  Independent Study

Fall 2020
CEG5310  5310  Computer Organization  CEG  Computer Engineering  4  Organization and sequential operation of digital computers. Binary and hexadecimal number systems, 2's complement arithmetic, program control, memory organization and hierarchy, addressing modes, stacks and parameter passing, interrupts and traps, I/O devices, DMA, cache, and virtual memory. DEE Department Manager Prerequisite(s): Graduate level CS 1181 Minimum Grade of D.  UG  LE  Lecture

Fall 2020
ED4560  4560  MA CIS Methods  ED  Education  3  Explores computer information science as a discipline that encourages inquiry, creativity and collaboration. This includes lesson planning, creation of a nurturing learning environment, assessment, differentiation, technology and content for computer science courses.  UG  LE  Lecture

Fall 2020
PSY4320  4320  Develop Psychopath Cap  PSY  Psychology  3  Concepts and principles of developmental psychopathology and their connections to childhood/adolescent disorder and the evolution of personality pathology. Integrated Writing course.  UG  LE  Lecture

Fall 2020
URS7060  7060  Research Methods  URS  Urban Affairs  3  Emphasis on different aspects of policy evaluation by obtaining facts and analyzing information on the impact of public programs. Deals with controversy over the use of objective performance indicators and citizen surveys as program performance measures.  GR  LE  Lecture

Fall 2020
BME4550  4550  Bioinstrumentation  BME  Biomedical Engineering  4  Various electrodes, transducers, chemical sensors, special circuits, devices and methods for measuring biological signals and variables; therapeutic and prosthetic devices; electrical safety. DEE Department Manager Prerequisite(s): Undergraduate level ANT 2120 Minimum Grade of D or Undergraduate level ANT 3120 Minimum Grade of D or Undergraduate level BM 3520 Minimum Grade of D or Undergraduate level BM 3530 Minimum Grade of D.  UG  LE  Lecture/Lab Combination

Fall 2020
MUE4940  4940  Chamber Players  MUE  Music: Ensembles  1  Exploration and performance of compositions for small wind ensemble (usually 8 to 16 players). Typical repertoire may include works by Gabrieli, Mozart, Schubert, Dvorak, Strauss, or others. The ensemble functions according to a player pool concept, utilizing instrumental forces as needed for various works. Audition and instructor permission required.  GR  LE  Lecture/Lab Combination
Fall 2020 ED7810 7810 Liturgy Reearch: Pract III ED Education 3 Conduct the literacy research project designed in ED 7800. Collect and analyze the data. Final written project includes: findings, discussion, and conclusion (including limitations and implications). This course involves supervision. GR LE Lecture
Fall 2020 MKT4870 4870 Ind Studies in Marketing MKT Marketing 1 Research or some other marketing project. The course is offered with the prior-approval of the department chair and the supervising faculty member. UG IS Independent Study
Fall 2020 MGT7010 7010 Social Influence Organizations MGT Management 3 This course examines various aspects of power, including how power is acquired, retained, and used in organizations. It also explores what effect power has on employees and the overall performance of organizations. GR LE Lecture
Fall 2020 EDL9900 9960 Practicum II: Supt EDL Educational Leadership 3 The practicum provides significant opportunities for candidates to synthesize and apply the knowledge and skills identified in the district-level standards through substantial, sustained, standards-based work in real settings. GR IN Internship
Fall 2020 MIL4500 4500 Advanced Topics MIL Military Science 2 Independent study project on selected recent or current events that impact U.S. Army operations, doctrine, structure, planning, or organization. A detailed presentation of causes, actions, and results on a selected topic. UB IS Independent Study
Fall 2020 MLB4311 4311 Basic Hematology Lab MLB Medical Laboratory Science 1 Application of principles of hematology, including hematopoiesis, counting and identification of cells in the peripheral blood, and the use of cellular morphology to diagnose disease. This course has a fee that is non-refundable once the term begins. UB LB Lab
Fall 2020 PHY4610 4610 Intro to Quantum Mechanics II PHY Physics 3 Introduction to the theoretical foundations of quantum theory. The Schroedinger and Heisenberg formulations of the harmonic oscillator, the hydrogen atom, the theory of quantized angular momentum, and scattering. Hilbert space, operators, commutation relations, and the Heisenberg uncertainty principle are included. UB LE Lecture
Fall 2020 PHY6820 6820 Electromagnetic Th. II PHY Physics 4 Understanding of formal Electromagnetic Theory including application of multiple treatments in Electro- and Magnetostatics, applications of relativity, and application of Maxwell's equations to particular physical systems. GR LE Lecture
Fall 2020 NUR3460C 3460C Nursing Care of Children Clin NUR Nursing 0 Required clinical for NUR 3460. UB CL Clinical
Fall 2020 MUE9700 6970 Paul L Dunbar Chorale MUE Music: Ensembles 1 A choral ensemble for students who desire to explore the musical style of gospel music and its roots and various forms. Includes performances of a body of literature associated with the African American church to the university and surrounding communities. GR LL Lecture/Lab Combination
Fall 2020 REL5510 5510 Comp. Asian Mysticism REL Religion 3 Examination of the religious phenomena and category of mysticism in various Asian traditions including Daoism, Hinduism, and Buddhism (both early Indian Buddhism and Japanese Zen). Particular topics include: the nature of mystical and religious experience in general; the relationship between religious experience and other aspects of religions, such as religious practice; doctrine, and language; and the question of the univarsity of mystical experience. GR LE Lecture
Fall 2020 CEG9900 5900 Special Topics in CS CEG Computer Engineering 1 Selected topics in computer science. GR LE Lecture
Fall 2020 EDT7800 7800 JCT in Education EDT Educational Technology 3 Information and communication technology provides effective technology integration strategies to educators in the K-12 arena. Participants will be introduced to key technology skills and explore current and emerging practices in educational technologies. GR LE Lecture
Fall 2020 ART3670 3670 Berg Printing: Intaglio ART Art 3 Exploration of printingmaking intaglio method: etching, engraving, drypoint, aquatint, and liftgrounds. Use of black-and-white techniques and introduction to color printing. This course has a fee that is non-refundable once the term begins. UB LB Lab
Fall 2020 CHM5520L 5520L Physical Chem Lab II CHM Chemistry 2 Experimental methods of physical chemistry. GR LB Lab
Fall 2020 STT6110 6110 Applied Time Series STT Statistics 3 Stochastic models for discrete time series in the time-domain, moving average processes, autoregressive processes, model identification, parameter estimation, and forecasting. Statistical computing software packages are used. GR LE Lecture
Fall 2020 HST6830 6830 Topics in Gender History HST History 3 Intensive analysis of subjects in gender history. Topics may include masculinity, femininity, sexuality, family and women's history. Focus may be on one nation, region or comparative perspective. Topics vary. GR LE Lecture
Fall 2020 EES4510 4510 Scientific Communication EES Earth & Environmental Sciences 3 Fundamentals of effective scientific communication in written and conference presentation formats. Basics of good scientific prose, manuscript and figure preparation and submission, poster and platform presentations, job interviews, research proposals, and communication with non-scientists. Integrated Writing course. GR LE Lecture
Fall 2020 CS8910 8910 PhD Seminar in CS CS Computer Science 1 Seminar discussion of current research in computer science. GR SE Seminar
Fall 2020 GEO4460 4460 Transport Principles GEO Geography 3 Principles related to developing and managing public and human service transportation systems. Role of public and human service transportation in society; history and geography of public transportation; and spatial, funding, organizational, cost benefit, labor, and customer service issues. GR LE Lecture
Fall 2020 ECE7400 7400 Research in ECE Topics ECE Education - Early Childhood 3 Research topics, issues and trends in Early Childhood Education using qualitative and action research methods. GR LE Lecture
Fall 2020 KIN5340A 1340A Judo KIN Kinesiology & Health 1 Fundamental skills and knowledge of Judo. Competency-based approach. Course may accommodate disabled students when appropriate. UB LB Lab
Fall 2020 REL3790 3790 Topics in Greco-Rom Rels REL Religion 3 Examination of selected topics related to the practice of religion in the Greco-Roman world. Integrated Writing course. UB LE Lecture
Fall 2020 HPR2690 2690 Intro to Education HPR Health Phy Edu & Recreation 3 Orientation to the teaching profession and pluralistic American society as well as an awareness of the global community. UB LE Lecture
Fall 2020 CLS1010 1010 Medical Sci Terminology CLS Classics 3 Spelling, recognition, and understanding contemporary specialized medical and scientific vocabulary that is based on the Latin and Greek languages. Emphasis on terminology of the medical sciences. UB LE Lecture
Fall 2020 BME7380 7380 Near to Beh - Hlth & Dis BME Biomedical Engineering 3 The course presents the stretch reflex as an example of a neural circuit and how it mediates movement. Discussion of the neuronal components that form the stretch reflex circuit and how electrical signals are generated and processed in this circuit under normal and pathological conditions. GR LE Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Department</th>
<th>Notes</th>
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<td>BME7136</td>
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<td>Woman Inf Perspective</td>
<td>3</td>
<td>Women's, Gender, &amp; Sexual</td>
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</table>

Fall 2020

Under the direct supervision of an experienced classroom teacher, candidates are assigned to a school for leading the pupil personnel service aspects of school operation, including ethical considerations, special education requirements, student attendance and accounting, guidance, counseling, health and wellness, discipline, and extracurricular/curricular activities.

Develops a theoretical framework and working knowledge of the economic basis for government activity, government expenditures, programs, and policies, and the financing of government expenditures through taxation.

Provides students with an overview for designing and implementing ISE-focused solutions using R. Of interest are applications of operations research, specifically of probabilities, inventory models, simulation and optimization, forecasting, data analysis, and decision support system (GUI/HTML interface).

Planning structures, developing plans, and preparing analytical studies needed to make planning decisions. Solving social and economic problems using planning tools.

Overview of dance as a form of art and as entertainment. Exploration of styles, theories, and social and historical contexts of dance as a vital art in the world. Topics include a study of various dance genres, pop culture's influence on dance, reality television dance influences, and the life of a professional dancer and choreographer.

Offers a graduate-level anthropological perspective on human health by integrating biological and socio-cultural dimensions of health and illness in selected societies of the contemporary world and in the past.

Reading and discussion of selected works of Latin literature with emphasis on grammatical, rhetorical, literary, and cultural analysis and criticism. Topics vary.

Independent study designed to develop proficiency in technology, instrumentation, research design, and data analysis in an area of concentration (advanced curriculum) different from a student's area of specialization.

A course designed to give students a foundation in the language and style of modern Arabic media through the study of newspapers, magazines, TV and radio. Provides the student with an understanding of the role of Arabic media in Arab society.

A course that is designed to provide students with a comprehensive and up-to-date understanding of the causative and consequent issues of modern infectious diseases at levels from individual organisms to the globe. Integrated Writing course.

A course that is designed to provide students with a comprehensive and up-to-date understanding of the causative and consequent issues of modern infectious diseases at levels from individual organisms to the globe. Integrated Writing course.
Fall 2020
STT 6300  6300  Biostatistics  STT  Statistics  3  Statistical methods suitable for analysis of data arising in biological and related studies. Estimation and hypothesis testing are reviewed. Methods include one and two sample t-tests, simple and multiple regression, and analysis of variance. (Gr: Department Managed Prerequisite(s): Undergraduate level STT 2640 Minimum Grade of D-)(Gr: Independent Study)

Fall 2020
SM 1900  1990  Topics in Science & Math  SM  Science and Mathematics  1  Challenging opportunities for academically talented students to work in small study groups with university research professors in Mathematics, Biological Sciences, Chemistry, Geophysical Sciences, Physics and Psychology  UG  IS  Independent Study

Fall 2020
STT 5960  5960  Topics in Stat and Prob  STT  Statistics  1  May be taken for letter grade or pass/unsatisfactory. Titles vary.  GR  IS  Independent Study

Fall 2020
TH 1760  3760  Design Studio  TH  Theatre  2  Study of theatrical costume, scenery, lighting and/or sound design. Includes theoretical and practical design work with an emphasis in the area of interest.  UG  ST  Studio

Fall 2020
ED 7400  7400  MST Project Development  ED  Education  1  Assists graduate students in the Master of Science in Teaching (Earth Science) program to choose, develop and finalize a MST project proposal, choosing a faculty project committee and completing midpoint TK20 assignment.  GR  SE  Seminar

Fall 2020
EDS 2900  2900  Exceptionalities  EDS  Education - Special Education  3  Overview of historical and current legal, philosophical, and educational issues surrounding the definition, identification, causes, prevalence of specific exceptionalities, service delivery/placement options and multidisciplinary team process across education and community settings for K-12 students. Integrated Writing course.  UG  LE  Lecture

Fall 2020
PHY 3150  3150  Physics Instrumentation  PHY  Physics  3  Analog and digital electronics with an emphasis on use in the laboratory. Topics include linear devices and analysis, op-amps, the use of digital components including logic gates, counters, microcontrollers, and ADC/DAC.  UG  LL  Lecture/Lab

Fall 2020
MUE 4900  4900  University Chorus  MUE  Music: Ensembles  1  Development of choral and vocal skills. Choral literature from a wide range of historical and compositional styles. No audition required.  UG  LL  Lecture/Lab

Fall 2020
MUS 3720  3720  Composition II  MUS  Music  3  Creative writing that encompasses a variety of media and forms. Includes style exploration and the development of a personal style.  UG  LE  Lecture

Fall 2020
FAS 3310  3310  Animal Science Industry  FAS  Food and Agricultural Systems  3  Fundamentals of livestock production, including feeding and nutrition, reproductive physiology, selective breeding, health, management, and marketing of major and minor species. Current and projected business developments in the livestock industry.  UG  LE  Lecture

Fall 2020
EES 4380  4380  Seismic Interpretation  EES  Earth & Environmental Sciences  4  Principles of seismic reflection data interpretation, as well as pitfalls, are examined in the context of both structural styles and stratigraphic settings. The student will use industry-standard software packages.  UG  LL  Lecture/Lab

Fall 2020
CHM 8250  8250  Sel Topics in Inorganic  CHM  Chemistry  1  Selected topic in the field of inorganic chemistry, such as the reactions of substances in nonaqueous solvents, metal chelate compounds, inorganic reaction mechanisms, ligand field theory, or the chemistry of the lanthanides and actinides.  GR  LE  Lecture

Fall 2020
EES 2510L  2510L  Earth Systems Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 2510  UG  LB  Lab

Fall 2020
PHY 1000  1000  Undergrad Phy Seminar I  PHY  Physics  1  Provides undergraduate physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.  UG  SE  Seminar

Fall 2020
PHY 2460  2460  Concepts in Physics MCE  PHY  Physics  3.5  Fundamental concepts and applications of physics designed for middle childhood education majors. Topics are integrated with mathematics and include laboratory exercises, demonstrations, and projects. Students may use either PHY 2450 or PHY 2460, but not both courses, to satisfy the requirements of the WSU Core.  UG  LL  Lecture/Lab

Fall 2020
PSY 1740  4740  Space and Time Capacitive  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on space and time. Integrated Writing course.  UG  SE  Seminar

Fall 2020
EES 7090  7090  Perspectives in Env Sci  EES  Environmental Sciences  1  Explores current topics and contemporary research programs and ideas in Environmental Sciences.  GR  SE  Seminar

Fall 2020
HST 3400  3400  Studies Asian History  HST  History  3  Studies in Asian history, for example a survey of a sub-field or a specific topic. Topics vary.  UG  LE  Lecture

Fall 2020
URS 6210  6210  Pub. Leadership & Change  URS  Urban Affairs  3  Examines the leadership role of the public and nonprofit administrators in formulating programs, policies, and service delivery options. Explores topics such as managing internal and external environments, improving productivity and effectiveness, policy/program creation, and the dynamics of change.  GR  LE  Lecture

Fall 2020

Fall 2020
EES 6620  6620  Environmental Toxicology  EES  Earth & Environmental Sciences  3  Study of the effects of environmental contaminants on aquatic and terrestrial organisms. Effects on the biochemical and physiological levels are related to impacts on individuals, populations, and ecosystems. Current approaches for assessing environmental toxicity are presented.  GR  LE  Lecture

Fall 2020
PHY 7530  7530  Ultrastar Optics  PHY  Physics  3  The science and application of ultrastar optics. The theory of the generation, propagation, and application of ultrastar laser pulses. Nonlinear optics as related to ultrastar optics.  GR  SE  Seminar

Fall 2020
AVI 2000  2000  Intro to Aviation  AVI  Aviation  3  Introduction to aviation systems and careers: airlines, business, freight, flight test, and military flight operations.  UG  LE  Lecture

Fall 2020
BMS 7530  7530  Molecular Signalling  BMS  Biomedical Sciences  3  Also listed as BMB 7530. A molecular analysis of information transfer into and within cells.  GR  LE  Lecture

Fall 2020
MUS 2900  2900  African American Music  MUS  Music  3  Survey of the development of African American music from a historical, sociological, and cultural perspective. Analysis of the genres, influences, and impact on American and world culture. Integrated Writing course.  UG  LE  Lecture

Fall 2020
FIN 7240  7240  Sem in Corp. Finance  FIN  Finance  3  Advanced treatment of the theory and practice of long-term financial management. Topics include dividends, leasing, hybrid financing, derivatives and risk management, mergers and acquisitions, and divestitures.  GR  SE  Seminar

Fall 2020
EDS 4090  4090  Dyslexia Mtds & Assessment  EDS  Education - Special Education  3  Explore various assessments to administer, analyze, and interpret specifically for learners with dyslexia. Apply assessment knowledge and skills to a struggling learner to create a case study assessment report and plan for specific classroom accommodations.  GR  LE  Lecture

Fall 2020
IT 1120  1120  Adv Photo Des Sci  IT  Information Technology  3  Advanced photography techniques including image editing, output, workflow, advanced exposure, lighting techniques, and the shooting (GR: Department Managed Prerequisite(s): Undergraduate level IT 1210 Minimum Grade of D-)(Gr: Independent Study)}
The focus is on synthesis of theory and implementation of the role of the acute care nurse practitioner.

Fall 2020
- **EC7300** 7300 Regional & Urban Econ
  - **EC** Economics 3 Analysis of the basic forces that shape the economic, social, and physical environments of urban and nonurban regions. Emphasis on regional income determination and developmental models; location of economic activity, the structure of urban centers, intra-urban economic relationships, and economic policy.
  - **GR** Lecture

- **EE7520L** 7520L Low Par VL Sys Des Lab
  - **EE** Electrical Engineering 1 Required lab for EE 7520.<br>
  - **GR** Lecture/Lab

- **PSY4940** 4940 Animal Behavior Capstone
  - **PSY** Psychology 3 Communication-intensive seminar integrating knowledge on animal behavior. Topics will include evolution, natural and sexual selection, and mating systems. Integrated Writing course.
  - **UG** Seminar

- **BMS7210** 7210 Orthoped & Prosthet Eng
  - **BMS** Biomedical Sciences 3 The course enables the student to use engineering techniques in orthopaedic and prosthetic applications. Students also gain some of the human anatomy and terminology used by physicians and other practitioners so that they may become more literate and better able to communicate with the latter professions and to understand the literature in this field of biomechanics.
  - **GR** Lecture

- **ECE4020** 4020 ECE-Gen Lang Arts & SS
  - **ECE** Electrical Engineering 3 Pedagogy and content knowledge of content area reading through the study of grades 4 and 5 social studies.
  - **UG** Lecture

- **FAS2870** 2870 Practicum I
  - **FAS** Food and Agricultural Systems 1 Individual supervised learning experiences and in-site seminars under the direction of instructor and site staff.
  - **UG** Practicum

- **NUR7203** 7203 ACNP Practicum
  - **NUR** Nursing 6 The focus is on synthesis of theory and implementation of the role of the acute care nurse practitioner. Experiences emphasize clinical decision-making in an inter-professional environment with focus on the acute care practitioner as a principal provider of care for patients with acute or emergent health problems.
  - **GR** Seminar

- **EE2011** 2011 Analog Circuit Techniques
  - **EE** Electrical Engineering 3 Electrical quantities and their relationships, Impedance models of basic circuit elements, Conservation laws, leveraging algebraic solutions, Algebraic models of dynamic systems via transform calculus.
  - Intended for BSEEET majors. May not be taken for credit if students have taken EE 2010L.
  - **UG** Lecture

- **ANT3120** 3120 Human Structure Funct II
  - **ANT** Anatomy 4 Endocrine system, cardiovascular system, lymphatic system, respiratory system, and urinary system. Acid-base balance, fluid balance, reproductive system and digestive system. Laboratory exercises use human donors.
  - **UG** Lecture

- **CS2900** 2900 Spec Topics in Comp Sci
  - **CS** Computer Science 1 Special Topics in Computer Science.
  - **UG** Lecture

- **CEG3310** 3310 Computer Organization
  - **CEG** Computer Engineering 4 Organization and sequential operation of digital computers. Binary and hexadecimal number systems, 2's complement arithmetic, program control, memory organization and hierarchy, addressing modes, stacks and parameter passing, interrupts and traps, I/O devices, DMA, cache, and virtual memory.
  - **UG** Lecture

- **FAS5120** 5120 Agriculture Laws
  - **FAS** Food and Agricultural Systems 3 Study of the U.S. legal system and areas of law that relate to agriculture and agribusiness. Topics include contracts, torts and civil liability, property, business organizations, environmental issues, and other relevant topics.
  - **UG** Lecture

- **ART3660** 3660 Big Printing: Relief
  - **ART** Art 3 Exploration of printmaking, stressing relief methods using wood and linoleum. Exploration of aesthetic possibilities of the media. This course has a fee that is non-refundable once the term begins.<br>
  - **DB** Department Managed Prerequisite(s): Undergraduate level ART 2280 Minimum Grade of D and Undergraduate level ART 2280 Minimum Grade of D.<br>
  - **UG** Lecture/Lab

- **IT2400** 2400 Employ Portfolio Dev
  - **IT** Information Technology 2 Development of effective job strategies including application forms, cover letters, and resumes. Development of a multimedia portfolio.
  - **UG** Lecture/Lab

- **CS6290** 6290 Cryptography Data Secure
  - **CS** Computer Science 3 Mathematical principles of cryptography and data security. Preliminary algebra and number theory will be briefly introduced. Various developments in cryptography will then be discussed, including the data encryption standard (DES), public-key encryption (RSA), cryptographic hash functions, digital signatures, key safeguarding schemes, and cryptographic protocols such as key exchange and entity authentication, identification schemes, electronic signatures and digital cash.<br>
  - **GR** Lecture

- **NUR4800** 4800 Transition Role Prof Nur
  - **NUR** Nursing 3 Synthesis of concepts, theories, processes, issues of informatics, and models to facilitate transition into professional nursing.
  - **UG** Lecture

- **HST4300** 4300 African History
  - **HST** History 3 Examine particular periods, regions, or countries in African history. Topics vary. Integrated Writing course.
  - **UG** Lecture

- **PTX260** 260 Microbiology & Immunology
  - **PTX** Pharmacology/Toxicology 4 Fundamentals of immunobiology and basic virology. Emphasis on the regulatory and cellular level of host immune responses against microbial pathogens, as well as mechanisms of immunopathology, and on the characteristics and molecular biology of viral pathogens.
  - **GR** Lecture

- **EE7560** 7560 Advanced Robotics
  - **EE** Electrical Engineering 3 Detailed study of the dynamics and control of robotic systems and robot programming languages and systems. Material covered includes rigid-body dynamics, linear, nonlinear, adaptive, and force control of manipulators; and robot programming languages. Sensors, low-level and higher level vision techniques, task planning including obstacle avoidance and artificial intelligence and expert systems as applied to robotic systems.<br>
  - **GR** Lecture
An exploration of biological variation in contemporary human populations and an examination of the genetic, physical, and cultural foundations of human biological diversity. Reviews selected population adaptations to specific environmental conditions. Emphasis on the interaction of biology and culture in human variation and adaptation. Considers the link between human variation science and U.S. society and culture.

This course will apply the 0th, 1st, 2nd, and 3rd laws of thermodynamics, as well as conservation of mass, to a systems, jobs, tools, and environments.

Managed Prerequisite(s): (Undergraduate level ME 1020 Minimum Grade of C and Undergraduate level ME 1020 Minimum Grade of D or Graduate level ENG 4710 Minimum Grade of D or Graduate level ENG 6710 Minimum Grade of D) or (Graduate level EDS 6420 Minimum Grade of D or Graduate level EDS 6240 Minimum Grade of D or Graduate level ENG 6710 Minimum Grade of D and Graduate level ED 6050 Minimum Grade of D and Graduate level ED 6040 Minimum Grade of D and Graduate level ED 6050 Minimum Grade of D or (Graduate level EDS 6540 Minimum Grade of D or Graduate level EDS 6540 Minimum Grade of D or Graduate level EDS 6540 Minimum Grade of D). Department Managed Prerequisite(s): (Undergraduate level ENG 4710 Minimum Grade of D or Graduate level ENG 6710 Minimum Grade of D or Graduate level ENG 6710 Minimum Grade of D). Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C

Part one of a two-sequence course addressing infant through adolescent development; therapeutic interventions; psychological, social, and economic influences; cognitive, socioemotional, and physical foundations of human biological diversity. Reviews selected population adaptations to specific environmental conditions. Emphasis on the interaction of biology and culture in human variation and adaptation. Considers the link between human variation science and U.S. society and culture.

This course explores research and concepts of spatial knowledge acquisition, processing and use. Relevant theories will be reviewed and critically evaluated from contemporary and historical perspectives. Importance and potential applications of spatial processing for human factors applications will be considered.

This course introduces polymers as engineering materials and covers fundamental concepts in polymer science and engineering. This includes polymerization processes morphology and crystallinity, thermal transitions, viscoelasticity, rubber elasticity, aging and contemporary issues in polymers. Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C.

This course will apply the 0th, 1st, 2nd, and 3rd laws of thermodynamics, as well as conservation of mass, to a range of classical thermodynamic systems and phenomena. These include power and refrigeration cycles, gas mixtures, ideal vapor-gas mixtures, air conditioning, combustion, and chemical equilibrium. Department Managed Prerequisite(s): (Undergraduate level ME 1020 Minimum Grade of C and Undergraduate level ME 3310 Minimum Grade of C). Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C.

This course is designed for students who are considering a career in clinical psychology. It provides a theoretical foundation for the study of second language acquisition, including awareness of first language acquisition. Builds awareness of cultural similarities and differences and addresses the impact of cultural and personal variables on English language learning. Department Managed Prerequisite(s): (Graduate level EDS 6540 Minimum Grade of D and Graduate level EDS 6540 Minimum Grade of D). Department Managed Prerequisite(s): (Graduate level EDS 6540 Minimum Grade of D or Graduate level EDS 6540 Minimum Grade of D). Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C.

There is no course description available for this course.

This course will apply the 0th, 1st, 2nd, and 3rd laws of thermodynamics, as well as conservation of mass, to a range of classical thermodynamic systems and phenomena. These include power and refrigeration cycles, gas mixtures, ideal vapor-gas mixtures, air conditioning, combustion, and chemical equilibrium. Department Managed Prerequisite(s): (Undergraduate level ME 1020 Minimum Grade of C and Undergraduate level ME 3310 Minimum Grade of C). Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C or Graduate level ME 2700 Minimum Grade of C.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Discipline</th>
<th>Credits</th>
<th>Description</th>
<th>Grade</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT7660</td>
<td>Creative &amp; Innovative</td>
<td>MGT Management</td>
<td>3</td>
<td>This is a course designed to make you start thinking differently about your organizational life. It is intended to make you think differently about yourself, those with whom you work, and the organizational environment in order to facilitate increased creativity and innovation. The course is built around three main themes: personal reflection and improvement, enhancing individual creativity, and managing people and organizations for creativity and innovation.</td>
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</tr>
<tr>
<td>REL3120</td>
<td>Modern Jewish Thought</td>
<td>REL Religion</td>
<td>3</td>
<td>Major themes and issues in the works of contemporary Jewish thinkers (e.g., Borowitz, Herberg, Fackenheim, Kaplan, Rothschild, Heusel, Rubenstein, and Weisel).</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>FIN3160</td>
<td>Foundations of Fin Plan</td>
<td>FIN Finance</td>
<td>3</td>
<td>Basic concepts and techniques of financial planning from the perspective of a professional financial planner.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>POLS4030</td>
<td>Pol. Developing Nations</td>
<td>POLS Political Science</td>
<td>3</td>
<td>Exploration of politics, economy, society, and international relations of developing nations.</td>
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<td>Lecture</td>
</tr>
<tr>
<td>EES6120</td>
<td>Earth Materials</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>4</td>
<td>This course provides an understanding of the minerals and rocks that make up the solid earth, their significance and uses. Based upon the 'rock cycle' the minerals studied include the rock-forming minerals as well as their weathered products. The laboratory focuses upon the identification and classification of minerals and rocks in hand specimen.</td>
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<tr>
<td>BIO4720L</td>
<td>Ornithology Lab</td>
<td>BIO Biology</td>
<td>0</td>
<td>Required laboratory for BIO 4720.</td>
<td></td>
<td>Lab</td>
</tr>
<tr>
<td>ENG4780</td>
<td>Studies TESOL Education</td>
<td>ENG English</td>
<td>3</td>
<td>Focus on theoretical issues and practical problems of teaching English to speakers of other languages (TESOL). Minimum Grade of D in Undergraduate level ENG 3400 Minimum Grade of D or Undergraduate level ENG 4710 Minimum Grade of D or &lt;b&gt;Minimum Grade of D&lt;/b&gt;.</td>
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<tr>
<td>EDT7720</td>
<td>Developing Multimedia</td>
<td>EDT Educational Technology</td>
<td>3</td>
<td>Students use elements of instructional design and storyboard techniques to translate instruction into various types of multimedia presentations.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>ED6410</td>
<td>Reading Recovery II</td>
<td>ED Education</td>
<td>3</td>
<td>Teachers deepen their understanding of Clay’s literacy processing theory through contingent instruction based on student data while teaching Reading Recovery students. Key concepts include teaching for pleasurable, fluent processing and flexible problem solving.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>HST7850</td>
<td>Archival Preservation</td>
<td>HST History</td>
<td>3</td>
<td>An introduction to the basics of archival preservation. Topics include components of a preservation program, factors affecting preservation, archival environments, handling and use of materials, appropriate housing and storage, reformatting options, exhibit and display considerations, disaster preparedness, and security guidelines.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>KNH1120A</td>
<td>Canoning</td>
<td>KNH Kinesiology &amp; Health</td>
<td>1</td>
<td>Fundamental skills and knowledge of Canoning. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.</td>
<td></td>
<td>Lab</td>
</tr>
<tr>
<td>SW4810</td>
<td>Social Work Practice II</td>
<td>SW Social Work</td>
<td>3</td>
<td>Develops a framework for understanding micro-inclusive practice interventions with individuals and families. Integrated Writing course. Minimum Grade of D in Undergraduate level SW 3700 Minimum Grade of D and Undergraduate level SW 3700 Minimum Grade of D and Undergraduate level SW 3800 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D or &lt;b&gt;Minimum Grade of D&lt;/b&gt;.</td>
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<tr>
<td>FMS3310</td>
<td>Intro to Film Studies</td>
<td>FMS Film &amp; Media Studies</td>
<td>3</td>
<td>Examine critical approaches of authorship, genre, presentation, and narrative, with an emphasis on the language of cinema, basic film concepts, techniques, and terminology. Topics include spectactorship, ideology, social and political context, celebrity culture, aims of meaning, and modes of criticism.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>ME4900</td>
<td>Capstone Design in ME I</td>
<td>ME Mechanical &amp; Materials Engineering</td>
<td>3</td>
<td>First of a two-course sequence affording students an experience in the methodology of solving realistic engineering design problems. Both courses require research of professional literature, application of systems engineering principles, and reporting of technical results. The student becomes acquainted with the demands of initiative, knowledge, intuition, and resourcefulness required for the successful solution of interdisciplinary open ended engineering problems. Integrated Writing course.</td>
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<tr>
<td>PSY4730</td>
<td>Hearing Capstone</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on the perception of hearing. Integrated Writing course.</td>
<td></td>
<td>Seminar</td>
</tr>
<tr>
<td>ART3970</td>
<td>Intro to Museum Studies</td>
<td>ART Art</td>
<td>3</td>
<td>History, purposes, and literature of museums and galleries. Various aspects of gallery management, such as planning, organizing, and installing exhibitions. Integrated Writing course. Minimum Grade of D in Undergraduate level ART 2110 Minimum Grade of D and Undergraduate level ART 2120 Minimum Grade of D or &lt;b&gt;Minimum Grade of D&lt;/b&gt;.</td>
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<tr>
<td>EDL9990</td>
<td>Thesis</td>
<td>EDL Educational Leadership</td>
<td>3</td>
<td>Research for thesis in Educational Specialist Program.</td>
<td></td>
<td>Independent Study</td>
</tr>
<tr>
<td>PSY4330</td>
<td>Personality Psych Cap</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on personality, including theory, research, and application. Integrated Writing course.</td>
<td></td>
<td>Seminar</td>
</tr>
<tr>
<td>KNH7400</td>
<td>Admin-Interscholastic Ath</td>
<td>KNH Kinesiology &amp; Health</td>
<td>3</td>
<td>Ways of directing interscholastic athletic programs. Emphasis on personnel administration, program development, facility management, fiscal management, and winning community and professional support.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>KNH7410B</td>
<td>Volleyball</td>
<td>KNH Kinesiology &amp; Health</td>
<td>1</td>
<td>Fundamental skills and knowledge of Volleyball. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td></td>
<td>Lab</td>
</tr>
<tr>
<td>ED4180</td>
<td>Assess for Mid Child Ed</td>
<td>ED Education</td>
<td>3</td>
<td>Focus on varying assessment techniques and strategies (teacher-created and standardized) utilized in middle level education. Students will read, analyze and interpret assessment data to modify instruction and promote student success.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>PHS8801</td>
<td>Professional Development</td>
<td>PSI Professional Psychology</td>
<td>1</td>
<td>Issues relevant to students’ development as professional psychologists including professional involvement, legal and legislative issues, professional ethics and standards, and relations with other professional groups.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>FAS2500</td>
<td>Food Chem and Analysis</td>
<td>FAS Food &amp; Agricultural Systems</td>
<td>3</td>
<td>Chemistry of various food components, and methods of analysis.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>APS4030</td>
<td>APS Finance</td>
<td>APS Applied Studies</td>
<td>3</td>
<td>A course to provide opportunities for students to gain knowledge, practice, and study in financial management. Focus on financial management concepts such as financial goal setting, financial statements, financial analysis, credit, insurance, and financial tools.</td>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>MLB4820</td>
<td>Ads Immunohematology</td>
<td>MLB Medical Laboratory Science</td>
<td>2</td>
<td>Advanced topics in transfusion medicine, including immune hemolytic anemia, paternity testing, component therapy, HLA antigens, quality assurance and the role of regulatory agencies in the practice of transfusion medicine.</td>
<td></td>
<td>Lecture</td>
</tr>
</tbody>
</table>
Fall 2020  ED6940  6940  Cont Sem: AYA/ILA  ED  Education  3  Seminar accompanying Adolescent and Young Adult Internship focusing on pedagogical content knowledge in Integrated Language Arts, assessment of the National Council of Teachers of English (NCTE) standards and the completion of the professional portfolio.

Fall 2020  CEG7080  7080  CMOS Mod Sig IC Des  CEG  Computer Engineering  3  Introduction to the techniques, limitations, and problems in the design of CMOS analog integrated circuits. Topics include: CMOS analog circuit modeling and device characterization; analog CMOS subcircuits, CMOS amplifiers, CMOS comparators, and CMOS Op Amps; CMOS Analog to Digital Converters, and CMOS Digital to Analog Converters, and Switched Capacitor Circuits.  0  Department Managed Prerequisite(s): (Undergraduate level EE 4540 Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D).  0  Department Managed Prerequisite(s): Undergraduate level CEG 4120 Minimum Grade of D or (Graduate level CEG 6120 Minimum Grade of D)

Fall 2020  SW6450  6450  Con Foc Older Ad Pract  SW  Social Work  0  Provides students with understanding of advanced generalist practice with older adults. Utilizes life course perspective incorporating cultural, economic, historical and structural contexts to examine aging-related issues, particularly the impact on quality of life of older adults.

Fall 2020  IT1010  1010  Graphic Terminology/Design  IT  Information Technology  3  Desktop publishing and graphic terminology used in today's graphics communications, and principles of design in printed media. Trends, history and ethics in print media.

Fall 2020  PHY6620  6620  Nucl. & Particle Phys.  PHY  Physics  3  Nuclear radiation, nuclear properties, nuclear transformations, and elementary particles and interactions. Relativistic energy relationships.

Fall 2020  ART3010  5010  Independent Study in Art  ART  Art  1  Special studies for qualified students. Intensive individually directed work in art with faculty consultation and supervision.

Fall 2020  GEO4000  4000  Climate Meteorology  GEO  Geography  3  Clouds, humidity, precipitation, winds, fronts, forecasting, and climate examination. Emphasis on complex processes creating severe weather and climate change.

Fall 2020  ABS7604  7604  Sem Social Problems  ABS  Applied Behavioral Science  1  In-depth coverage of special topics in applied behavioral science/social problems. Topics vary. 1-2 credit hours.

Fall 2020  MLI2020  2020  Chinese Culture in Film  ML  Modern Languages  3  Chinese culture and traditions in films, with special emphasis on issues related to nationhood, modernity, education, gender roles, family values, equality, and globalization.

Fall 2020  EE4990  4990  Special Problems in EE  EE  Electrical Engineering  1  Special problems in advanced engineering. Topics vary.

Fall 2020  MUE9940  9940  Univ Women's Chorus  MUE  Music: Ensembles  1  Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

Fall 2020  DOS9090  9090  Adv Rorch Methods II  DOS  Doctor Org Studies  3  Developing research techniques in basic and inferential statistics using statistical computing software and critical interpretation of social sciences research design and analysis.

Fall 2020  ED7870  7870  C&D DESGN FOR PBL  ED  Education  3  This course provides students (teachers and leaders) with foundational background in the design and implementation of Project Based Learning (PBL) in K-12 classrooms.

Fall 2020  MTH6320  6320  Real Variables II  MTH  Mathematics  3  Infinite series, sequences and series of functions, power series, Taylor series, uniform convergence, topology of R^n, real-valued and vector-valued functions of several variables, derivatives and integrals of functions of several variables (department managed prerequisite(s): Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level MTH 4310 Minimum Grade of D or Graduate level MTH 6310 Minimum Grade of D).

Fall 2020  SCM3330  3330  Planning for SCM  SCM  Supply Chain Management  3  Planning and control of productive activities in supply chains: planning of inventories and production quantities. Management of physical and information flows and control information systems.

Fall 2020  KNH1000  1000  PE for Chdrm w/Spec Need  KNH  Kinesiology & Health  3  Provides an overview of the etiological, physical, and psychological considerations of disabilities in an education setting. This course contains methods of adapting activities in physical education for individuals with disabilities.

Fall 2020  EED4990  4990  Internsh II: Stud Teach  EED  Elementary Education  1  Field experience student teaching placement in a P-5 setting.

Fall 2020  PSY9020  9020  Manual Control  PSY  Psychology  3  Description of human control processes and their models. Analyses of human skills and skill typology.

Fall 2020  CTE7300  7300  Review in CTE  CTE  Career and Technical Education  3  Review of current and historical research articles, research writing and APA style. Candidates will develop and complete a masters inquiry project that will impact teaching and undergo an exit exam.

Fall 2020  BMB4230  4230  Biochem & Mol Bio II  BMB  Biochemistry & Molecular Biology  3  Biosynthetic and biodegradative metabolism with emphasis on the molecular events leading to the regulation of metabolism. Covers the chemistry which enables cells to generate energy for life-sustaining processes and the role of biological membranes in this process. Includes control and regulation of metabolic processes at the molecular level.

Fall 2020  ME4120  4120  Finite Element Analysis  ME  Mechanical and Materials Engineering  3  Fundamentals of finite element analysis as a general numerical method for the solution of boundary value problems in engineering, with emphasis on structural and solid mechanics.  0  Department Managed Prerequisite(s): Undergraduate level MTH 2120 Minimum Grade of D and (Undergraduate level MTH 2130 Minimum Grade of D or Undergraduate level MTH 2310 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D) and Undergraduate level ME 3120 Minimum Grade of D.  0  Department Managed Prerequisite(s): Undergraduate level MTH 2120 Minimum Grade of D or (Graduate level ME 6120 Minimum Grade of D and Graduate level ME 6130 Minimum Grade of D).

Fall 2020  MBA5800  5800  Survey Quan Bus Analysis  MBA  MBA  3  Survey of quantitative techniques relevant to private and public sector resource allocation, production, and management decision problems, including linear programming, queueing analysis, and decision theory. Emphasis on mathematical modeling and interpretation of solutions.

Fall 2020  PS1100  1100  Social Psychology  PSI  Professional Psychology  3  Presents theories and experimental findings regarding determinants of social behavior, including social motivation, attribution theory, perception of people, attitude theories, group processes, interpersonal attraction, and environmental determinants of behavior.  0  Department Managed Prerequisite(s): (Graduate level PSY 5100 Minimum Grade of D or Graduate level PSY 5200 Minimum Grade of D)

Fall 2020  BIO2200  2200  Microbiology-Human Env  BIO  Biology  4  Biology of viruses, bacteria, fungi, protozoans, and helminths as related to their natural environments and host-parasite interaction. Introductory course for students in environmental health, nursing, and patient-oriented paramedical health professions. Three hours lecture and two hours lab.

Fall 2020  ABS7602  7602  Sem Crim Just System  ABS  Applied Behavioral Science  1  In-depth coverage of special topics in applied behavioral science/criminal justice with special emphasis on the criminal justice system and its components. Topics vary on law, crime, police, courts, corrections, etc. 1-2 credit hours.
<table>
<thead>
<tr>
<th>CRN</th>
<th>Course Title</th>
<th>Department or Field</th>
<th>Credits</th>
<th>Mode</th>
<th>Schedule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8020</td>
<td>Immunology</td>
<td>BMS Biomedical Sciences</td>
<td>4</td>
<td>GR</td>
<td>Lecture</td>
<td>(Also listed as M&amp;I 7260.) Fundamentals of immunobiology and basic virology. Emphasis on regulatory and cellular level of host immune responses against microbial pathogens as well as mechanisms of immunopathology, and on the characteristics and molecular biology of virus pathogens.</td>
</tr>
<tr>
<td>8000</td>
<td>Graduate Seminar</td>
<td>MTH Mathematics</td>
<td>1</td>
<td>SE</td>
<td>Seminar</td>
<td>Seminar on selected advanced topics in mathematics.</td>
</tr>
<tr>
<td>6900</td>
<td>Workshops in Education</td>
<td>ED Education</td>
<td>0.5</td>
<td>LE</td>
<td>Lecture</td>
<td>Workshops in selected areas of education taught through the Division of Professional Development (DPD) for educational leadership.</td>
</tr>
<tr>
<td>6820</td>
<td>Supp Ch Analy &amp; Des</td>
<td>IHE Industrial &amp; Hum Fac Engr</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Provides fundamental understanding of supply chain systems and their structure. Techniques for analysis and design of the components and interactions including forecasting, inventory, warehouse operations &amp; location, transportation and contemporary issues. Department Managed Prerequisite(s): Graduate level MHE 6711 Minimum Grade of D-.</td>
</tr>
<tr>
<td>7990</td>
<td>Independent Study in BME II</td>
<td>BME Biomedical Engineering</td>
<td>1</td>
<td>IS</td>
<td>Independent Study</td>
<td>Graduate independent studies in advanced biomedical engineering. Topics vary.</td>
</tr>
<tr>
<td>9730</td>
<td>Perspectives on Educ</td>
<td>EDL Educational Leadership</td>
<td>3</td>
<td>SE</td>
<td>Seminar</td>
<td>Examines leadership, curriculum, and instruction in a rapidly evolving global and technological world from a district level perspective.</td>
</tr>
<tr>
<td>2360</td>
<td>Food Plant San and HACCP</td>
<td>FAS Food and Agricultural Systems</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Principles and practices required to keep the food plant free from potential hazards to human health. Students will learn how to develop and maintain a food safety hazard analysis and critical control points (HACCP) plan.</td>
</tr>
<tr>
<td>4410</td>
<td>Phy Gen Nat Hist Ohio</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>2</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td>Field trip courses examining the landforms, processes, and deposits associated with Pleistocene continental glaciation, as well as subsequent post-glacial terrain modification. The course involves 1 day of lecture/lab and 4 one-day field trips.</td>
</tr>
<tr>
<td>4540</td>
<td>Spanish V</td>
<td>YH Theatre</td>
<td>2</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td>Emphasis on learning dialects.</td>
</tr>
<tr>
<td>8900</td>
<td>Practicum II: Principal</td>
<td>EDL Educational Leadership</td>
<td>1</td>
<td>IN</td>
<td>Internship</td>
<td>Provides experience in school administration. Candidates perform administrative tasks under the supervision of a licensed school administrator.</td>
</tr>
<tr>
<td>6020</td>
<td>Lang Dev/Syst Soc Skl</td>
<td>EDS Education - Special Education</td>
<td>3</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td>Examines communicative needs for individuals with Autism Spectrum Disorder (ASD). Assesses communicative and social norms to determine skill gaps to develop intervention targets. Explores evidence supporting prominent communication interventions for students with ASD.</td>
</tr>
<tr>
<td>7040</td>
<td>Design Optimization</td>
<td>EGR Engineering</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Concepts of minimax and maximax; linear, dynamic and nonlinear programming; variational methods. Interdisciplinary engineering applications are emphasized.</td>
</tr>
<tr>
<td>5120</td>
<td>Modern Jewish Thought</td>
<td>REL Religion</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Examination of the major themes and issues in the works of contemporary Jewish thinkers (e.g., Buber, Herberg, Fackenheim, Kaplan, Rothchild, Heschel, Rubenstein, and Weisel).</td>
</tr>
<tr>
<td>4990</td>
<td>Special Problems Biology</td>
<td>BIO Biology</td>
<td>1</td>
<td>IS</td>
<td>Independent Study</td>
<td>Independent laboratory study course.</td>
</tr>
<tr>
<td>2320</td>
<td>Publication Design</td>
<td>IT Information Technology</td>
<td>3</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td>Introduces current print media environment and unique challenges encountered with communication when designing for books, magazines, newspapers, promotional literature, and other types of print publications. Department Managed Prerequisite(s): Undergraduate level IT 1400 Minimum Grade of D-.</td>
</tr>
<tr>
<td>5000</td>
<td>APS Technologies</td>
<td>APS Applied Studies</td>
<td>3</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td>This course introduces technologies relating to the business environment. The main focus is on business and technical applications of software, operating systems, communication and networks, computer security and safety, ethics, privacy and other current topics.</td>
</tr>
<tr>
<td>7550</td>
<td>Sustain Pract Lif&amp;Hlth Prof</td>
<td>SAA Student Affairs in Higher Ed</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Course focuses on practical application of resilience-related techniques to increase wellness in an effort to mitigate or prevent anxiety, depression and burnout. The approach is grounded in positive psychology, existentialism, cognitive-behavioral therapy, and mindfulness.</td>
</tr>
<tr>
<td>3000</td>
<td>Internship in CJ/Family</td>
<td>SOC Sociology</td>
<td>3</td>
<td>IN</td>
<td>Internship</td>
<td>Supervised field experience in criminal justice and family agencies. Requires readings, activity log, progress report, and final synthesis paper. Must be prearranged with departmental internship coordinator at least one term prior to placement.</td>
</tr>
<tr>
<td>7904</td>
<td>Instruct Practices in Math</td>
<td>ED Education</td>
<td>1</td>
<td>SE</td>
<td>Seminar</td>
<td>Centers on the effective implementation of various mathematical instructional practices, the evidence behind the practices, and their practical application in PK-12 classrooms.</td>
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<tr>
<td>3330</td>
<td>Personality Research Meth</td>
<td>PSY Psychology</td>
<td>4</td>
<td>LE</td>
<td>Lecture</td>
<td>Survey of research methods appropriate to personality assessment and analysis. Laboratory experience in the development, implementation, and analysis of a research project focused on an issue in personality psychology. Integrated Writing course.</td>
</tr>
<tr>
<td>1060A</td>
<td>Backpacking</td>
<td>KNH Kinesiology &amp; Health</td>
<td>1</td>
<td>LB</td>
<td>Lab</td>
<td>Fundamental skills and knowledge of Backpacking. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>4800</td>
<td>Conservation Biology</td>
<td>BIO Biology</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>The goal of this class is to provide you an entry into the field of conservation biology. Since conservation biology is an interdisciplinary field, we will touch upon topics from many disciplines, such as biology-related ecology, genetics, statistics, botany, zoology, biogeography, but also social studies, economics, and political science. As an applied science, conservation biology necessarily works within the fault lines between pure science that attempts to be value-free and objective, and management that attempts to balance the needs and ideologies of all stakeholders and may even employ advocacy that attempts to influence the public and decision makers using the best knowledge and techniques available. Given the two challenging aspects of this class, namely interdisciplinary and applied nature, the format will also be unusual, blending traditional lecture-style instruction with class discussion, activities and projects. Examination of the scientific theory and applied research focused on the sustained preservation of global biodiversity.</td>
</tr>
<tr>
<td>3500</td>
<td>Spanish Ambassador Prog</td>
<td>SPN Spanish</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Profesor-led study abroad program in a Spanish-speaking country, such as Mexico, Puerto Rico, Spain, etc. Taught in Spanish. Department Managed Prerequisite(s): Undergraduate level SPN 2020 Minimum Grade of D-.</td>
</tr>
<tr>
<td>7800</td>
<td>Ethics &amp; Politics in Edu</td>
<td>EDL Educational Leadership</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Developing an understanding of potential structures and effective principles of school/community relations. Concepts of power, pressure groups, lobbying, potential networks, and public ethics are examined.</td>
</tr>
<tr>
<td>4650</td>
<td>Physical Polymer Chem</td>
<td>CHM Chemistry</td>
<td>2</td>
<td>LE</td>
<td>Lecture</td>
<td>Structural and physical aspects of macromolecules. Emphasizes the relationship of polymer structure to physical and mechanical properties.</td>
</tr>
<tr>
<td>7100</td>
<td>Quantum Mechanics I</td>
<td>PHY Physics</td>
<td>3</td>
<td>LE</td>
<td>Lecture</td>
<td>Principles of non-relativistic quantum mechanics, Schroedinger's equation and matrix mechanics. Faculty with applications to atomic, molecular, nuclear, solid state, spin, and biological systems.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Section</td>
<td>Title</td>
<td>Department</td>
<td>Credits</td>
<td>Description</td>
<td></td>
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<tr>
<td>BMS7370</td>
<td>7370</td>
<td>Thermodynamics</td>
<td>BMS</td>
<td>2</td>
<td>Fundamentals of chemical thermodynamics; first, second, and third laws; applications to solutions.</td>
<td></td>
</tr>
<tr>
<td>AED6780</td>
<td>6780</td>
<td>MA: Visual Arts &amp; C&amp;M II</td>
<td>AED</td>
<td>3</td>
<td>Theoretical/practical methods of teaching multi-age visual arts. Integration of artistic and educational ideas into creative programs as a continuum of issues/skills for the developing art educator with mentorship by master teachers.</td>
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</tr>
<tr>
<td>TH2100</td>
<td>2100</td>
<td>Theatre Technology</td>
<td>TH</td>
<td>2</td>
<td>Participation in the operation of a production shop. Fundamentals of theatre technology, emphasizing basic processes and materials. Participation in selected department productions required.</td>
<td></td>
</tr>
<tr>
<td>CLS3400</td>
<td>3400</td>
<td>Art and Archaeology</td>
<td>CLS</td>
<td>3</td>
<td>Greece in the Bronze Age, classical Greece and Rome; and selected areas of Greek and Roman art and archaeology. Integrated Writing course.</td>
<td></td>
</tr>
<tr>
<td>MUS6200</td>
<td>6200</td>
<td>Opera Prod and Coaching</td>
<td>MUS</td>
<td>2</td>
<td>Production of opera, public performance and individual coaching. For advanced singers. At the discretion of the instructor course requirements may include participation in Dayton Opera productions.</td>
<td></td>
</tr>
<tr>
<td>FAS5500</td>
<td>5500</td>
<td>Animal Nutrition</td>
<td>FAS</td>
<td>3</td>
<td>Introduction to animal nutrition covering all aspects of nutrition for domestic animals from fundamentals of nutrition through feed and feeding (digestion, absorption, assimilation, and utilization of nutrients, basic balancing of rations, and identification of feedstuffs).</td>
<td></td>
</tr>
<tr>
<td>ME4590</td>
<td>4590</td>
<td>Adv. Clean Coal Tech.</td>
<td>ME</td>
<td>3</td>
<td>Historical perspective on coal; sources of coal in the world; future dependence on coal for energy; power production using coal; general process description; principles of combustion, conventional combustion reactors, environmental impact; fluidized bed reactors, process improvements in minimizing emissions; future innovations in clean coal technology. Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D- or concurrent.</td>
<td></td>
</tr>
<tr>
<td>HED2330</td>
<td>2330</td>
<td>Human Sexuality for Educ</td>
<td>HED</td>
<td>3</td>
<td>Develops a depth of sexuality knowledge and related teaching competencies of K-12 teachers. Emphasis is placed on the biological, psychological, and sociological aspects of adolescent and young adult sexuality and application of the National Health Education Standards.</td>
<td></td>
</tr>
<tr>
<td>BBO3920</td>
<td>3920</td>
<td>Dept Honors Seminar</td>
<td>BBO</td>
<td>1</td>
<td>Preparation you for designing honors project. Focus on aspects of research design, literature review, and communication of results. Students will receive detailed guidance in writing the proposal and will present some aspect of the honors project.</td>
<td></td>
</tr>
<tr>
<td>EES6470</td>
<td>6470</td>
<td>Astronomy K-12 Teachers</td>
<td>EES</td>
<td>2</td>
<td>Introduction to astronomy and the space sciences from the viewpoint of the amateur astronomer. Emphasizes both aesthetic and scientific aspects, and the amateur's enthusiasm for the subject.</td>
<td></td>
</tr>
<tr>
<td>ASL4101</td>
<td>4101</td>
<td>Aspects of Deaf Life</td>
<td>ASL</td>
<td>3</td>
<td>Psychosocial aspects of deafness, examining the development and functioning of deaf persons, including intellectual functioning, personality issues, personal/social adjustment issues, and family dynamics. A historical and sociological perspective on the evolution from a pathological view of deaf people to a cultural one.</td>
<td></td>
</tr>
<tr>
<td>PLS6820</td>
<td>6820</td>
<td>State Legal Internship</td>
<td>PLS</td>
<td>3</td>
<td>Students work for a state legislator in Columbus two days per week. They report weekly to the faculty instructor and write an assessment of the experience at the end of the assignment.</td>
<td></td>
</tr>
<tr>
<td>EST7020</td>
<td>7020</td>
<td>Biogeochemical Cycles</td>
<td>ES</td>
<td>3</td>
<td>This course examines the how components of Earth (biosphere, hydrosphere, lithosphere, atmosphere) interact to affect how elements cycle through and between these components. This understanding forms the basis of the field of biogeochemistry. Topics include feedback loops, weathering, biological cycles, processes, nutrient cycling, gas fluxes, and how humans have modified Earth's biogeochemistry.</td>
<td></td>
</tr>
<tr>
<td>EDD120</td>
<td>7120</td>
<td>Lit Inst Div Learners</td>
<td>ED</td>
<td>3</td>
<td>Developing knowledge of a wide variety of children’s literature. Demonstrate understanding of how to use diverse texts as an instructional tool to meet the needs of a diverse culture.</td>
<td></td>
</tr>
<tr>
<td>CTE6990</td>
<td>6990</td>
<td>Independent Study</td>
<td>CTE</td>
<td>1</td>
<td>Independent study for CTE candidates. Topics vary.</td>
<td></td>
</tr>
<tr>
<td>ME6520</td>
<td>6520</td>
<td>Hydropower</td>
<td>ME</td>
<td>3</td>
<td>Topics covered are hydraulics of turbomachinery for power generation, hydrology for analysis of hydropower development for run-of-the-river systems and reservoir systems, dams and environmental impacts, environmental impact assessment, operation of reservoir systems, and economics of hydropower generation. Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D or Undergraduate level ME 3350 Minimum Grade of D-.</td>
<td></td>
</tr>
<tr>
<td>MLB4990</td>
<td>4990</td>
<td>Medical Lab Op and Ed</td>
<td>MLB</td>
<td>2</td>
<td>Principles of education, laboratory management, computer application and completion and presentation of a scientific project. Integrated Writing course.</td>
<td></td>
</tr>
<tr>
<td>GEO3300</td>
<td>3300</td>
<td>World Regional Geography</td>
<td>GEO</td>
<td>3</td>
<td>Spatial characteristics that comprise world regions and connections between world regions utilizing environmental, cultural, political and economic factors.</td>
<td></td>
</tr>
<tr>
<td>LAT5570</td>
<td>5570</td>
<td>Readings in Roman Satire</td>
<td>LAT</td>
<td>3</td>
<td>Horace, Juvenal, Persius, Petronius, and Martial. Topics include development of this peculiar Roman genre, fragments of Lucan, satirical method and techniques, satiric epigram, and satire as a source of information about Roman private life. Titles vary.</td>
<td></td>
</tr>
<tr>
<td>REL5200</td>
<td>5200</td>
<td>Topics in Christianity</td>
<td>REL</td>
<td>3</td>
<td>Examination of selected topics related to the history and practice of Christianity.</td>
<td></td>
</tr>
<tr>
<td>SAA7640</td>
<td>7640</td>
<td>Prog Eval/Assmnt High Ed</td>
<td>SAA</td>
<td>3</td>
<td>Studies theories, models, and techniques for evaluation of SAHE programs, and student organizations. Focus is on a systematic approach to designing, integrating, and assessing the success of SAHE programs.</td>
<td></td>
</tr>
<tr>
<td>BME3511L</td>
<td>3511L</td>
<td>Bioelectronics I Laboratory</td>
<td>BME</td>
<td>3</td>
<td>Required laboratory for BME 3511.</td>
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</tbody>
</table>

Fall 2020

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Fall 2020 ME2020 2020 Mech Drawing Solid Mod ME Mechanical and Materials Engr 3 Basic concepts of engineering drawing with applications to manual and computer-aided drafting: multiview projections, sectional, auxiliary, and pictorial views; dimensioning; intersections and developments; introduction to finite element tools. UG LL Lecture/Lab Combination

Fall 2020 CHM5710 7510 Chemical Kinetics CHM Chemistry 2 Characterization of simple and complex kinetic systems; experimental techniques, methods of data analyses; kinetic theories; reactions in gas phase, in solution and chemical chain reactions; deduction of reaction mechanisms from experimental rate laws. GR LE Lecture

Fall 2020 BME1980 1980 Special Topics in BME I BME Biomedical Engineering 1 Undergraduate special topics in biomedical engineering. Topics vary. UG LE Lecture

Fall 2020 SPN5990 5990 Studies in Selected Subj SPN Spanish 1 Graduate level research and writing in the field of Spanish. Topics vary. Department Managed Prerequisite(s): Graduate level SPN 5110 Minimum Grade of D or Graduate level SPN 5120 Minimum Grade of D or Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3220 Minimum Grade of D (D-)

Fall 2020 DMV999 999 For Administrative Use Only DMV DMV Consortium 0

Fall 2020 ISE3512 3512 Bioelectronics II ISE Industrial & Systems Engr 4 Modern electronic devices/circuits applied to human systems/biomedical applications, instrumentation, data collection. Reactive components, filters, semiconductors, op-amps, digital logic circuits in biomedical applications and devices. Hands-on laboratory component provides experience in designing, assembling, testing, and employing amplifiers, filters, digital logic circuits used for collecting and analyzing data related to biomedical engineering applications. UG LE Lecture

Fall 2020 PLS6881 6881 Diplomacy & Negotiation PLS Political Science 3 Topics include power and leverage: negotiation strategies; mediation and third-party involvement; and ratification and implementation of agreements. Provides an analytical understanding of how negotiation works, and some level of proclivity and comfort in the practice of negotiation. GR SE Seminar

Fall 2020 BMS7330 7330 Adv Inorganic Chem I BMS Biomedical Sciences 2 Study of the modern theories of valence, structural inorganic chemistry, and the chemistry of nonmetals. GR LE Lecture

Fall 2020 KNEH1440A 1440A Phys Ed for Disabled KNEH Kinesiology & Health 1 Fundamental skills and knowledge of Physical Education for Disabled. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 SPN3220 3220 Adv SPN Conv and Writing SPN Spanish 3 Conversational and writing techniques and grammar review; literary and/or film and/or media analysis incorporating targeted grammar, vocabulary, and stylistic devices. Taught in Spanish: Integrated Writing course (D-) Department Managed Prerequisite(s): Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3220 Minimum Grade of D (D-)

Fall 2020 ED3700 3700 Comm Arts for Ed ED Education 3 Study, design, and present speeches and media projects for a variety of purposes, occasions, and audiences. UG LE Lecture

Fall 2020 UVC1110 1110 Athletics Interest Group UVC University College 0 National Collegiate Athletic Association regulations. Required for all new student athletes. UG SE Seminar

Fall 2020 TH2130 2130 Singing Min Theatre III TH Theatre 1 Private singing lessons for acting, theatre studies and dance majors only. UG ST Studio

Fall 2020 SCM4000 4000 Special Topics in SCM SCM Supply Chain Management 3 Focuses on one area of emerging trends in supply chain management. UG LE Lecture

Fall 2020 CHM7200 7200 Adv Inorganic Chem I CHM Chemistry 2 Study of the modern theories of valence, structural inorganic chemistry, and the chemistry of nonmetals. GR LE Lecture

Fall 2020 BMS6890 8690 Quant Aspect-Membran Trans BMS Biomedical Sciences 3 Employs a quantitative approach to the properties of solutes, water, bio-electrical phenomena, the properties of transport systems that move solutes across biological membranes, and the interactions of these solutes with membranes. Completion of calculus, cell biology, and cellular physiology and biophysics required. May be taken for letter grade or pass/no-fail/audit. GR LE Lecture

Fall 2020 SOC6310 6310 Urban Sociology SOC Sociology 3 Role of cities in past and present societies, the social and cultural implications of urban living, and problems associated with city life. GR LE Lecture

Fall 2020 PPHE1270 7270 Global Health Systems PPH Population & Public Health 3 This course provides an overview of the institutional, economic, epidemiological, ideological, social, and political forces that shape global health systems. A health system includes all organizations, people and actions that promote, restore or maintain health. A health system incorporates efforts to influence determinants of health as well as more direct health improving activities. Students will investigate best-practices approaches to health systems both at national and global levels. GR LE Lecture

Fall 2020 PPHY1120R 1120R Principles of Physics II Rec PHYH Physics 0 Required prerequisite for PHYH 1120. UG RE Recitation

Fall 2020 EE3020 6320 Env Microbiology EES Earth & Environmental Sciences 3 Examines how microorganisms interact with abiotic resources to affect natural and human-created systems, using a multidisciplinary approach drawing on tools from microbiology, aquatic chemistry, soil science, limnology and oceanography, analytical chemistry, ecology, geology, and biochemistry. GR LE Lecture

Fall 2020 PLS4422 4422 Congress Diet Internship PLS Political Science 3 Intern 12-15 hours per week in one of the area's congressional district local offices to assist staff with constituency casework. UG IN Internship

Fall 2020 GER4060 4060 Renaissance & Reform GER German 3 Representative German authors of the period. UG LE Lecture

Fall 2020 PSH300 8300 Interviewing PSI Professional Psychology 3 Process of client designation, problem identification, and functional analysis. Client expectancy, establishing relationships, developing information base for linking, consultation, and referral. Interviewing styles and types. GR LE Lecture

Fall 2020 EDL9150 9150 Adv Data Driven Decision EDL Educational Leadership 3 Advanced studies exploring the use of appropriate, meaningful data for making instructional, curricular, and assessment decisions as a normative professional standard. GR LL Lecture/Lab Combination

Fall 2020 PFA7010 7010 Research Techniques PTX Pharmacology/Toxicology 4 Practical laboratory experiences in commonly used biological techniques including DNA purification and manipulation, protein expression and analysis, and the classical pharmacological techniques of mediating receptor binding. Designed to give hands-on experience along with a short weekly lecture providing background on theory behind the topic. GR LL Lecture/Lab Combination

Fall 2020 GEO200 2000 Global Awareness GEO Geography 3 Introduction to maps and using maps as means of developing global awareness. UG LE Lecture

Fall 2020 ENG1300 3000 Business Writing ENG English 3 Written business and organizational communication; rhetorical demands of writing in professional settings; attention to various forms including short reports and informal oral presentations. UG LL Lecture

Fall 2020 SOC4650 4650 Gbl Salty & Hung Rights SOC Sociology 3 Survey of current issues in sexuality and social justice from a global perspective, with emphasis on developing students' capacity to assess and address sexual social justice concerns through human rights regimes. Consideration of practices, conditions, and identities such as sexual tourism and work, polygamy and polyamory, same-sex loving and transsexual persons, surrogacy, body modifications, and HIV/AIDS: Integrated Writing. UG LE Lecture
Fall 2020  DAN4050 4050  Musical Theatre Dance IV  DAN  Dance 3  Advanced group classes applying Ballet, Jazz and Modern Dance techniques to Musical Theatre Dance, focusing on professional preparation. UG  ST  Studio
Fall 2020  ME3350 3350  Fluid Dynamics IV  ME  Mechanical and Materials Engr 3  Study of fluid properties, fluid statics, incompressible flows, and real fluid flows.<b> Department Managed Prerequisite(s): Undergraduate level ME 2210 Minimum Grade of D and Undergraduate level ME 3310 Minimum Grade of C</b> UG  LE  Lecture
Fall 2020  PLS4070 4070  Seminar Political Theory  PLS  Political Science 3  Special topics on selected theorists/thinkers, or in theoretical approaches to disciplinary subject matter. Integrated Writing course. UG  SE  Seminar
Fall 2020  ENG1030 1030  Advanced Writing: ESL  ENG  English 3  Advanced course in written communication with an emphasis on grammatical structures, sentence structure and essay organization, and topic development. For non-native speakers of English only. Placement by writing diagnostic. UG  LE  Lecture
Fall 2020  STT3860 7860  Ind Read Stat and Prob  STT  Statistics 1  Independent reading in statistics and probability. GR  IS  Independent Study
Fall 2020  NUR3734 7734  NNP Practice II  NUR  Nursing 7  The clinical focus of this course is on continuing clinical competencies for the nurse practitioner in the Level III/IV neonatal intensive care unit. The course continues the exploration of embryology, neonatal pathophysiology, and management of the disease process. Students will apply current management strategies and will utilize best evidence to provide a high level of care for infants and their families. UG  LE  Lecture
Fall 2020  BIO4270 4270  Pathogenic Microbiology  BIO  Biology 3  Studies microorganisms pathogenic for humans and animals using the organ system approach. Emphasizes mechanisms of pathogenesis and host resistance. UG  LE  Lecture
Fall 2020  PTX7110 7110  Journal Club  PTX  Pharmacology/Toxicology 1  WSU faculty driven course. Students are presented with current literature on around a specific topic. The students will give presentations on the material. GR  SE  Seminar
Fall 2020  NEU3010 1010  Intro to Neuroscience Program  NEU  Neuroscience 1  Actively engages undergraduate neuroscience majors to create a foundation for academic success. Students will also be introduced to the neuroscience community at Wright State University. UG  LE  Lecture
Fall 2020  ENG2140 2140  Research & Argument  ENG  English 3  Adapts principles introduced in ENG 1100 and equivalents to writing for professional audiences in engineering and computer science and lay readers. Stresses argument, research, and effective use of source materials. UG  LE  Lecture
Fall 2020  GER3830 3830  Applied Elem Ger Instr.  GER  German 1  German majors and minors assist GER 1010 or GER 1020 course instructors in conducting classes. Taught in German.<b> Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of B and Undergraduate level GER 3210 Minimum Grade of B or Undergraduate level GER 3250 Minimum Grade of B) and Undergraduate level GER 3120 Minimum Grade of B or Undergraduate level GER 3220 Minimum Grade of B or Undergraduate level GER 3260 Minimum Grade of B or Undergraduate level GER 3310 Minimum Grade of B or Undergraduate level GER 3350 Minimum Grade of B or Undergraduate level GER 3610 Minimum Grade of B or Undergraduate level GER 3990 Minimum Grade of B)</b> UG  IS  Independent Study
Fall 2020  EES6240 6240  Oceanography  EES  Earth & Environmental Sciences 3  Introduction to the interrelated geology, physics, chemistry, and biology of the ocean. GR  LE  Lecture
Fall 2020  NEU4020 4020  Sr Cap Neuro Lab Res  NEU  Neuroscience 2  Senior neuroscience majors will write a scientific research article encompassing the neuroscience research they have done and deliver an oral presentation summarizing their research project in the NCBP Departmental Honors Forum. Senior standing, in the Departmental Honors Program, and a minimum of 3 credits of NEU 4990. Integrated Writing course. UG  IS  Independent Study
Fall 2020  MUS3290L 3290L  Adv Choral Cord Lab I  MUS  Music 1  Builds upon the previously gained conducting experiences and knowledge. UG  LL  Lecture/Lab Combination
Fall 2020  EDT9220 9220  ED Concepts & Theories  EDT  Educational Technology 3  Students will explore a variety of instructional design concepts and theories, software applications, and how instructional design theory can be applied to practice. GR  LE  Lecture
Fall 2020  CHM7520 7520  Thermodynamics  CHM  Chemistry 2  Fundamentals of chemical thermodynamics; first, second, and third laws; applications to solutions. GR  LE  Lecture
Fall 2020  PPH7640 7640  Princ. of Emerg. Mgmt  PPH  Population & Public Health 3  Course provides an understanding of the phenomena of disasters and management of disaster impacts, as well as an understanding of the emergency management system, currently in place in the US, which serves as a model for developing systems worldwide. Analysis of the National Incident Management System for disaster/crisis/consequence management will be done through case studies, lecture, and independent study that will provide insight into emergency management and the role public health plays. GR  LE  Lecture
Fall 2020  PSY4720 4720  Select Visal Attn Cap  PSY  Psychology 3  Communication-intensive seminar integrating knowledge on selective visual attention. Integrated Writing course. UG  SE  Seminar
Fall 2020  EES6480 6480  Plate Tectonics for Edu  EES  Earth & Environmental Sciences 3  This course explores the history and development of the theory of plate tectonics with an emphasis upon the particular needs of the educator. A required text provides the topical core, supplemented by abundant web-based resources and information. UG  LL  Lecture/Lab Combination
Fall 2020  ME4750 4750  Mat. Characterization  ME  Mechanical and Materials Engr 2  Principles of characterizing materials with respect to crystal structure, micro/nano structure, and chemical composition using particle or wave-based probes (visible lights, X-rays, and energetic electrons). The interactions between the probes and materials are discussed. Characterization at both qualitative and quantitative level will be elucidated. Laboratory exercises are included.<b> Department Managed Prerequisite(s): Undergraduate level ME 2600 Minimum Grade of D and Undergraduate level ME 2700 Minimum Grade of C</b> UG  LB  Lab
Fall 2020  MIS4420 4420  Pedagogy  MUS  Music 1  Fundamental problems involved in studio teaching. Critical analysis of teaching materials. Observation and practice in private teaching required. UG  IS  Independent Study
Fall 2020  URS5950 6950  MPA Internship  URS  Urban Affairs 3  A one semester supervised internship of at least 300 hours in a selected public, nonprofit or public-service private agency. Arranged in consultation with student's advisor or intern director. GR  IN  Internship
Fall 2020  DAN4320 4320  Men's Ballet Class  DAN  Dance 1  Training for the male dancer to strengthen ballet technique with the emphasis on large jumps, turns, and tricks.<b> Focus is on virtuosity and strength.</b> UG  ST  Studio
The course will provide an opportunity for the student to observe the criminal justice system in operation. The student will be expected to compare classroom theory with the day-to-day operation of the agency to which they are assigned and the roles and responsibilities of the professional in the field. Total of 40 clock hours required.

**Fall 2020**
- **LE2990** 2990 Law Enforce Internship LE Law Enforcement 3
  - Course will provide an opportunity for the student to observe the criminal justice system in operation. The student will be expected to compare classroom theory with the day-to-day operation of the agency to which they are assigned and the roles and responsibilities of the professional in the field. Total of 40 clock hours required.
- **PHY4470** 4470 Dev of Ideas Phy Sci PHY Physics 3
  - Acquaints physics and chemistry teachers with the construction of knowledge in physical science and its implications to science instruction. Focuses on the processes that lead to the laws of physics and chemistry and how this knowledge of science history can be used to design physics and chemistry lessons.
- **ME4490** 4490 Aerospace Structures ME Mechanical and Materials Eng 3
  - Stress, deformation, and stability analysis of aerospace structures. Thin-walled members bending, torsion, and shear stresses calculation in multi-cell structures. Buckling of thin plates. Department Managed Prerequisite(s): Undergraduate level ME 3120 Minimum Grade of D- or higher.
- **TMG2700** 2700 Production Management TMG Technical Management 3
  - Introduction to the production system, including product parts manufacture, process routing, quality standards, work measurement, work methods, scheduling, and inventory control.
- **ENG4850** 4850 Sp Topics Creative Wrtg ENG English 3
  - Specialized courses in genres, modes, styles, practices, creative processes, and the craft of fiction, creative non-fiction, poetry, or playwriting. Integrated Writing course.
- **ENG7010** 7010 Math & Mat: Literature ENG English 3
  - Examination of the aims and approaches of scholarly study of literature and the tools and methods of literary research. Emphasis on the problems of collecting, evaluating, and reporting the findings of scholarly study.
- **NUR7351** 7351 Curriculum Development NUR Nursing 3
  - Analysis of learning theories and models of nursing curriculum design. Development and evaluation of nursing curriculum and educational programs.
- **ACC4440** 4440 Federal Income Tax II ACC Accountancy 3
  - Federal income taxation of business entities and owners. State and local taxes and their impact on tax strategies.
- **CLS3700** 3700 Ancient Pol Law/War CLS Classics 3
  - Politics, law and legal systems, and warfare in Greece and Rome. Integrated Writing course.
- **EE2010** 2010 Analog Circuit Theory EE Electrical Engineering 3
  - Electrical quantities and their relationships, Transform-calculus impedance models of basic circuit elements, Conservation laws leveraging algebraic solutions, Transform-calculus-derived algebraic models of dynamic systems, and mathematical solution techniques.
- **PSY3600** 3600 Human Factors Psychology PSY Psychology 3
  - Introduction to the study of human factors in the design and operation of machine systems.
- **SAA6670** 6670 Career Dev Adm/Asses SAA Student Affairs in Higher Ed 3
  - Focus of the course will be on developing the helping relationship, career planning strategies, applying career development models and theories to cases, and understanding how different types of career assessments aid or hinder the career development process.
- **TH1480** 1480 Acting Aesthetics TH Theatre 2
  - Generalized acting course that includes various aspects of movement, vocal technique, improvisation, and scene work.
- **PLS7300** 7300 Comparative Pol Theories PLS Political Science 3
  - Focuses on research emphasizing the comparative analysis of political systems and cultures, including mass and elite behavior in democratic and non-democratic regimes.
- **LE1020** 1020 Intro to Criminal Law LE Law Enforcement 3
  - Rationale and legal foundations of legal procedures.
- **MGT6260** 6260 Staffing MGT Management 3
  - This course covers the staffing process. Topics include human resource planning, recruitment, selection, measurement in selection, legal issues in staffing, job analysis, decision making, and retention management.
- **MIS4300** 4300 Business Analytics MES Management Information Systems 3
  - Introduction to business analytics, including business intelligence, data visualization, reports, queries, scorecards, dashboards, online analytical processing, decision support, data warehousing, data mining, and multidimensional databases. Familiarizes students with different business analytics tools such as MicroStrategy and Teradata.
- **PSY3730** 3730 Perception Methods PSY Psychology 4
  - Laboratory experience and research techniques in various areas of perception. Integrated Writing course.
- **MUS4470** 4470 Baroque Music MUS Music 3
  - Study of music and critical analysis of representative works from major composers of the Baroque period.
- **MIL2010** 2010 Foundations of Ldrshp MIL Military Science 3
  - Analysis of the light infantry squad's weapons and employment and the leader's role in directing and controlling small units in the execution of offensive and defensive tactical missions. Contracted students are required to participate in two-hour lab, physical fitness program and weekend training exercises.
- **NUR7213** 7213 AG AC: Diagnostic Proc NUR Nursing 2
  - This course provides theoretical knowledge and emphasizes psychomotor skills.
- **HED4430** 4430 Hlth Progr Planning Eval HED Health Education 2
  - Knowledge and skills for planning, implementing, and evaluating school and community health education programs. Integrated Writing course.
- **ENG7520** 7520 TESOL: Read/Write ENG English 3
  - Reading, research, reports, and discussion on topics dealing with TESOL reading and writing. Emphasis placed on examining the relationships between language and writing theory and practices in TESOL reading and writing. Department Managed Prerequisite(s): (Graduate level ENG 7030 Minimum Grade of C or Graduate level ENG 7020 Minimum Grade of C or Graduate level ENG 7010 Minimum Grade of C or Graduate level ENG 7000 Minimum Grade of C) and (Undergraduate level ENG 4710 Minimum Grade of C or Graduate level ENG 6710 Minimum Grade of C or Graduate level ENG 7150 Minimum Grade of C).
- **PPH7810** 7810 Foundations of Clinical Ethics PPH Population & Public Health 3
  - This course will provide an introduction to moral philosophy in medicine, emphasizing its historical underpinnings. Specifically, the course will focus on normative ethics as applied to the pluralistic arena of modern healthcare.
- **ED2700** 2700 Intro Educational Psychology ED Education 3
  - Understand how people learn, how to motivate, and assess pre-K-12 students based on theoretical principles from field of educational psychology. Integrated Writing course.
- **OIS2200** 2200 Admin Office Management OIS Office Information Systems 3
  - Office organization with an emphasis on work flow, proper equipment, problems in supervision, human relations, and management techniques.
- **AFS4000** 4000 Service Experience AFS Afr / Afr Amer Studies 3
  - Field placement of students in community organizations, social service agencies, and governmental entities where they will engage in work that relates to and enhances their understanding of the African American experience.
- **EE4360** 4360 Digital Signal Proc EE Electrical Engineering 3
  - Principles and applications of digital signal processing (DSP) from the design and implementation perspective. Introduction to advanced digital signal processing design concepts. Focus on time and frequency domain algorithms. Methods include multirate signal processing, filter banks, time-frequency analysis, and wavelets.
Fall 2020 MLB4211 4211 Urine/Body Fluid Lab MLB Medical Laboratory Science 0.5 Study of body fluids, including the pathophysiology of their formation and the biochemical and morphological methods used to obtain diagnostic information. This course has a fee that is non-refundable once the term begins. UG LB Lab

Fall 2020 PLS6480 6480 Gender Violence & Am Pol PLS Political Science 3 Examines gender violence in the U.S. Considers the range of violence, its sources, and solutions. Topics include domestic violence, rape, dating disorders, reproductive rights, and pornography. GR LE Lecture

Fall 2020 BME1550 1550 Adaptive Computer Tech BME Biomedical Engineering 3 Presented for physically impaired students for the purpose of familiarizing them with adaptive computer usage. It is structured to teach necessary skills related to each student's rehabilitative needs. UG LL Lecture/Lab Combination

Fall 2020 HEA9280 9280 Internship in Higher Ed HEA Higher Education Admin 3 Provides opportunity for an in-depth field experience in higher education with administrative professionals. Designed to provide breadth to the students' prior experiences and be consistent with individual career goals. GR IN Internship

Fall 2020 ISG7300 7300 Practicum in Gifted Ed ISG Intervention Specialist Gifted 4 Educators with prior teaching licenses, under the direct supervision of an experienced Intervention Specialist, are assigned to a school for intensive teaching experience in K-12 grade special education. GR IN Internship

Fall 2020 CS1200R 1200R Intro Discrete Struct Rec CS Computer Science 0 Required recitation for CS 1200. UG RE Recitation

Fall 2020 ME5210 5210 System Dynamics ME Mechanical and Materials Engr 3 Introduces students to the system level modeling of dynamic engineering systems including, but not restricted to, linear and rotational mechanical, fluid, thermal, and electrical systems. Modeling of control devices (motors, heaters, pumps) is addressed. GR LE Lecture

Fall 2020 EGR4980 4980 Special Topics in EGR EGR Engineering 1 Special topics in Engineering and Computer Science. UG PKG Combination

Fall 2020 MBA5100 5100 Survey of Financial Acct MBA MBA 3 Provides a basic understanding of financial accounting through examination of the concepts underlying generally accepted accounting principles and basic financial statements. UG LE Lecture

Fall 2020 MIS4400 4400 IS Strat Mgt and Acq MIS Management Information Systems 3 Explores issues in managing the information systems function in organizations and how it integrates, supports, and enables various types of organizational capabilities. Senior management perspective in exploring the acquisition, development, and implementation of plans and policies to achieve efficient and effective information systems. UG LE Lecture

Fall 2020 ENG1010 1010 Basic Acad Spk Ltrn ESL ENG English 3 Basic course in spoken English, both production and comprehension. Open only to non-native speakers of English. UG LE Lecture

Fall 2020 MUE2050 2050 Chamber Music MUE Music: Ensembles 1 Small chamber ensembles of varying instrumentation. Audition required. UG LL Lecture/Lab Combination

Fall 2020 EE3210L 3210L Digital System Design Lab EEE Human Biomechanics I Lab EIE Electrical Engineering 0 Required laboratory for CEG 3210. UG LL Lab

Fall 2020 FR3120 3120 French Conv and Society FR French 3 Practice in oral use of French emphasizing the culture of the French-speaking world. Taught in French. GR LE Lecture

Fall 2020 PSY2140 2140 Psychology of Social Media PSY Psychology 3 This course examines the connections between psychology and social media. We will discuss the history of media and psychology. We will draw on social psychology, cognitive psychology, health psychology and psychological disorders among other topics. UG LE Lecture

Fall 2020 ED4510 4310 MCE Internship I Methods ED Education 3 Candidates, mentored by a middle-level teacher, shall assist in the planning, organizing, delivering, and assessing of instruction in a 4-9th grade setting applying educational content knowledge from middle childhood content and methods courses. UG PR Practicum

Fall 2020 WGS3600 3600 Feminist/Sexuality Theor WGS Women, Gender, and Sexuality 3 Major concepts and themes in feminist, gender, and sexuality theories and applicability of theory to historical and contemporary concerns. Explores gender-based oppression in connection to race-based, class-based, and other forms of oppression. Integrated Writing course. Students with credit for WMS 4500 cannot receive credit for WGS 3600. UG LE Lecture

Fall 2020 GR4550 4550 Readings Greek Politics GR Greek 3 Lysias, Demosthenes, Isocrates, Old Oligarch, Plato, Xenophon, and Aristotle. Topics include development of political ideas and vocabulary, nonliterary sources for our knowledge of Greek civil life, and influences on Roman theories and practices. UG LE Lecture

Fall 2020 PSY6000 6000 PSY Capstone Topics PSY Psychology 1 A selected psychology capstone topic. The topic will vary according to the discretion of the instructor. GR SE Seminar

Fall 2020 KHI6180A 1680A Swimming: Advanced KHI Kinesiology & Health 1 Advanced level of skills and knowledge in Swimming: Advanced. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 CEG7060L 7060L Advanced Robotics Lab CEG Computer Engineering 1 Required laboratory for EE 7560. UG LB Lab

Fall 2020 OL4940 4940 Talent Development OL Organizational Leadership 3 Explores the systematic and strategic approaches to talent management by learning how to assess and develop an organization's human assets. Integrated Writing course. UG SE Seminar

Fall 2020 CS3700 3700 Intro to Oracle/SQL DB CS Computer Science 3 Relational client server database design and access techniques. Includes building database tables, writing SQL and PL/SQL statements and programs and developing user interfaces using forms and reports. GR LE Lecture

Fall 2020 TH3720 3720 MT History/Lit I TH Theatre 3 Covers history of Musical Theatre from its roots in early lyric theatre and popular variety entertainments to the birth of the modern Book Musical. Reading, viewing and discussion of significant examples from major periods while studying historical, artistic and social contexts for these works. Integrated Writing course. UG LE Lecture

Fall 2020 SAA7360 7660 Adv Sem in Stu Affairs SAA Student Affairs in Higher Ed 3 Provides an opportunity for advanced students to explore current issues and future trends in higher education with a focus on the influence on student affairs practice. GR SE Seminar

Fall 2020 HST4550 4550 U.S. Foreign Relations HST History 3 Examines main currents, prominent issues, key individuals and major events in the history of U.S. relations with other countries and regions. Topics vary. Integrated Writing course. UG LE Lecture

Fall 2020 EDT7990 7990 Exit Seminar Lib Media EDT Educational Technology 1 Individual and group study of problems related to educational technology. Should be taken near or at the completion of master degree program. GR SE Seminar
Methods/materials for assessing/teaching individuals with moderate/intensive needs in multiple environments.

Nanotechnology is an interdisciplinary field that encompasses aspects of biology, chemistry, and physics. This course will focus on three themes: the development and characterization of NMs, their potential applications in medicine/biomedical applications, and their potential toxicological risks for human health.

German culture and civil society. Survey of the contribution of German-speaking people to world culture in art, music, science, education, philosophy, and religion. Integrated Writing course.

Combination of 360 hours of field education experience in the community. Provides the opportunity for students to engage in selected and organized activities, with or on behalf of clients, that apply the social work skills, knowledge, and values learned in the classroom.

A modular approach to oral and written communication of complex technical information to an expert audience. Includes describing technical mechanisms and processes, designing and using tables, graphs, charts, and figures; producing technical proposals, progress reports, feasibility reports, and formal reports; and doing technical briefings. Integrated Writing course.

This course focuses on security vulnerabilities, threats, attacks, and mitigation solutions in the context of cyber networks. Topics include network traffic analysis, basic cryptography, protocol vulnerabilities, application vulnerabilities, secure networking protocols, malicious logics, firewalls, as well as the design and evaluation of intrusion detection systems. Integrated Writing course.

This course will focus on three themes: the development and characterization of NMs, their potential applications in medicine/biomedical applications, and their potential toxicological risks for human health.

An organization-based experience that provides students with an opportunity to gain an understanding of and appropriate talent and frequent practice in a wide range of media settings. Integrated Writing course.

This course will focus on three themes: the development and characterization of NMs, their potential applications in medicine/biomedical applications, and their potential toxicological risks for human health.

This course provides basic and general principles on animal handling, caring and experimental design. It instructs basic techniques in drug dosing and administration, animal surgery, tissue sample collection. Emphasizes Biomedical Science's current methods.

This course is designed to teach the basic concepts of chemical kinetics, reaction mechanisms, and reaction rates. It also covers the application of these concepts to real-world problems.

This course is designed to teach the basic concepts of chemical kinetics, reaction mechanisms, and reaction rates. It also covers the application of these concepts to real-world problems.

This course introduces students to the fundamentals of digital communication systems. Topics include: analog communication vs digital communication; source coding, pulse shaping, digital modulation/demodulation; signal detection and optimal receiver, simulation of digital communication system as an integral part of this course.
Fall 2020  IHE6350  6350  Comp Neuroerg & Hlth App  IHE  Industrial & Hum Fac Engr  3  Principles and application of computational methods and technologies to neuroergonomics and neuroengineering; analysis of applications related to brain-system interface and augmented sensory perception; articulation of various methods of non-invasive neuroscience measurements.  GR  LE  Lecture

Fall 2020  CEG3310L  3310L  Computer Organization Lab  CEG  Computer Engineering  0  Required laboratory for CEG 3310.  UG  LB  Lab

Fall 2020  ENG3060  3060  Intro Literary Study  ENG  English  3  Introduction to the discipline of English, with a focus on verse, narrative, textual analysis, literary theory, and integration of secondary sources in analytical arguments. Integrated Writing course.  UG  LE  Lecture

Fall 2020  PSY6620  6620  Egonomics Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on ergonomics.  GR  SE  Seminar

Fall 2020  ME4840  4840  Mat Sel for Mech Design  ME  Mechanical and Materials Engr  3  Principles of materials-limited design. Lectures, case histories, open-ended assignments and computer-based materials selection tools. Procedures for selection of optimum materials/under constraints resulting from functional, reliability, safety, cost and environmental issues. (b) Department Managed Prerequisite(s): (Undergraduate level ME 2700 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of D-)<b> (Graduate level ME 2700 Minimum Grade of C and Graduate level ME 3120 Minimum Grade of C-).</b>  GR  LE  Lecture

Fall 2020  IT2200  2200  Web Theory and Design I  IT  Information Technology  3  Introduction to web authoring and programming using basic HTML authoring tools. 2 hours lecture/2 hours lab.  UG  LL  Lecture/Lab

Fall 2020  EE7580L  7580L  CMOS Med Sig IC Des Lab  EE  Electrical Engineering  1  Required lab for EE 7580. (b) Department Managed Prerequisite(s): (Undergraduate level EE 4540 Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D).  GR  LB  Lab

Fall 2020  BIO3150  1150  Organisms and Ecosystems  BIO  Biology  4  Introduction to basic concepts of biology. Topics include evolution, ecology, and the diversity of life. Three hours lecture, two hours lab. (b) Department Managed Prerequisite(s): WSU Math Placement Level 25 or Undergraduate level DEV 0280 Minimum Grade of P-</b>-<b> (Graduate level BIOL 1210 Minimum Grade of C-).</b>  UG  LE  Lecture

Fall 2020  GR5530  5530  Readings in Greek Poetry  GR  Greek  3  Select readings in Greek epic and lyric poetry. Topics include structure and technique of oral epic, the didactic tradition, lyric and epic meters and diction, and selected development of pastoral poetry. Titles vary.  GR  LE  Lecture

Fall 2020  ED6480  6480  Fld Exp II: MA/Vis Arts  ED  Education  1  Candidates, mentored by a visual arts educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a 4-12 grade setting applying pedagogical content knowledge from visual arts content and methods courses.  GR  PR  Practicum

Fall 2020  PLS4600  4600  Comparative Politics Sem  PLS  Political Science  3  Readings, research, reports, and discussion of selected topics and problems. Topics vary. Integrated Writing course.  UG  SE  Seminar

Fall 2020  SAAT540  7540  Resilience Ldrship&Wld of Work  SAA  Student Affairs in Higher Ed  3  Focuses on organizational resilience including ecology, finding meaning, giving/receiving feedback, managing difficult conversations, and compassionate communication. Understanding the science behind resilience and providing opportunities for practice, increases sustaining healthy engagement in the workplace.  GR  LE  Lecture

Fall 2020  GR6510  6510  Readings in Greek Philos  GR  Greek  3  Plato, Xenophon, Aristotle, Epicurus, Epictetus, and Marcus Aurelius. Topics include pre-Socrates and the development of philosophical vocabulary, the sophist movement, the Cynic tradition, and the development of popular philosophy. Titles vary.  GR  LE  Lecture

Fall 2020  ME6430  6430  Aeronautics  ME  Mechanical and Materials Engr  3  Aviation history. Standard atmosphere, basic aerodynamics, theory of lift, airplane performance, principles of stability and control, aeronautics, and propulsion concepts. (b) Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D-<b> (Graduate level ME 3350 Minimum Grade of D).</b>  GR  LE  Lecture

Fall 2020  ENG4820  4820  Adv Poetry Wrtr Seminar  ENG  English  3  Advanced practice in writing and revising poems, refining craft and style, with the aim of producing poetry of superior merit; group discussion of manuscripts; and reading and discourse of modern poetry and poetics. Integrated Writing course.  UG  SE  Seminar

Fall 2020  URS6970  6970  NLA Internship  URS  Urban Affairs  3  A one quarter supervised internship of at least 300 hours in a selected nonprofit agency. Arranged in consultation with Director of American Humanities.  GR  IN  Internship

Fall 2020  PTX7006  7006  Ldrship, Theory & Application  PTX  Pharmacology/Toxicology  3  Leadership is not passive; neither the number of degrees, nor length of time on a job are enough to give you the tools to make you a good leader. Fortunately, there is excellent literature available that can offer up the needed advice. Students will apply what they have learned in the classroom through games and role playing. By studying the course texts and having firsthand experience through classroom activities and discussions, this course will help students cultivate their leadership skills using the advice and theories learned.  GR  LE  Lecture

Fall 2020  OSIS101  1010  Professional Dvel I  OIS  Office Information Systems  1  Professioanl development in office procedures, dress, personality, leadership, and other aspects of business etiquette.  UG  LE  Lecture

Fall 2020  PSY6950  6950  Sex & Endocrinology Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on sexuality and endocrinology.  GR  SE  Seminar

Fall 2020  PLSS420  5420  Civil Liberties I:1st Amendment  PLS  Political Science  3  Cases and related materials on the Bill of Rights and the Fourteenth Amendment with emphasis on the First Amendment freedoms, concentrating on Supreme Court behavior and First Amendment procedures.  GR  LE  Lecture

Fall 2020  HST7860  7860  Historic Preservation  HST  History  3  Overview of the history and practices of architectural preservation. Introduces students to the supervision of, or participation in, the preservation program of an historical organization.  GR  LE  Lecture

Fall 2020  STT3866  3866  Actuarial Prob Exam Prep  STT  Statistics  1  Seminar course that assists students who wish to prepare to sit for the Society of Actuaries (SOA) Exam P. It is expected that students enrolling in this course will already have taken courses in probability and statistics that have covered all or most of the topics in this ACTEX Manual and/or the Part P syllabus posted on the SOA website. Virtually all class time will be spent discussing solution techniques for sample problems of the type expected to be encountered on Exam P.  UG  SE  Seminar

Fall 2020  EDS6240  6240  Cur meth mst EUCS & PKSN  EDS  Education - Special Education  3  Interventions, modifications and adaptations for children in early childhood special education or early intervention to access curriculum.  GR  LE  Lecture

Fall 2020  ATH6000  6000  Political Anthropology  ATH  Anthropology  3  Focuses on the anthropological approaches to the study of political life cross-culturally. Presents evolutionary and historical approaches to political institutions, and classic anthropological analyses of political institutions. Also recent developments in the study of politics as problems related to organization versus relationship, domination versus resistance, freedom versus order, and globalization.  GR  LE  Lecture
Fall 2020  MGT4720  4720  High Performance Teams  MGT  Management  3  Introduction to group theory, the practical elements of forming and leading high performing teams, self-assessments and other group-related skills, and practice engaging different group roles and activities. Integrated Writing course.  UG  LE  Lecture

Fall 2020  HEA9200  9200  Hat & Phil High Ed U.S.  HEA  Higher Education Admin  3  Reviews history and development of higher and continuing education in the United States with special attention to forces that have shaped its development. Examines history of critical philosophical debates, and issues about the nature and role of higher education.  GR  LE  Lecture

Fall 2020  CS6830  6830  Systems Simulation  CS  Computer Science  3  Introduction to simulation concepts and techniques. Topics include modeling, discrete simulation, continuous simulation, random number generators, input distribution selection and analysis of simulation results. Emphasis is on the application of simulation techniques for analyzing behavior of real systems.  GR  LE  Lecture

Fall 2020  PSY8240  8240  Reasoning  PSY  Psychology  2  This course will provide an overview of problem solving theory in the context of laboratory, academic and workplace tasks. Upon completion, students will be able to relate fundamental research to support the analysis of complex workplace cognition.  GR  SE  Seminar

Fall 2020  PSY3110  3110  Abnormal Psychology  PSY  Psychology  3  Facts and theories pertaining to abnormal behavior. Topics include classification and diagnosis, and causes and treatment of abnormal behavior.  UG  LE  Lecture

Fall 2020  KNE1700  1700  Tai Chi  KNE  Kinesiology & Health  1  Fundamental skills and knowledge of Tai Chi. Competency-based approach. Course may accommodate disabled students when appropriate.  UB  Lab

Fall 2020  PLS6370  6370  Criminal Procedure  PLS  Political Science  3  Examines the case law regarding the constitutional aspects of criminal procedure, particularly the Fourth, Fifth, and Sixth Amendments.  GR  LE  Lecture

Fall 2020  MTE6480  6480  Calculus Mid Schlr Tchr  MTE  Mathematics Teacher Education  3  An exploration meant to give a solid conceptual understanding of the big ideas in calculus (limit, derivative, integral). Applications, connections to algebra, and how these concepts appear in middle school math classrooms are emphasized.  GR  LL  Lecture/Lab

Fall 2020  EE6190  6190  Intelligent Control Sys  EE  Electrical Engineering  3  Foundations of fuzzy set theory, system modeling using fuzzy rules, structure of fuzzy controllers and PID fuzzy controller design. Also included are neural network foundations, single layered/multi-layered perceptions, learning rules, basics of adaptive controls and adaptive neural control.  GR  LE  Lecture

Fall 2020  PSY6940  6940  Animal Behavior Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on animal behavior. Topics will include evolution, natural and sexual selection, and mating systems.  GR  SE  Seminar

Fall 2020  URS4290  4290  Issues in City/Community Mgmt  URS  Urban Affairs  3  Issues and topics related to community development agencies and local governments.  UG  LE  Lecture

Fall 2020  BHE6360  6360  Fund of HFE  BHE  Industrial & Hum Fac Engr  3  Fundamentals of human factors engineering tools and processes as applied to systems development. Emphasis is placed on use-centered design principles. Material is presented through lectures and application-oriented projects.  GR  LE  Lecture

Fall 2020  MKT7700  7700  International Marketing  MKT  Marketing  3  Introduces the concepts and language of international marketing and examines institutional, behavioral, and managerial aspects of a cross section of national marketing systems and multinational organization operations.  GR  LE  Lecture

Fall 2020  REL3490  3490  Hindu Goddesses  REL  Religion  3  Explores conceptualizations of the divine feminine in Hinduism, combines textual, historical, and anthropological resources to understand the nature of the various Hindu goddesses and how they are worshipped.  LG  LE  Lecture

Fall 2020  CSR930  930  Phd Qualifying Exam  CS  Computer Science  1  Examination that tests understanding of the fundamentals necessary to begin concentrated study in chosen Ph.D. research area.  GR  IS  Independent Study

Fall 2020  MP4990  4990  Ind Study in Motion Pict  MP  Motion Picture  1  Independent study in motion picture history, theory, criticism, and practice.  UG  IS  Independent Study

Fall 2020  EE6000  6000  Linear Systems II  EE  Electrical Engineering  3  Covers discrete time signals and systems, the z-Transform, input output theory and discrete Fourier transform, IIR and FIR filter design, relationships, and sampling.  GR  LE  Lecture

Fall 2020  MKT4670  4670  Analytics Tools Insights  MGT  Marketing  3  Students gain hands-on experience with analytical tools to analyze marketing data and support marketing decisions that create value and build competitive advantage. Topics include demand estimation, segmentation, and web/social media analytics.  UG  LE  Lecture

Fall 2020  EES4240  4420  Paleozoic Vertebra/Plants  EES  Earth & Environmental Sciences  4  The rise and evolution of Palaeozoic vertebrate and plant groups emphasizing the evolution of jawed fishes, early tetrapods, and the terrestrialization of Earth. Phylogenetic and molecular analysis.  UG  LL  Lecture/Lab

Fall 2020  IDL7240  7240  Trend Instruction Design&Tech  IDL  Instructional Design & Learning  3  Students will explore literature reviews in the field of instructional technology and instructional design.  GR  LE  Lecture


Fall 2020  ME4860  8660  Metal Forming  ME  Mechanical and Materials Eng  3  Fundamentals of principal deformation processing systems including forging, extrusion, rolling, and sheet forming; material response and forming; and mechanics and analysis of selected processes.  GR  LL  Lecture/Lab

Fall 2020  MUS2310  2310  Percussion Pedagogy  MUS  Music  1  Class instruction. Materials and pedagogy.  UG  LE  Lecture

Fall 2020  ATH4750  4750  Sem Archaeological Theory  ATH  Anthropology  3  A survey of traditional and contemporary archaeological theory, and how a variety of problems including the origins of agriculture, the rise of complex societies, and transoceanic contacts have been interpreted by those adopting different theoretical positions.  UG  SE  Seminar

Fall 2020  BME4990  6990  Indep Study in BME I  BME  Biomedical Engineering  1  Graduate independent studies in advanced biomedical engineering. Topics vary.  GR  IS  Independent Study

Fall 2020  EE4750  4750  Intro to Radar Systems  EE  Electrical Engineering  3  Study of the radar equation, antenna patterns, target cross sections and system losses, radar measurements, pulse Doppler and coherent techniques, detection probability and signal-to-noise ratio, side lobe clutter, synthetic arrays, and pulse compression techniques.  UG  LE  Lecture
Fall 2020  FAS2410  2410  Food Microbiology Lab  FAS  Food and Agricultural Systems
Microorganisms of importance to the food industry: characteristics, utilization and control.
UG  LB  Lab

Fall 2020  EE7510  7510  Dig. Wideband Rec. Design EE  Electrical Engineering
The course material is designed at an undergraduate senior or the first year graduate level. In this course digital
design techniques applicable to wideband signal detection are discussed. Several digital wideband receiver designs
are studied. New laboratory components using Matlab/Simulink, Xilinx System Generator, Xilinx ISE and FPGA
will be developed to engage students in the learning process and give them hands-on examples to connect with the
theory aspects throughout the course. (UG) Department Managed Prerequisite(s): Graduate level EE 4620 Minimum
Grade of D and Graduate level EE 6620 Minimum Grade of D- or D+.
GR  LE  Lecture

Fall 2020  SPM7040  7040  Recreation Management  SPM  Sports Management
This course explores directing and managing the program, services, and business operations of recreation and
intramural sports programs. Organization principles and current issues are presented.
GR  SE  Seminar

Fall 2020  EDL7320  7320  Imprint & Analyze Reach  EDL  Educational Leadership
Impliment and analyze a research project.
GR  LE  Lecture

Fall 2020  ENG2320  2320  Amer Acad Culture  ENG  English
Unique cultural norms within American higher education through critical analysis of the social, political, and
economic factors which have influenced their development and continuous evolution.
UG  LE  Lecture

Fall 2020  HPR4850  4850  Teaching MS/HS PE  HPR  Health Phys Educ & Recreation
Students apply teaching and management strategies that have been linked to student learning, the design of
instructional materials and techniques, and strategies for working with a diversity of learners in middle and high
school.
UG  LE  Lecture

Fall 2020  EDL9860  9860  Organizational Behavior  EDL  Educational Leadership
Analyzing organizations and educational institutions in particular through a social systems orientation. Role
theory, leadership theory and styles, ethical behavior, and decision-making theory and practice are addressed from
an organizational perspective.
GR  LE  Lecture

Fall 2020  ENG7610  7610  Seminar in ILA  ENG  English
Advanced study of theory and pedagogy of the language arts: reading, writing, listening, speaking, viewing,
and/or visually representing. (UG) Department Managed Prerequisite(s): Graduate level ENG 7010 Minimum
Grade of D or Graduate level ENG 7020 Minimum Grade of D or Graduate level ENG 7030 Minimum Grade of
D or Graduate level HUM 7000 Minimum Grade of D+ or
GR  SE  Seminar

Fall 2020  MGT5000  5000  Honors Ind Study Market  MGT  Marketing
The course will consist of research or some other form of marketing project. The course is offered with the prior-
approval of the department chair and the supervising marketing faculty member.
UG  IS  Independent Study

Fall 2020  ENG4920  4920  Internship in Writing  ENG  English
Supervised professional writing in workplace setting. Integrated Writing course.
UG  IN  Internship

Fall 2020  PSY3990  3990  Psychopharmacology  PSI  Professional Psychology
Introduction to how psychotropic medications produce their desired and undesired effects with applications to
many forms of psychopathology.
GR  LE  Lecture

Fall 2020  BMB3900  3900  Scientific Communication  BMB  Biochem & Molecular Biology
Reading, comprehending, and generating scientific literature in Biochemistry and Molecular Biology. Integrated
Writing course.
UG  LE  Lecture

Fall 2020  MUS7995  7995  Perf. Document/Recital  MUS  Music
Work on the capstone experience in the Master of Music in Performance degree, and in the recital option of the
Master of Music in Music Education degree. Includes preparation and performance of a performance recital and
an accompanying scholarly document relating to research connected to the performance recital.
GR  IS  Independent Study

Fall 2020  ML3990  3990  Studies in Selected Subjects  ML  Modern Languages
Problems, approaches, and topics in the field of modern languages, Topics vary
UG  LE  Lecture

Fall 2020  PSY4410  4410  Industrial Psych Cap  PSY  Psychology
Writing and oral communication intensive seminar integrating knowledge on industrial psychology. Industrial
psychology focuses on understanding human behavior in a workplace. Topics may include performance
human performance, analysis of organizations, predicting behavior, and interview techniques. Integrated Writing course.
UG  SE  Seminar

Fall 2020  ME3680  6680  Experimental Nanoscience  ME  Mechanical and Materials Engr
This course will provide a series of laboratory experiments similar to the state-of-the-art R&D in nanotechnology
and nanoscience. The experiments include 1) fabrication of nanomaterials such as metal nanoparticles and
graphene nanoplatelets; 2) characterization of physical and chemical properties by using techniques such as
Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses etc; and 3) computational modeling of nanoscale physical phenomena. (UG) Department Managed Prerequisite(s): Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level CHM 1210L Minimum Grade of D and Undergraduate level PHY 2400 Minimum Grade of D and Undergraduate level PHY 2400L Minimum Grade of D+ or
GR  LE  Lecture

Fall 2020  CEG7030L  7030L  VLSI Des Synth Optim Lab  CEG  Computer Engineering
Required laboratory for EE 7530. (UG) Department Managed Prerequisite(s): (Undergraduate level EE 4620 Minimum Grade of D and Undergraduate level EE 4620L Minimum Grade of D or Graduate level EE 6620 Minimum Grade of D and Graduate level EE 6620L Minimum Grade of D or Graduate level EE 6620 Minimum Grade of D or Graduate level EE 6620L Minimum Grade of D or Graduate level EE 6620 Minimum Grade of D- or D+)
GR  LB  Lab

Fall 2020  BME4850  4850  Six Sigma for Engineers  BME  Biomedical Engineering
Introduction to the practical application of Six Sigma tools in production and service contexts. Includes videos
and case studies of real world applications. Six Sigma Green Belt Certificate awarded to students upon successful
completion of course and in-class project.
UG  LE  Lecture

Fall 2020  CEG6400  6400  Comp Networks & Security  CEG  Computer Engineering
This course covers fundamental knowledge on computer networks, network security, and technologies for
ensuring network security. (UG) Department Managed Prerequisite(s): Undergraduate level CEG 3310 Minimum
Grade of D or Graduate level CEG 5310 Minimum Grade of D- or
GR  LE  Lecture

Fall 2020  MLB4210  4210  Urine/Body Fluid Analysis  MLB  Medical Laboratory Science
Study of body fluids, including the pathophysiology of their formation and the biochemical and morphologic
methods used to obtain diagnostic information.
UG  LE  Lecture

Fall 2020  KNH1770A  1770A  Water Safety Instruction  KNH  Kinesiology & Health
National American Red Cross standards training for teaching American Red Cross Swimming and Diving and
Water Safety courses.
UG  LL  Lecture/Lab Combust

Fall 2020  SOC3110  3110  Sociology of Religion  SOC  Sociology
Explores the influence that various religions have on society and, in turn, on the effect of social structure and
culture on religion. Attention given to American religiosity as well as religion in other cultures.
UG  LE  Lecture

Fall 2020  PSY4520  4520  Prejudice Research Cap  PSY  Psychology
Discusses research on the topics of stereotyping, prejudice, discrimination, and related phenomena. Integrated
Writing course.
UG  SE  Seminar

Fall 2020  COM4320  4320  Race Class Gender Comm  COM  Communication
Theoretical and pragmatic consideration of the impact of race, class, and gender on the communication process
within society.
UG  LE  Lecture

Fall 2020  CS8960  8960  PhD Candidacy Exam  CS  Computer Science
Examination that tests for depth of understanding in a chosen computer science and computer engineering
research area. Includes a written proposal for a Ph.D. topic and an oral examination, that is open to the public.
GR  IS  Independent Study
Fall 2020
ME4700  6700  Structure & Properties of Materials  ME  Mechanical and Materials Engineering  3  Effect of microstructure, phase equilibrium, and processing on properties of structural materials including metallic alloys, polymers, and composites. / Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level MTH 2320 Minimum Grade of D/<br/>

Fall 2020
HST4900  4900  Research Seminar  HST  History  3  Tools and techniques for preparing a significant research paper in conformity with contemporary standards. / Integrated Writing course.  UG  SE  Seminar

Fall 2020
MUS1150  1150  Fund of Musicanship II  MUS  Music  3  Class instruction in functional music theory, sight-singing and musicianship skills, keyboard skills including technique, chord inversions, harmonization, sight reading, and performing repertoire pieces.  UG  LE  Lecture

Fall 2020
ASL1020  1020  Beginning ASL II  ASL  American Sign Language  4  A continuation of the introduction to conversational skills in American Sign Language, including study of vocabulary and structure of ASL sentences, practice in conversation both receptive and expressive and exposure to Deaf culture. Outside activity required.  UG  LE  Lecture

Fall 2020
ISE4810  4810  Prod & Serv Sys  ISE  Industrial & Systems Engineering  3  Explores quantitative techniques as applied to planning and control of systems in production and service industries. Applications include inventory control, scheduling, waiting time & variability management and production/workforce planning.  UG  LE  Lecture

Fall 2020
PSY6600  6600  Human Factors Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on human factors psychology. Topics will vary.  GR  SE  Seminar

Fall 2020
SOC2700  6700  Explaining Crime  SOC  Sociology  3  Provides students with a sound understanding of theories of crime and how they operate within society as part of our understanding of the criminal justice system.  GR  LE  Lecture

Fall 2020
PTX8005  8005  Mad Bio Defense  PTX  Pharmacology/Toxicology  3  This course will provide an overview understanding of the most important biodefense and emerging infectious agents, their epidemiology, pathogenesis, animal models, and medical/ environmental countermeasures with reference to regulatory requirements.  GR  LE  Lecture

Fall 2020
EES1050  1050  Dynamic Earth  EES  Earth & Environmental Sciences  4  Processes that have shaped the earth from its origin until the present. Origin and evolution of life. Focuses on understanding the nature of science by examining earth materials (minerals, rocks, fossils) and features (represented by geologic and topographic maps) and what these reveal about the past and present.  UG  LE  Lecture

Fall 2020
MUE6670  6670  Pep Band  MUE  Music: Ensembles  1  Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities.  GR  LL  Lecture/Lab Combination

Fall 2020
PSY6370  6370  Psychology of Aging Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on theories, methods, and research related to human aging. Focus on both current research and applications from psychology.  GR  SE  Seminar

Fall 2020
PHH7530  7530  Health Systems Comm  PHH  Population & Public Health  2  The course introduces principles and practices of communication in health systems settings. Students develop knowledge in communication styles, interpersonal relations, conflict management, grant writing, consensus building, conducting meetings, corresponding, and community communication with the media, interviews, and risk communication. Case studies are used from healthcare and other sectors. The course is presented by an interdisciplinary team of faculty and community leaders.  GR  LE  Lecture

Fall 2020
PLS7791  7791  Principle of Intelligence  PLS  Political Science  2  This seminar examines the role of intelligence in security, and the rigorous techniques used by analysts. Data collection, analysis, and policy recommendations to develop threat and vulnerability assessments are the focus.  GR  SE  Seminar

Fall 2020
TH4580  4580  Singing Min Theatre VIII  TH  Theatre  2  Private singing lessons for musical theatre.  UG  ST  Studio

Fall 2020
KNH1220A  1220A  Fencing: Competitive  KNH  Kinesiology & Health  1  Intermediate level of skills and knowledge in Fencing: Competitive. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020
MGT4950  4950  HR Capstone  MGT  Management  3  Address timely and important issues for human resource professionals. This course requires extensive team work, effective communication through writing and presentations, and a high degree of professionalism. This course is an integrated writing (IW) course within the Human Resource Management Major.  UG  LE  Lecture

Fall 2020
DOCS9000  9000  Colloquium in Org Stdu  DOS  Doctor Org Studies  1  Doctoral level seminar examining and synthesizing assumptions, concepts, theories, and methodologies that inform research in organizations.  GR  SE  Seminar

Fall 2020
BMS7100  7100  Continuous Control  BMS  Biomedical Sciences  3  Introductory course providing students with a general control background. Major topics include block diagrams and signal-flow graphs, electromechanical modeling, time response, root locus, and design of PID controllers.  GR  LE  Lecture

Fall 2020
EC4360  4360  Industrial Organization  EC  Economics  3  Analyzes business behavior under various industry structures and government policies. Emphasizes actual case studies.  GR  LE  Lecture

Fall 2020
ANT2100  2100  Human Anatomy & Phys I  ANT  Anatomy  4  Introductory survey of the anatomy and physiology of the human body with an emphasis on clinical applications. Anatomical terminology, biochemistry, cells, tissues, integumentary system, skeletal system and, articulations, nervous system, special senses and muscular system. Laboratory exercises use human donors.  UG  LE  Lecture

Fall 2020
EES6720  6720  Epidem & Community Hlth  EES  Earth & Environmental Sciences  3  Study of communicable and occupational diseases of contemporary importance; includes epidemiological investigation, environmental considerations, and control procedures.  GR  LE  Lecture

Fall 2020
SCM7880  7880  Foundations of SCM  SCM  Supply Chain Management  3  Strategic role of integrated supply chain management, supply chain design and dynamics; supply chain frameworks and customer-focused design. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture

Fall 2020
EDS6590  6590  Assessment Skills for IS  EDS  Education: Special Education  3  Administration and interpretation of formal and informal educational assessment instruments and communication of assessment data to parents, students, and colleagues. Fifteen hours of field experience required.  GR  LE  Lecture

Fall 2020
EDS6575  6575  MA Intern P/JI ST CIS  ED  Education  8  Candidates, under the direct supervision of an experienced teacher/mentor, are assigned to a school for intensive teaching experience in grades K-12: Computer Information Science classroom.  GR  IN  Internship

Fall 2020
EES4740  4740  Fund Occup Hlth & Safety  EES  Earth & Environmental Sciences  3  Accident recognition, evaluation, and control in the work environment regarding hand/arm equipment use. Emphasizes methods of inspection, accident investigation, and evaluation of accident programs.  UG  LL  Lecture/Lab Combination

Fall 2020
ENG6920  6920  Internship in Writing  ENG  English  3  Supervised professional writing in workplace setting.  GR  IN  Internship

Fall 2020
PPH7510  7510  Strat Lead Health Care  PPH  Population & Public Health  3  This course will introduce students to concepts, principles, and practices of strategic management in multiple health care settings. Cases will be used from the health care industry as well as other business sectors to expose students to the field of organizational behavior. Students will develop their knowledge in areas including negotiation, leadership, organizational design and culture, how people work in organizations, quality improvement, communication, stakeholder and SWOT analysis, and current approaches to the development of strategic plans.  GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG3550</td>
<td>Teaching Shakespeare</td>
<td>ENG</td>
<td>3</td>
<td>Survey and discussion of plays by Shakespeare in the context of his times and with attention to teaching Shakespeare in high school. Topics include Shakespeare's texts and their performance in film and theatre.</td>
</tr>
<tr>
<td>ANT4030</td>
<td>Biomedical Review Article</td>
<td>ANT</td>
<td>2</td>
<td>Graduate students will select a biomedical topic, critically analyze the scientific literature associated with it, and write a scientific review article on that topic.</td>
</tr>
<tr>
<td>ME6585</td>
<td>Natural Gas Prod EGR</td>
<td>ME</td>
<td>3</td>
<td>Students will be able to demonstrate a knowledge of natural gas production and the associated separation processes to extract gas from oil, recognize the properties of natural gas, perform design calculations involved in production, development and distribution of natural gas, demonstrate a knowledge of efficient treatments in natural gas production and demonstrate a knowledge of the environmental impacts of natural gas.</td>
</tr>
<tr>
<td>SPN5220</td>
<td>Adv SPN Core and Writing</td>
<td>SPN</td>
<td>3</td>
<td>Conversational and writing techniques and grammar review; literary and/or film and/or media analysis incorporating targeted grammar, vocabulary, and stylistic devices. Taught in Spanish.</td>
</tr>
<tr>
<td>SLJ4540</td>
<td>Mental Health Interpret</td>
<td>SLI</td>
<td>3</td>
<td>An introduction to mental health interpreting will prepare Interpreters to work with Deaf clients, providing appropriate and culturally affirming services, promote teamwork and understanding of mental health service providers and improve individual interpreting skills.</td>
</tr>
<tr>
<td>SW6000</td>
<td>Gerontology Practicum</td>
<td>SW</td>
<td>3</td>
<td>Supervised learning under direction of the Gerontology Certificate Director and staff from a social service agency serving older adults. Department Managed Prerequisite(s): Graduate level SW 6620 Minimum Grade of D or Graduate level SOC 6820 Minimum Grade of D(\geq3).</td>
</tr>
<tr>
<td>CS4260</td>
<td>Matrix Computations</td>
<td>CS</td>
<td>3</td>
<td>Numerical linear algebra survey using high-level computing tools. Topics include linear equations, matrix factorizations, eigenvalue problems, least squares, applications of singular value decompositions, and iterative methods for large sparse matrices. Conditioning of problems and accuracy and stability of algorithms are emphasized.</td>
</tr>
<tr>
<td>STT6460</td>
<td>Stat Methods Engineers</td>
<td>STT</td>
<td>4</td>
<td>Classical statistical techniques for analysis and interpretation of research data, with extensive use of statistical software. Includes review of basic statistics. Simple, multiple, and polynomial regression. Analysis of variance, techniques for interpretation of research data, with extensive use of statistical software. Includes factorial experiments, fixed and random effects, crossed and nested factors, and repeated measures. Department Managed Prerequisite(s): Undergraduate level STT 3610 Minimum Grade of D or Graduate level STT 5610 Minimum Grade of D(\geq3).</td>
</tr>
<tr>
<td>EE4730L</td>
<td>Wireless Comm Lab</td>
<td>EE</td>
<td>4</td>
<td>Application-rich environment that realizes the important modulation, demodulation and decision schemes that are the foundation of wireless communication. Department Managed Prerequisite(s): Undergraduate level EE 3260 Minimum Grade of D and Undergraduate level EE 4210 Minimum Grade of D(\geq3).</td>
</tr>
<tr>
<td>MTH1430</td>
<td>Precalculus</td>
<td>MTH</td>
<td>5</td>
<td>Functions and graphs, polynomial and rational functions, trigonometric and inverse trigonometric functions, conics, systems of equations, exponential and logarithmic functions, geometric series, binomial theorem.</td>
</tr>
<tr>
<td>BIO3140R</td>
<td>Molecular Bio Lab Rec</td>
<td>BIO</td>
<td>0</td>
<td>Required recitation for BIO 3140.</td>
</tr>
<tr>
<td>PSY8230</td>
<td>Psycholinguistics</td>
<td>PSY</td>
<td>2</td>
<td>This course introduces students to the major concepts and theories in the area of psycholinguistics, the study of language processes, primarily in humans.</td>
</tr>
<tr>
<td>NUR6903</td>
<td>School Nursing Practicum</td>
<td>NUR</td>
<td>3</td>
<td>Within the school environment, the school nurse student will focus on meeting the needs of the entire school community by applying and demonstrating the corresponding competencies which meet the standards of professional school nurse practice. School nurse students will apply strategies that support academic success of the school student through health promotion, health management, evidence based practice, care coordination, quality student centered care, and specific population health efforts.</td>
</tr>
<tr>
<td>GEO4950</td>
<td>Geography Internship</td>
<td>GEO</td>
<td>4</td>
<td>Application of theory to practice in the nonprofit, private, or public sector. Requires 125 hours of work for an agency.</td>
</tr>
<tr>
<td>MTE6990</td>
<td>Sel Topics Math Stat Ed</td>
<td>MTE</td>
<td>1</td>
<td>Selected topics pertinent to Pre K - 14 mathematics educators.</td>
</tr>
<tr>
<td>EE7360</td>
<td>Adv Wireless Comm Tech</td>
<td>EE</td>
<td>3</td>
<td>Fading Cancellation including ISI mitigation and Adaptive Equalization, Diversity, Coding and Interleaving for error correction, Speech Coding, Multiplexing and Multiple Access techniques including TDMA, FDMA, and CDMA; OFDM, CDMA, Wireless Networking, Packet Radio, Wireless LAN's including Bluetooth. Department Managed Prerequisite(s): Graduate level EE 7350 Minimum Grade of D(\geq3).</td>
</tr>
<tr>
<td>PLS4550</td>
<td>Politics of Iraq</td>
<td>PLS</td>
<td>3</td>
<td>Traces recent political history of Iraq since its formation in 1920s. Examine reasons for recent war and implications for Iraqi political future. Integrated writing course.</td>
</tr>
<tr>
<td>EC7840</td>
<td>Capstone Preparation</td>
<td>EC</td>
<td>3</td>
<td>Capstone Project. Course requires students to research a topic in economics. Includes study of survey techniques; discussion of data collection, cleansing, and outlier identification, and applied case studies employing econometrics and forecasting. Must have completed at least 6 courses in the MS in Social &amp; Applied Econ. Prog or Department Managed Prerequisite(s): Graduate level EC 5100 Minimum Grade of D and Graduate level EC 5220 Minimum Grade of D(\geq3).</td>
</tr>
<tr>
<td>COM6810</td>
<td>Independent Study</td>
<td>COM</td>
<td>1</td>
<td>Faculty-directed readings and research.</td>
</tr>
<tr>
<td>ED6120</td>
<td>Read &amp; Lit I. Int Spec</td>
<td>ED</td>
<td>3</td>
<td>Content knowledge of the structure of literacy and reading/writing instruction; instructional strategies for reading and writing and the theory that supports scientifically-based instruction.</td>
</tr>
<tr>
<td>PSY9600</td>
<td>Multivariate Methods</td>
<td>PSY</td>
<td>4</td>
<td>Issues in multivariate analysis are reviewed using statistical software programs. These issues include path analysis, principle components analysis, confirmatory factor analysis, and structural regression models.</td>
</tr>
<tr>
<td>MUS4840</td>
<td>Classic and Romantic Music</td>
<td>MUS</td>
<td>3</td>
<td>Study of music and critical analysis of representative works from major composers of Classical and Romantic music.</td>
</tr>
<tr>
<td>PSY2000</td>
<td>PSY Elective Topics</td>
<td>PSY</td>
<td>1</td>
<td>A variable elective topic in psychology. Topics vary.</td>
</tr>
</tbody>
</table>
Fall 2020  BME4550L  4550L  Biostatimstion  Laboratory  BME  Biomedical Engineering  0  Required laboratory for BME 4550.  UG  LB  Lab
Fall 2020  EED4200  4200  Math Methods P-5  EED  Elementary Education P-5  3  Curricula and materials for teaching P-5 Mathematics emphasizing conceptual math, growth mindset, integration, and interventions to meet the needs of diverse learners. Includes development and implementation of assessments, lessons, and appropriate modifications.  UG  LE  Lecture
Fall 2020  EE4600L  4600L  UAV Flight Control Lab  EE  Electrical Engineering  1  Laboratory supporting EE 4600/6600. Students will experience hands on learning in lab environment. Designing, implementing, and testing autonomous UAV flight control systems.  UG  LB  Lab
Fall 2020  CS7840  7840  Soft Computing  CS  Computer Science  3  This course explores soft computing from a historical, theoretical, and an application viewpoint. Techniques including evolutionary computation, neural computation, fuzzy set theory and approximate reasoning applied to problems in control, optimization, and classification are presented.  GR  LE  Lecture
Fall 2020  MUS6430  6430  Vocal Pedagogy  MUS  Music  3  This course is designed to make students familiar with physiological and psychological aspects of voice so they will better understand their own instruments and will be better equipped to teach others.  GR  LE  Lecture
Fall 2020  P&N7750  7750  Neuroscience & Phys  P&N  Physiology & Neuroscience  3  In-depth coverage of cellular neuroscience with an emphasis on physiological concepts. Subjects include nervous system development, generation of ion gradients, ionic basis of the action potential, synaptic transmission, and ion channels.  GR  LE  Lecture
Fall 2020  ABS7800  7800  Continuing Registration  ABS  Applied Behavioral Science  1  Continuing Registration.  GR  IS  Independent Study
Fall 2020  DAN2080  2080  Beginning Tap Dance II  DAN  Dance  1  Group class continues to introduce students to fundamentals of tap dance technique.  UG  ST  Studio
Fall 2020  HST4810  4810  African-American History  HST  History  3  Examines topics drawing from the African-American experience; may include block ideology and leadership, racial tension in urban society, and the civil rights movement. Topics vary. Integrated Writing course.  UG  LE  Lecture
Fall 2020  SM2100  2100  Scientific Inquiry  SM  Science and Mathematics  3  Introduction to the WCU COSM Applying Scientific Knowledge (ASK) Program, which expands student research opportunities by integrating the research experience into actual coursework. The program starts with this course, a research methods/design course in which students develop skills to execute, analyze and communicate science. They build on this knowledge by becoming part of a "research stream" cohort for the following two semesters.  UG  LL  Lecture/Lab Combination
Fall 2020  ACC4460  4460  Financial Strett Analysis  ACC  Accountancy  3  Topics in financial statement analysis and firm valuation suitable for undergraduate accounting students. Focus in this course is on applying methods to analyze firm strategies using financial statement analysis. Relevant for assessing value generated by various strategic scenarios. Students work together in small groups, using the financial statements of public firms, to practice applying analysis techniques learned in class.  UG  LE  Lecture
Fall 2020  PPH1710  7170  PH Epidemiology II  PPH  Population & Public Health  3  Through homework, readings, exercises and case projects, students will gain hands-on experience in epidemiologic research.  GR  LE  Lecture
Fall 2020  EDS4650  4650  Transitions Exceptions  EDS  Education - Special Education  3  Role of intervention specialists in shaping transition for students with exceptionalities. Focus on high school/college transition with consideration of transitions at earlier levels. Ten hours field experience with student age 14-22 required.  UG  LE  Lecture
Fall 2020  ART4580  4580  Adv Photo Practices  ART  Art  3  Exploration of advanced photographic materials and photography techniques. Investigation of aesthetic possibilities of the media. Development of personal concepts and aesthetic expression in photography. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture
Fall 2020  LA3990  3990  Studies Select Subjects  LA  Liberal Arts  1  Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated three times.  UG  LL  Lecture/Lab Combination
Fall 2020  FAS2050  2050  Intro to Horticulture  FAS  Food and Agricultural Systems  3  Designing, maintaining, and cultivating vegetable gardens. Topics include soil amendments, nutrients, integrated pest management, plant selection, garden layout, harvesting and produce care.  UG  LL  Lecture/Lab Combination
Fall 2020  DOS9040  9040  Org. in Global Environ.  DOS  Doctor Org Studies  3  Concepts, models and international linkages for understanding organizational performance in a global world are provided. Emphasis is placed on issues facing 21st century leaders and on preparation for effective management in an interconnected world.  GR  SE  Seminar
Fall 2020  ATH4650  4650  Archaeology Field School  ATH  Anthropology  3  Summer field training in the methods of excavation and data recording at selected archaeological sites.  UG  LB  Lab
Fall 2020  MGT4850  4850  International Management  MGT  Management  3  Distinctive managerial challenges in conducting business in diverse regions and nations around the world, environmental constraints and functional competencies in international management.  UG  LE  Lecture
Fall 2020  SAA7650  7650  Internship I in SAHE  SAA  Student Affairs in Higher Ed  1  This field-based experience provides students with practice and supervision in areas of interest in SAHE.  GR  IN  Internship
Fall 2020  EDPS4195  4195  Pract II: Dyslexia Meth&Dtrlv  EDPS  Education - Special Education  1  Use assessment data to plan and implement dyslexia remediation in a professional setting. Write professional case study integrating assessment and tutoring data. Required: 30 hours of field experience.  UG  PB  Practicum
Fall 2020  HEA9260  9260  The Community College  HEA  Higher Education Admin  3  Explores the historical roots of the most exciting, important innovation in American higher education since the Second World War, the community college. How and why did they come into being, how do they really work, and how can we make them more effective?  GR  LE  Lecture
Fall 2020 | ATR7950 | 7950 | Clinical Practice V | ATR | Athletic Training | 4 | Immersive clinical experience. Calming experience allowing for mastery of all competencies and proficiencies throughout the athletic training program, including appropriate mental health counseling techniques and professional preparation. | GR | IN | Internship

Fall 2020 | ED3850 | 3850 | MCE Gen Science Instr | ED | Education | 3 | Methods for teaching middle level science pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula, and materials suitable for teaching through fourth through sixth grade science education. | UG | LE | Lecture

Fall 2020 | DAN2310 | 2310 | Intermediate Jazz II | DAN | Dance | 2 | Second-year intermediate jazz dance technique. Focus on technical diversity, musicality, artistry, and performance and on increasing body strength, flexibility, and kinesthetic awareness. | UG | ST | Studio

Fall 2020 | FR4930 | 4930 | Franco-American Films | FR | French | 3 | This course will examine the Americanization of selected French language films as a powerful tool for cross-cultural comparison. Film pairs analyzed may include Breathless and A Bout de souffle, Les Visitants and Just Visiting, La Femme infidele andilestone, etc. Taught in French. Integrated Writing course.<br>Department Managed Prerequisite(s): (Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D)<br>UG | LE | Lecture

Fall 2020 | ED7220 | 7220 | Teaching Writing K-12 | ED | Education | 3 | Study of writing methodologies and the processes of teaching writing in grades K-12. Includes research into the theories of writing acquisition and the reciprocity between writing and reading. | GR | LE | Lecture

Fall 2020 | KNH1780B | 1780B | Weight Training | KNH | Kinesiology & Health | 1 | Fundamental skills and knowledge of Weight Training. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab

Fall 2020 | PSY4530 | 4530 | Psychology and Law | PSY | Psychology | 3 | Communication-intensive seminar integrating knowledge within forensic psychology. Integrated Writing course. | UG | SE | Seminar

Fall 2020 | SOC3310 | 3310 | Gilbmt & Social Change | SOC | Sociology | 3 | Explanations of social change in modern societies. Emphasis on identification of sources of change, effects of change throughout society, major trends, and issues for the future. | UG | LE | Lecture

Fall 2020 | SLJ3580 | 3580 | Adv ASL for Interpreters | SLI | Sign Language Interpreting | 3 | An advanced American Sign Language (ASL) course designed for interpreters for the Deaf. Focus will be on natural use of language and grammatical features while reviewing sentence structure, register, prosodic features and boundary markers. | UG | LE | Lecture

Fall 2020 | BHE6320 | 6320 | Hum-Sys Int & Usab Engr | BHE | Industrial & Hum Fac Engr | 3 | User-centered design and usability testing for product development with an emphasis on human-computer interfaces.<br>Department Managed Prerequisite(s): Graduate level HBE 6300 Minimum Grade of D<br>UG | LE | Lecture

Fall 2020 | PSY3610 | 3610 | Conditioning & Learning | PSY | Psychology | 3 | Introduction to experimental findings and contemporary theories of conditioning, learning, and motivation. | UG | LE | Lecture

Fall 2020 | THS310 | 310 | Theatre History I | TH | Theatre | 3 | Exploration of a variety of later theatrical texts and pertinent history. Integrated Writing course. | UG | LE | Lecture

Fall 2020 | M&I6750 | 6750 | Pathogenic Mechanisms | M&I | Microbiology & Immunology | 4 | Pathogenic Mechanisms of M&I Microbiology & Immunology 4 (Also listed as BMS 7750) This advanced level course will expand the knowledge of basic microbiology by focusing on human-microbial pathogen interactions. The molecular basis of the pathogenic mechanisms will be emphasized. In addition, the student will gain a better appreciation and understanding of the complexities of interactions between microbes and their human hosts. | GR | LE | Lecture

Fall 2020 | CHM7500 | 7500 | Intro to Quantum Chem | CHM | Chemistry | 3 | Introduction to the ideas and mathematical techniques of quantum theory, including applications to some simple chemical systems. | GR | LE | Lecture

Fall 2020 | ED7030 | 7030 | LA and SS Grades 4-5 | ED | Education | 3 | Pedagogy and content knowledge of content area reading through the study of grades 4 and 5 social studies. | GR | LE | Lecture

Fall 2020 | KNH3440 | 3440 | Phys Ed for Disabled | KNH | Kinesiology & Health | 1 | Fundamental skills and knowledge of Physical Education for Disabled. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab

Fall 2020 | ENG3310 | 3310 | American Texts: to 1890 | ENG | English | 3 | Representative works of American writers from the colonial era until 1890. | UG | LE | Lecture

Fall 2020 | CHI3210 | 3210 | Chinese Composition | CHI | Chinese | 3 | Development of composition skills using famous Chinese writings as guided examples of grammar and techniques. Taught in Chinese. If prerequisite not met, contact instructor for permission.<br>Department Managed Prerequisite(s): Undergraduate level CHI 3020 Minimum Grade of D or Undergraduate level CHI 310 Minimum Grade of D | UG | LL | Lecture/Lab Combination

Fall 2020 | ECE3750 | 3750 | Writing Methods in ECE | ECE | Education - Early Childhood | 3 | The study of writing development, writing theory, writing genres, writing assessment, instructional pedagogy, and materials in early childhood language arts program development, and the integration of literature and language arts across PK-3 grade curricula. Integrated Writing course. | UG | LE | Lecture

Fall 2020 | LRS3000 | 3000 | Special Topics | LRS | Life and Recreational Skills | 1 | Life and recreational skills course at the Lake Campus. Topic varies by term and instructor. | UG | LB | Lab

Fall 2020 | CHM4720 | 4720 | Chemical Crystallography | CHM | Chemistry | 3 | Methodology and techniques in the determination of crystal structure by using single-crystal x-ray diffraction. | UG | LE | Lecture

Fall 2020 | KNH1210 | 1210 | Fencing: Intermediate | KNH | Kinesiology & Health | 1 | Intermediate level of skills and knowledge in Fencing. Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab

Fall 2020 | MTH6510 | 6510 | Modern Algebra I | MTH | Mathematics | 3 | Elementary number theory: divisibility, prime numbers, congruences, quadratic reciprocity, and number-theoretic functions. This provides an introduction to rings, integral domains, and fields.<br>Department Managed Prerequisite(s): Undergraduate level MTH 2400 Minimum Grade of D<br>UG | LE | Lecture

Fall 2020 | ATH5400 | 5400 | Special Topics-Bio ATH | ATH | Anthropology | 3 | Intensive study of selected graduate-level topics in Biological or Medical Anthropology. Topics vary. | GR | LE | Lecture

Fall 2020 | MTH2300 | 2300 | Calculus I | MTH | Mathematics | 4 | Examine limits, the derivative, differentiation, applications of the derivative, antiderivatives, Riemann sums, the definite integral, and the fundamental theorem of calculus. | UG | PKG | Combination

Fall 2020 | BMS5331 | 5331 | Quant Workload Analysis | BMS | Biomedical Sciences | 3 | Physiological and mathematical methods needed to accomplish a workload analysis as requisite to a system design or a redesign of an ergonomic system. | GR | LE | Lecture

Fall 2020 | PHY4450 | 4450 | Teaching Physical Sci | PHY | Physics | 3 | Pedagogical content knowledge and skills necessary to teach physical science. Includes an analysis of the high school physics curriculum and detailed development of teaching strategies for most physical science topics. | UG | LL | Lecture/Lab Combination

Fall 2020 | ENG7200 | 7200 | Teaching College Comp I | ENG | English | 3 | Introduction to the theory and pedagogy of college-level writing courses. Requires concurrent teaching or tutorial experience. Required of all first-year English teaching assistants. | GR | LE | Lecture

Fall 2020 | IT2230 | 2230 | Web Integration | IT | Information Technology | 4 | Integration of the web design process into a usable product. Overview of how web productions multimedia and interactivity interact with the Internet and databases. | UG | LE | Lecture

Fall 2020 | URS3200 | 3200 | Comm/Reg Planning I | URS | Urban Affairs | 3 | Development of city planning as a professional discipline that has significantly shaped urban spaces. Explores planning practices and theories related to spatial patterns and design, including location theory and democratic processes. | UG | LE | Lecture
This course covers the nature of sourcing in modern organizations, how sourcing executes business strategy, legal issues and accepted practices and techniques are presented.

Explores contemporary women movements at local and national levels to understand different forms of feminist activism and encourage civic engagement. Service Learning course.

Practical application of microbiology techniques at a clinical site.

Survey of popular musical theatre from its origin in classic opera to the present. Emphasis on the Broadway musical since the 1940s.

Provides an experience in counseling, interviewing, training, and/or consultation in which the student under supervision, demonstrates skills in educational, vocational, organizational, and/or personal areas to individuals and/or groups.

Diverse experiences of urban youth and effect of urban experiences on students, teachers, schools, and communities. Methods for providing resource access for all.

Quantitative trading strategies will be discussed in detail. Excel will be used extensively in this course. A background in programming is recommended.

The course prepares the students to learn design aspects used in orthopaedic devices. It introduces the learner the components and designs of total joint replacement implants and fixation methods. Students research FDA approval categories for various types of devices.

Prerequisite: AYA ED Education 2

Goethe's Faust GER German 3

Goethe's Faust II. Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3260 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3350 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D.

Lab

3

A lecture course will assist students in the completion of their aerospace medicine research project required for graduation.

Practical application of clinical chemistry techniques at a clinical site.

A selected topic in a core area of psychology. Topics vary.

GIL regulations are a set of international standards developed to ensure quality and reliability of safety data submitted to regulatory authorities. This course is a study of the standards and principles governing the conduct of pharm/tox studies.

An intensive study of Faust I and Faust II. Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3260 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3350 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D.

Approach to learning self-defense techniques and basic tactics, in a setting that promotes the development of a personal style.

Fundamental skills and knowledge of GRAICE SelfDefense: Basic. Competency-based approach. Course may accommodate disabled students when appropriate.

Lab

This course explores the marketing and public relations aspects of sports programs and sporting events. Current issues and accepted practices and techniques are presented.

The course will assist students in the completion of their aerospace medicine research project required for graduation.

Comprehensive study of Faust I and Faust II. Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3260 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3350 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D.

Lab

3

Basic Self Defense: Basic. Competency-based approach. Course may accommodate disabled students when appropriate.

Lab

Lab

Lab

Lab

Lab
Fall 2020
PLS6420 6420 Criminal Justice Systems PLS Political Science 3 Survey of the American criminal justice system concentrating on political aspects. Topics include police, judges, attorneys, supreme court decisions, crime, and public opinion. GR LE Lecture
Fall 2020
BME7850 7850 Lean Proc Impr Eng BME Biomedical Engineering 3 Introduction to the practical application of lean manufacturing and kaizen techniques in multiple environments. Includes case studies and team projects based on real world problems and solutions. <b>Department Managed Prerequisite(s):</b> Graduate level IHE 6310 Minimum Grade of D+<b>/3</b> GR LE Lecture
Fall 2020
LAT5150 3510 Readings in Roman Drama LAT Latin 3 Drama in Latin by Seneca, Plautus, and/or Terence. Discussion of dramatic techniques, Greek influence, and the role of drama in Roman society. UG LE Lecture
Fall 2020
ENG4610 4610 Rhetoric, Culture ENG English 3 Rhetorical approaches to analyzing language and persuasion. Topics include the role of metaphor, language, and thought; how language operates as discourse within texts, groups and situations; first-hand research of culture and persuasion. GR LE Lecture
Fall 2020
ECC5000 5000 Econ Study for Teachers ECO Center for Economic Educ. 1 Variable titled course for selected economic issues and topics and techniques for teaching them in the K-12 classroom. This course has a fee that is non-refundable once the term begins. GR LL Lecture/Lab Combination
Fall 2020
PHH3820 7820 Chief Ethics Issues Case Study PHH Population & Public Health 3 This course will introduce the student to a systematic method of clinical case analysis, followed by a survey of major ethical clinical issues. These will include reproductive ethics, shared decision-making and decisional capacity, prenatal and pediatrics decision-making, substance abuse and addiction, end of life ethics including medically-assisted dying, and cultural and religious beliefs. Case studies will complement the historical and ethical analysis of each topic. <b>Department Managed Prerequisite(s):</b> Graduate level PHH 7810 Minimum Grade of D+<b>/3</b> GR LE Lecture
Fall 2020
PHL3100 3100 American Philosophy PHL Philosophy 3 A look at the American Pragmatist Tradition from Peirce, James and Dewey to recent American philosophers such as Quinn, Davidson, Rorty and Putnam. Integrated Writing course. UG LE Lecture
Fall 2020
HST7300 7300 Seminar Latin Amer Hist HST History 3 Examinations selected Latin American nations and regions (e.g., Mexico, Argentina) and particular topics (e.g., Authoritarianism) in detail. Topics vary. GR SE Seminar
Fall 2020
BIO120L 1120L Cells & Genes Laboratory BIO Biology 0 Required laboratory for BIO 1120. UG LB Lab
Fall 2020
ABT7910 7910 Graduate Thesis Research ABS Applied Behavioral Science 1 Research for the Master’s degree thesis. GR IS Independent Study
Fall 2020
APS3010 3010 Training & Presentations APS Applied Studies 3 This course will emphasize the development of listening skills, public speaking skills, interviewing skills, and training skills. The course explores communication skills including training and development as a research and training focus for students to apply toward their chosen field. Students will learn how to identify and assess communication competence and how to develop training programs and presentations to enhance communication competency. UG LE Lecture
Fall 2020
NUR925 8925 DNP Scholarly Project NUR Nursing 1 This course represents the final course in the DNP program. The scholarly project is defended through evaluation and dissemination. GR PR Practicum
Fall 2020
BME4703R 4703R Medical Imaging Recitation BME Biomedical Engineering 0 A recitation section that focuses on problem solving skills that apply to medical imaging. UG RR Recitation
Fall 2020
PHY7000 7000 Prin. of Instr-Phys. Lab PHY Physics 2 Survey of available instructional materials and discussion of educational theory and techniques leading to more effective instruction in the physics laboratory. For physics majors only or departmental approval required. GR RL Lecture/Lab Combination
Fall 2020
OL4020 4020 Community-Based Learning OL Organizational Leadership 3 Investigation of key issues within community-based organizations. Students volunteer their service to local organizations while demonstrating their learning through reflective exercises, written assignments, and final presentations. UG SE Seminar
Fall 2020
KNIH120B 1210B Fencing: Intermediate KNIH Kinesiology & Health 1 Intermediate level of skills and knowledge in Fencing: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab
Fall 2020
SW6110 6110 Social Welfare Policy I SW Social Work 0 Provides overview of social welfare and social work as a profession in context of social work values and ethics. Includes critical analysis of historical and current interactions of social welfare policies, programs, and services with diverse recipient populations. GR LE Lecture
Fall 2020
RHB4707 3670 Creation of EBP RHB Rehabilitation 3 Basic concepts in research as applied to the rehabilitation field, including theory, design, variables, measurement, hypothesis testing, and validity. UG LE Lecture
Fall 2020
UCV1040 1040 Critical Reading UCV University College 2 Critical analysis of current area readings. Recognizing organizational patterns, point of view, propaganda and persuasive writing; analyzing arguments; distinguishing fact from opinion; making inferences; understanding logical reasoning; interpreting graphic illustrations; drawing conclusions. UG LE Lecture
Fall 2020
KNIH1680 1680 Swimming: Advanced KNIH Kinesiology & Health 1 Advanced level of skills and knowledge in Swimming: Advanced. Competency-based approach. Course may accommodate disabled students when appropriate. GR LB Lab
Fall 2020
MKT7510 7510 Viral Mit & Social Media MKT Marketing 3 This course focuses on theory, application and practice associated with viral marketing activities. Goals for students are 1) identify the major components of a viral marketing campaign 2) understand how the viral marketing approach is being used strategically by advertisers and marketers 3) understand the psychological motivations associated with content sharing (WOM). GR LE Lecture
Fall 2020
MUE2860 2680 Jazz Band MUE Music: Ensembles 1 A jazz performance-oriented group. Students learn elements of ensemble execution, professionalism, jazz history, jazz styles, and jazz improvisation. Audition required. UG LL Lecture/Lab Combination
Fall 2020
UCV1000 1000 College Success Topics UCV University College 1 Variable topics, including study strategies, returning to learning for veterans, returning to learning for adults, Phoenix program. UG LE Lecture
Fall 2020
ISG7220 7220 Nat & Nur St Gif Ed Nat ISG Intervention Specialist Gifted 3 Addressing cognitive, affective, social, and physical characteristics of students with gifted and talented needs in the educational setting. GR LE Lecture
Fall 2020
BME4990 4990 Independent Study in BME II BME Biomedical Engineering 1 Undergraduate independent studies in advanced biomedical engineering. Topics vary. GR IS Independent Study
Fall 2020
CS7720 7720 Advanced Data Mining CS Computer Science 3 Advanced data mining is concerned with the extraction of novel and useful knowledge from large amounts of data. This course studies the fundamental and advanced concepts, principles, issues, tasks and techniques of data mining. Topics include data preparation, data mining for various knowledge types, data mining from various data types and applications, evaluation and validation, scalability. <b>Department Managed Prerequisite(s):</b> Graduate level CS 6710 Minimum Grade of D+<b>/3</b> GR LL Lecture/Lab Combination
Fall 2020
ENG7910 7910 Independent Study ENG English 3 Faculty-directed independent study in literature or language usually requiring reports and conferences with the instructor. A maximum of three credits may be applied to the M.A. degree. GR IS Independent Study
Fall 2020  | ME7780  | 7780 | Ceramics-Advanced Appl Eng | ME | Mechanical and Materials Engineering | 3 | Science and technology of ceramics and glasses and their use in various products; atomic structure; bonding; defect-structure-property relations; thermal and structural ceramics; electronic, optical, and dielectric ceramics; and special applications. | GR | LE | Lecture

Fall 2020  | HST4950  | 4950 | Independent Readings | HST | History | 1 | Faculty-directed readings in a field of student’s choice. | UG | IS | Independent Study

Fall 2020  | EDS4730  | 4730 | IS Student Teaching | EDS | Education - Special Education | 9 | Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in a grades K-12 classroom. | UG | IN | Internship

Fall 2020  | SPM5702  | 7020 | Fiscal Mgt in Sport | SPM | Sports Management | 1 | This course explores the financial principles related to managing sports organizations. Budget management, development, management, and accountability are explored and current practices presented. | GR | LE | Lecture

Fall 2020  | CS6270  | 6270 | Optimization Techniques | CS | Computer Science | 3 | Algorithms for optimizing real functions of several variables subject to equality and inequality constraints. Convexity properties of functions and sets, linear programming, simplex and interior point methods, integer programming, branch and bound algorithm, transportation problem, necessary and sufficient conditions for nonlinear function optimization, Newton and quasi-Newton methods, Lagrange multiplier conditions, Kuhn-Tucker conditions, dynamic programming. | GR | LE | Lecture

Fall 2020  | BIO4900  | 4900 | Biology Internship | BIO | Biology | 3 | Off-campus experience in cooperating scientific agency or industrial organization. Reports and specific assignments determine in consultation with faculty advisor and supervising professionals. Application required. | UG | IS | Independent Study

Fall 2020  | M&I4990  | 4990 | Problems in Microbiology | M&I | Microbiology & Immunology | 2 | Physiological and biochemical processes unique to microorganisms and the host response to microbes. | UG | LE | Lecture

Fall 2020  | GER3820  | 3820 | Applied Elem Ger Instr. | GER | German | 1 | German majors and minors assist GER 1010 or GER 1020 course instructors in conducting classes. Taught in German. | GR | LE | Lecture

Fall 2020  | ENG1570  | 1570 | Reading Workshop | ENG | English | 3 | Advanced strategies for teaching reading to middle school and adolescent students with an emphasis on literary response and workshop pedagogy. | UG | LE | Lecture

Fall 2020  | MP3310  | 3310 | Studies in Film History | MP | Motion Picture | 3 | Intensive study of selected areas of film history. Topics and topics vary. | UG | LE | Lecture

Fall 2020  | MUS3490  | 3490 | Music Since 1900 | MUS | Music | 3 | Study of music and critical analysis of representative works from major composers of music written after 1900. | UG | LE | Lecture

Fall 2020  | PHIL3060  | 3060 | Analytic Philosophy | PHIL | Philosophy | 3 | Survey of the analytic tradition including philosophers such as Frege, Russell, Wittgenstein, Carnap, Quine, Davidson, Kripke, Putnam, and Nagel. Integrated Writing course. | UG | LE | Lecture

Fall 2020  | LE1000  | 1000 | Intro to Law Enforcement | LE | Law Enforcement | 3 | Functions of law enforcement, community policing, patrol, traffic enforcement and criminal law. | UG | LE | Lecture

Fall 2020  | PHY4630  | 4630 | Solid State Physics | PHY | Physics | 3 | Functions of law enforcement, community policing, patrol, traffic enforcement and criminal law. | UG | LE | Lecture

Fall 2020  | ED4490  | 4490 | Teacher Music Ed | ED | Education | 2 | Teacher candidates will be provided the necessary knowledge and skills regarding issues affecting education to assist them in making a successful transition from being a teacher-candidate to becoming a professional educator. | UG | LE | Lecture

Fall 2020  | EED3300  | 3300 | Intro to Child Dev | EED | Elementary Education P-5 | 3 | The physical, cognitive, language, social, and emotional development (typical and atypical) of children prenatally through age eight. | UG | LE | Lecture

Fall 2020  | FIN4770  | 4770 | Independent Study in Fin | FIN | Finance | 1 | Independent study in selected areas of finance or financial services. | UG | IS | Independent Study

Fall 2020  | ABS7220  | 7220 | Sem on Criminal Justice | ABS | Applied Behavioral Science | 3 | An investigation of the criminal justice system in the United States and its relation to deviant adult and juvenile behavior. | GR | LE | Seminar

Fall 2020  | ISE8450  | 4580 | Six Sigma for Engineers | ISE | Industrial & Systems Engr | 3 | Introduction to the practical application of Six Sigma tools in production and service contexts. Includes videos and case studies of real world applications. Six Sigma Green Belt Certificate awarded to students upon successful completion of course and in-class project. | UG | LE | Lecture

Fall 2020  | CEG3320  | 3320 | Digital System Design | CEG | Computer Engineering | 4 | Basics of digital computer hardware and design. Topics include switching algebra and switching functions, logic design of combinational and sequential circuits, storage elements, register-level design, and instrumentation. Integrated Writing course. | UG | LE | Lecture

Fall 2020  | REL3430  | 3430 | Buddhism | REL | Religion | 3 | Introduction to Buddhism, focusing on its historical origins in India and its spread to neighboring regions. Examines the life and teachings of the Buddha, rituals and practices among Buddhist monastics and laity, and early Buddhist art and architecture. Reading from historical Buddhist sources and documentary films about living Buddhist communities. | UG | LE | Lecture

Fall 2020  | EES6490  | 6190 | Paleobiology | EES | Earth & Environmental Sciences | 3 | Paleobiology emphasizes fossils as organisms that provide information; on the origin of higher taxa, speciation, and speciation-relatedness of all life, transformation of species, and macroevolutionary trends, as well as the response, over geological time, of Earth biota to environmental, ecological, and geographical changes. Paleobiology also emphasizes the role that fossil organisms play in reconstructing past environments and global paleogeography. | GR | LE | Lecture

Fall 2020  | EE7020  | 7020 | Modern Control I | EE | Electrical Engineering | 3 | State variable representations of continuous and discrete systems. Linear vector spaces and similarity transformations; eigen-analysis, time and transform domain solutions of linear state equations; controllability, observability, and stability of linear systems. | GR | LE | Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>CS4850 4850</td>
<td>Foundations of AI</td>
<td>CS Computer Science</td>
<td>3</td>
<td>Problem-solving methods in artificial intelligence (AI) with emphasis on heuristic approaches. Topics include methods of representation, search, intelligent agents, planning, learning, natural language processing, logic, inference, robotics, and case-based reasoning.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BIO6700L 6700L</td>
<td>General Entomology Lab</td>
<td>BIO Biology</td>
<td>0</td>
<td>Required lab for BIO 6700.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>TH1510 1510</td>
<td>Intro to Perf Process</td>
<td>TH Theatre</td>
<td>3</td>
<td>Introduction to the working methods of the actor and director. Includes exploration of process through acting and directing exercises as well as discussion of the director’s collaboration with the production’s design team.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BIO6750L 6750L</td>
<td>Ichthyology Lab</td>
<td>BIO Biology</td>
<td>0</td>
<td>Required laboratory for BIO 6750.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC3100 3100</td>
<td>The Global Economy</td>
<td>EC Economics</td>
<td>3</td>
<td>Explores how the global economic environment affects business decisions and how these decisions affect the economy of host and source countries. Analyzes the impact of international trade, foreign direct investment, and global monetary systems.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SPN6130 6130</td>
<td>SPN Instr Practicum III</td>
<td>SPN Spanish</td>
<td>1</td>
<td>Peer teachers observe elementary and/or intermediate level classes; continuation of practicum from SPN 6120. Department Managed Prerequisite(s): Graduate level SPN 6120 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BME3940 3940</td>
<td>Biomed Eng Internship I</td>
<td>BME Biomedical Engineering</td>
<td>1</td>
<td>Biomedical engineering internship course: Students are supervised via weekly seminars and regular feedback from employee. Must have completed all of the 2nd year courses as listed in the program guide. Minimum of 10 hours per week for each credit hour registered. A minimum total of 450 hours of work is required for 3 credits of technical elective credit.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC3010 3010</td>
<td>Econ of Global Money Mar</td>
<td>EC Economics</td>
<td>3</td>
<td>Analysis of behavior and significance of money, credit, debt, and the banking system.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY5410 3410</td>
<td>Lifespan Development Psy</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Survey of theory, research, and methodological issues in the study of development across the lifespan.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GER4330 4330</td>
<td>20th Cent German Poetry</td>
<td>GER German</td>
<td>3</td>
<td>Readings and reports in 20th-century poetry. Representative works of Rilke, George, Trakl, Binn, and others. Department Managed Prerequisite(s): Undergraduate level GER 3100 Minimum Grade of D or Undergraduate level GER 3120 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3260 Minimum Grade of D or Undergraduate level GER 3310 Minimum Grade of D or Undergraduate level GER 3320 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BME3540 3540</td>
<td>Intro to Comp for BME</td>
<td>BME Biomedical Engineering</td>
<td>3</td>
<td>Digital computer applications in biomedical related fields. Use of Matlab to solve biomedical problems and display the results.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PS9973 9973</td>
<td>Practicum III</td>
<td>PSI Professional Psychology</td>
<td>1</td>
<td>Field experience supervised by a licensed psychologist.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES1050L 1050L</td>
<td>Dynamic Earth Lab</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>0</td>
<td>Required laboratory for EES 1050.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>NUR8006 8006</td>
<td>MKing Entrepre Hlth Car</td>
<td>NUR Nursing</td>
<td>3</td>
<td>This course examines marketing and entrepreneurial strategies for advanced nursing practice in complex health care systems. The focus is on creating and evaluating marketing plans and entrepreneurial activities.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>LDR7350 7350</td>
<td>Research Methods</td>
<td>LDR Leadership</td>
<td>3</td>
<td>This course focuses on the need for learners to understand collecting, analyzing, and interpreting data related to decision making in the workplace. Research concepts, reasoning, design and basic data analysis skills are introduced.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CS7820 7820</td>
<td>Semantic Web</td>
<td>CS Computer Science</td>
<td>3</td>
<td>This course is about the Semantic Web, a key enabler of Web 3.0. It goes beyond the recent language standards of RDF and OWL to understand new techniques, technologies and algorithms for making a broad variety of data meaningful and more amenable to processing by humans and machines (on the Web, as Web services, generated on social networks or generated by sensors and mobile devices). Topics covered include research in semantic search, browsing, integration, analysis and discovery. Department Managed Prerequisite(s): Graduate level CS 7810 Minimum Grade of D or Graduate level CS 7800 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED6600 6600</td>
<td>Teach in the Amer Ed Sys</td>
<td>ED Education</td>
<td>3</td>
<td>Foundational analysis of the relationship between public education in a democracy and the critical social issues and forces impacting renewal efforts.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES4680 4680</td>
<td>Ears Law for Scientists</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>3</td>
<td>Common law principles, environmental statutes, implementing regulations, and enforcement.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHM6880 6880</td>
<td>3rd Reading in Chemistry</td>
<td>CHM Chemistry</td>
<td>1</td>
<td>Selected Readings in Chemistry</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>HPR2040 2040</td>
<td>Adventure Education</td>
<td>HPR Health Phys Educ &amp; Recreation</td>
<td>3</td>
<td>Develops knowledge, skills and dispositions to successfully implement Adventure Education curriculum in pre-K-12 physical education programs.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC3770 3770</td>
<td>Economic Studies</td>
<td>EC Economics</td>
<td>3</td>
<td>An examination of special issues. Department Managed Prerequisite(s): equivalent coursework or permission of instructor. Department Managed Prerequisite(s): Graduate level MBA 5200 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>HPR5100 5100</td>
<td>Practicum I HPR</td>
<td>HPR Health Phys Educ &amp; Recreation</td>
<td>1</td>
<td>Candidates, mentored by a classroom teacher, participate in the educational process, assist with classroom duties, and participate in the classroom while examining the dynamics of the classroom.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ART4280 4280</td>
<td>Advanced Drawing</td>
<td>ART Art</td>
<td>3</td>
<td>Explores the structure and interrelationships of visual form in drawing, painting, and sculpture. Principal historical modes of drawing examined. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY8790 8790</td>
<td>Legal Issues in F/O Psych</td>
<td>PSY Psychology</td>
<td>2</td>
<td>Course will explore established, current, and emerging legal issues in Industrial/Organizational Psychology. Department Managed Prerequisite(s): Graduate level PSY 8630 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE7990 7990</td>
<td>Thesis</td>
<td>EE Electrical Engineering</td>
<td>1</td>
<td>Graded pass/unsatisfactory.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CRT1040 1040</td>
<td>Core Procedures and Ops</td>
<td>CRT Corrections</td>
<td>3</td>
<td>Contemporary legal issues impacting corrections management. Using case law, how the First, Fourth, Fifth, Sixth and Fourteenth Amendments relate to the day-to-day issues of running a prison, jail, and other corrections programs, such as probation and parole.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE7420 7420</td>
<td>Power Electronics II</td>
<td>EE Electrical Engineering</td>
<td>3</td>
<td>Modeling, linearization, and control of open-loop power stages of PWM DC-DC power converters, voltage-mode and current mode control techniques of PWM power converters, DC and AC, steady-state, and transient performance of open-loop and closed-loop power converters. Department Managed Prerequisite(s): Graduate level EE 5310 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Department</td>
<td>Credits</td>
<td>Description</td>
<td>GR</td>
</tr>
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</tr>
<tr>
<td>ART4080</td>
<td>Studies in Photography</td>
<td>ART</td>
<td>3</td>
<td>Explore problems and approaches to photography. May include cross-media and interdisciplinary studies.&lt;br&gt;Department Managed Prerequisite(s): Undergraduate level ART 2580 Minimum Grade of D and Undergraduate level ART 2590 Minimum Grade of D&lt;br&gt;UG</td>
<td>Lab</td>
</tr>
<tr>
<td>BIO6480</td>
<td>Advanced Cell Techniques</td>
<td>BIO</td>
<td>4</td>
<td>Analysis of cellular proteins will be the major focus. Students will have first-hand experience manipulating human cells in culture, extracting cellular proteins, transfecting cells, and performing immunoblotting and immunofluorescence techniques.&lt;br&gt;GR</td>
<td>LL</td>
</tr>
<tr>
<td>EES4590</td>
<td>Adv Aquatic Geochem</td>
<td>EES</td>
<td>4</td>
<td>Fundamentals of biogeochemistry in aquatic systems, emphasizing physical, geological, chemical, and biological interactions in marine and lacustrine environments. Biogeochemical cycling of nutrients, trace metals, gases, energy, and chemical equilibria and rates in natural waters.&lt;br&gt;UG</td>
<td>LE</td>
</tr>
<tr>
<td>SAA6640</td>
<td>Career Assessment</td>
<td>SAA</td>
<td>2</td>
<td>Analyze formal and informal assessment approaches to the career development process. Explore and evaluate job search strategies and resources for clients. A variety of career development theories are discussed and applied to client cases.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>PL6200</td>
<td>Politics &amp; the Novel</td>
<td>PL6200</td>
<td>3</td>
<td>(Also listed as ENG 6600.) Study and critique of political themes in works of selected 20th century authors, including social roles, activism, political awareness, power, government, and conflict at the individual, institutional, and international level.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>MIS4500</td>
<td>Bus Process Enterprise</td>
<td>MIS</td>
<td>3</td>
<td>Principles of business processes and enterprise information systems. Students identify, model, and redesign business processes within and across organizations and integrate disparate information resources and business processes with an integrated enterprise system. Integrated Writing course.&lt;br&gt;UG</td>
<td>LL</td>
</tr>
<tr>
<td>CNL7260</td>
<td>Marriage</td>
<td>CNL</td>
<td>1</td>
<td>Fundamental introduction to marriage and family counseling. Students learn to think across a wide variety of family structures and a diverse range of issues (i.e. gender, culture, and substance abuse).&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>LAT5550</td>
<td>Readings in Roman Poetry</td>
<td>LAT</td>
<td>3</td>
<td>Roman lyric and elegiac poetry: Virgil's Eclogues;Catullus, Horace, Propertius, Tibullus, and Ovid. Topics include meters and style of Latin lyric; antiquities and the influence of Hellenistic poetry. Titles vary.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>REL5310</td>
<td>Introduction to Islam</td>
<td>REL</td>
<td>3</td>
<td>Introduction to the Islamic belief systems and practices, from the rise of Islam to the modern era.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>PNN990</td>
<td>Physiology Research</td>
<td>PNN</td>
<td>1</td>
<td>Supervised thesis research.&lt;br&gt;GR</td>
<td>IS</td>
</tr>
<tr>
<td>MBB1050</td>
<td>Bioschem Lab</td>
<td>MBB</td>
<td>3</td>
<td>Laboratory methodologies such as chromatography, electrophoresis, purification and characterization of enzymes, culminating in guided research projects. Integrated Writing course.&lt;br&gt;UG</td>
<td>LL</td>
</tr>
<tr>
<td>BIE1899</td>
<td>Independ Sidy in BIE I</td>
<td>BIE</td>
<td>1</td>
<td>Graduate independent studies in advanced industrial and human factors engineering. Topics vary.&lt;br&gt;GR</td>
<td>IS</td>
</tr>
<tr>
<td>EED4100</td>
<td>Science Methods P-S</td>
<td>EED</td>
<td>3</td>
<td>Curricula and materials for teaching P-S science with emphasis on using an integrated multidisciplinary approach to science teaching. Includes development of appropriate learning targets, planning, implementation, assessments, and trends in science education.&lt;br&gt;UG</td>
<td>LE</td>
</tr>
<tr>
<td>BMS6760</td>
<td>Mol Basis Inherited Dis</td>
<td>BMS</td>
<td>3</td>
<td>An intensive course on human diseases at all levels; epidemiological, transcriptional, translational, protein expression, protein folding and processing, protein structure and function, cellular metabolic changes, nuclear and cellular phenotypic changes, symptoms, and pathative therapies.&lt;br&gt;GR</td>
<td>SE</td>
</tr>
<tr>
<td>ART3480</td>
<td>Intermediate Painting I</td>
<td>ART</td>
<td>3</td>
<td>Emphasis on principles of pictorial organization. Attention to the relationship of subject matter and abstraction as related to contemporary and traditional approaches. This course has a fee that is non-refundable once the term begins.&lt;br&gt;UG</td>
<td>LB</td>
</tr>
<tr>
<td>EES3180</td>
<td>Water &amp; the Environment</td>
<td>EES</td>
<td>3</td>
<td>Hydrology and the distribution and availability of water resources. Natural and anthropogenic processes that influence water quantity and quality. Water quality and contamination issues of water resources. Water resources and water-right conflicts. Hands-on analysis of water quality.&lt;br&gt;UG</td>
<td>LE</td>
</tr>
<tr>
<td>MTH4820</td>
<td>Applied Mathematics II</td>
<td>MTH</td>
<td>3</td>
<td>Use of integral transforms in the solution of differential and integral equations, Fourier series, Fourier and Laplace transforms, distributions, integral equations, Green's functions, Sturm-Liouville theory, perturbation methods and asymptotics, orthogonal functions, and special functions.&lt;br&gt;UG</td>
<td>LE</td>
</tr>
<tr>
<td>ED7830</td>
<td>Adv Educational Psych</td>
<td>ED</td>
<td>3</td>
<td>Gain an advanced understanding of learning processes, student motivation, and educational assessment based on theoretical principles from the field of educational psychology.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>CEG7590</td>
<td>Medical Image Analysis</td>
<td>CEG</td>
<td>3</td>
<td>Topics of 2-D and 3-D image segmentation and registration; 2-D and 3-D feature selection; validation methods; and visualization techniques for volumetric medical images are covered.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>ART4740</td>
<td>New Tech in Sculpt</td>
<td>ART</td>
<td>3</td>
<td>Development of personal concepts and aesthetic expression in new technologies in sculpture. Emphasis on theoretical issues, such as relationships between physical and virtual environments in both functional and conceptual aspects. This course has a fee that is non-refundable once the term begins.&lt;br&gt;UG</td>
<td>LB</td>
</tr>
<tr>
<td>PLS7200</td>
<td>Grad Sems in IR theory</td>
<td>PLS</td>
<td>3</td>
<td>Introduction to the theories and concepts employed in modern political analysis with emphasis on the study of international relations.&lt;br&gt;GR</td>
<td>SE</td>
</tr>
<tr>
<td>HST4980</td>
<td>History Honors Project</td>
<td>HST</td>
<td>3</td>
<td>May range from library research to field training.&lt;br&gt;UG</td>
<td>IS</td>
</tr>
<tr>
<td>GRS550</td>
<td>Readings Greek Politics</td>
<td>GRS</td>
<td>3</td>
<td>Lyssia, Demosthenes, Isocrates, Old Oligarch, Plato, Xenophon, and Aristotle. Topics include development of political ideas and vocabulary, nonliterary sources for our knowledge of Greek civil life, and influences on Roman theories and practices. Titles vary.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
<tr>
<td>SOC4500</td>
<td>Sociological Theory</td>
<td>SOC</td>
<td>3</td>
<td>Readings in an area of specialized interest in sociological theory. Topics vary. Integrated Writing course.&lt;br&gt;UG</td>
<td>LE</td>
</tr>
<tr>
<td>MES520</td>
<td>Thermodynamics II</td>
<td>ME</td>
<td>3</td>
<td>This course will apply the 0th, 1st, 2nd, and 3rd laws of thermodynamics, as well as conservation of mass, to a range of classical thermodynamic systems and phenomena. These include power and refrigeration cycles, gas mixtures, ideal vapor-gas mixtures, air conditioning, combustion, and chemical equilibria.&lt;br&gt;GR</td>
<td>LE</td>
</tr>
</tbody>
</table>

**Notes:**
- **UG:** Undergraduate
- **LB:** Lab
- **LE:** Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Hours</th>
<th>Type</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>LAT3570</td>
<td>Readings Roman Satire</td>
<td>Focuses on selected readings from Roman literature.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>LAT100</td>
<td>Latin</td>
<td>Introduces the language and culture of ancient Rome.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>DAD7010</td>
<td>DAGSI Registration</td>
<td>Provides an overview of the history and development of DAGSI.</td>
<td>0.5</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EE35700</td>
<td>MST Research</td>
<td>Focuses on the development and application of MST theory.</td>
<td>0.5</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>LEP0550</td>
<td>Grammar Refresher</td>
<td>Focuses on the development and application of grammar instruction.</td>
<td>0</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BIO1400</td>
<td>Verterbrate Histology</td>
<td>Focuses on the development and application of vertebrate histology.</td>
<td>5</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ISE3531LI</td>
<td>Bioelectric Devices</td>
<td>Focuses on the development and application of bioelectric devices.</td>
<td>0.5</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PSY8410</td>
<td>Group Psychotherapy</td>
<td>Focuses on the development and application of group psychotherapy.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENG4750</td>
<td>TESOL Grammar</td>
<td>Focuses on the development and application of TESOL grammar.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EDL7120</td>
<td>Philos &amp; Curr Foundations</td>
<td>Focuses on the development and application of philosophical and current foundations.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>FTP8001</td>
<td>Lab Safety</td>
<td>Focuses on the development and application of laboratory safety.</td>
<td>1</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EED6280</td>
<td>EES Colloquium</td>
<td>Focuses on the development and application of EES colloquium.</td>
<td>0.5</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENG4020</td>
<td>Topics: Advanced Writing</td>
<td>Focuses on the development and application of advanced writing.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>RHE3040</td>
<td>Rehab Case Management</td>
<td>Focuses on the development and application of rehabilitation case management.</td>
<td>5</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PSY6920</td>
<td>Clinical Neuro Cap</td>
<td>Focuses on the development and application of clinical neurology.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EE6460</td>
<td>Microwave Egr II</td>
<td>Focuses on the development and application of microwave engineering.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>SOC5000</td>
<td>Internship in CJ/Family</td>
<td>Focuses on the development and application of internships in CJ/Family.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENGL360</td>
<td>Sem: Literary Problems</td>
<td>Focuses on the development and application of sem: literary problems.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MTH3430</td>
<td>Alg Faux Mid Schi Tchr</td>
<td>Focuses on the development and application of algorithmic mathematics.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MTH120</td>
<td>Arab Beginning Arabic II</td>
<td>Focuses on the development and application of Arabic beginning.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ECE240</td>
<td>Law and Economics</td>
<td>Focuses on the development and application of law and economics.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENG1430</td>
<td>Women and Literature</td>
<td>Focuses on the development and application of women and literature.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ANT7000</td>
<td>Human Anatomy Instruct</td>
<td>Focuses on the development and application of human anatomy.</td>
<td>1</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CTE6000</td>
<td>Pre-Serv Workshop for CTE</td>
<td>Focuses on the development and application of pre-service workshop for CTE.</td>
<td>6</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ME4585</td>
<td>Natural Gas Prod EGR</td>
<td>Focuses on the development and application of natural gas production.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CS7980</td>
<td>Part-time CPT in CS</td>
<td>Focuses on the development and application of part-time CPT in CS.</td>
<td>0</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>FR4810</td>
<td>Independent Study</td>
<td>Focuses on the development and application of independent study.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>WGS7000</td>
<td>Feminist Theory</td>
<td>Focuses on the development and application of feminist theory.</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BIO7890</td>
<td>Continuing Registration</td>
<td>Focuses on the development and application of continuing registration.</td>
<td>1</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Department</td>
<td>Credits</td>
<td>Description</td>
<td>PREREQUISITES</td>
</tr>
<tr>
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</tr>
<tr>
<td>PHY7120</td>
<td>Rel Quantum Mech</td>
<td>PHY</td>
<td>3</td>
<td>Relativistic treatment of fields, quantum theory of radiation, relativistic treatment of spin, the Dirac equation and its solution, scattering of relativistic particles.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>CEG7060</td>
<td>Advanced Robotics</td>
<td>CEG</td>
<td>3</td>
<td>Detailed study of the dynamics and control of robotic systems and robot programming languages and systems. Material covered includes rigid-body dynamics, linear, nonlinear, adaptive, and force control of manipulators, and robot programming languages. Sensors, low-level and higher level vision techniques, task planning including obstacle avoidance and artificial intelligence and expert systems as applied to robotic systems.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>ENG6470</td>
<td>Post-Colonial Lit</td>
<td>ENG</td>
<td>3</td>
<td>Intensive study of post-colonial literature from diverse regions of the global South. Intended to develop critical perspectives on historical periods, genres, language use, thematic concerns, and global trends.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>ED2800</td>
<td>Cultural Humility w/Youth</td>
<td>ED</td>
<td>3</td>
<td>Examines historical and current racial, ethnic, gender, sexual orientation, linguistic, and social class stereotypes and biases as related to youth in the United States and globally. Students identify personal preconceptions and learn ways of becoming culturally responsive working with youth.</td>
<td>UG  LE  Lecture</td>
</tr>
<tr>
<td>NUR4990</td>
<td>NUR Honors Ind Study</td>
<td>NUR</td>
<td>3</td>
<td>Under the guidance of a faculty member, students implement and complete the honors project proposed in NUR 4980 by taking variable credits of 1-4 semester hours which can be repeated over several semesters. Program requires a minimum of 2 semester hours but may be extended to a maximum of 4 semester hours.</td>
<td>UG  IS  Independent Study</td>
</tr>
<tr>
<td>TH1570</td>
<td>Singing Min Theatre I</td>
<td>TH</td>
<td>2</td>
<td>Private singing lessons for Musical Theatre.</td>
<td>UG  ST  Studio</td>
</tr>
<tr>
<td>ME2210</td>
<td>Dynamics</td>
<td>ME</td>
<td>3</td>
<td>Vector treatment of the kinematics and kinetics of particles and rigid bodies, based on Newton's laws and including work-energy and impulse-momentum techniques.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>ME3840</td>
<td>Simulation of Thermal-Fl</td>
<td>ME</td>
<td>3</td>
<td>In this course students will learn to use commercial computational fluid dynamics software to solve practical engineering problems, including fluid, heat and mass transfer.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>CHM510L</td>
<td>Adv Inorg Syn &amp; Charact</td>
<td>CHM</td>
<td>2</td>
<td>Advanced synthesis and characterization of representative inorganic compounds.</td>
<td>GR  LB  Lab</td>
</tr>
<tr>
<td>FR5900</td>
<td>Foreign Lang Institute</td>
<td>FR</td>
<td>1</td>
<td>For teachers of French. Intensive experience designed, through total immersion, to improve language skills (conversation and composition) and increase awareness of French civilization and contemporary culture.</td>
<td>UG  SE  Seminar</td>
</tr>
<tr>
<td>KNH1610A</td>
<td>Strength &amp; Tone</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Strength &amp; Tone. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG  LB  Lab</td>
</tr>
<tr>
<td>STT1600</td>
<td>Statistical Concepts</td>
<td>STT</td>
<td>4</td>
<td>Fundamentals of statistics, including descriptive statistics, probability, confidence intervals, and testing hypotheses, as well as the basics of Chi-square tests, regression and correlation, and analysis of variance. This course includes data analysis activities that use Excel software.</td>
<td>UG  LL  Lecture/Lab Combination</td>
</tr>
<tr>
<td>ENG7240</td>
<td>Professional Writing</td>
<td>ENG</td>
<td>3</td>
<td>Current approaches to the study of technical, business, and other specialized writing. Critical and historical analyses are supplemented by assignments in writing the studied form.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>EDL7810</td>
<td>Schl Finance &amp; Economics</td>
<td>EDL</td>
<td>1</td>
<td>The financing of public education and the economics of education. Guiding principles for developing financial programs and management procedures.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>EE7580</td>
<td>CMOS Mod Sig IC Des</td>
<td>EE</td>
<td>3</td>
<td>Introduction to the techniques, limitations, and problems in the design of CMOS analog integrated circuits. Topics include CMOS analog circuit modeling and device characterization, analog CMOS subcircuits, CMOS amplifiers, CMOS comparators, and CMOS Op Amps, CMOS Analog to Digital Converters, and CMOS Digital to Analog Converters, and Switched Capacitor Circuits.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>FITN240</td>
<td>Real Estate Prin/Pract</td>
<td>FIN</td>
<td>3</td>
<td>Introduction to the principles and practices of real estate. Topics include the real estate profession and industry, real estate contracts, market analysis, valuation approaches, financing techniques, investment analysis, and home ownership. Successful completion of this course meets part of the licensing requirements for real estate salespeople in Ohio.</td>
<td>UG  LE  Lecture</td>
</tr>
<tr>
<td>SCM7950</td>
<td>Info Tech &amp; Supply Chain</td>
<td>SCM</td>
<td>3</td>
<td>Information technology as an enabler of improved supply chain performance. Managing material and information outside the factory walls. Includes supply chain technology, ERP systems, e-business and collaborative technologies, synchronizing technologies, and RFID. Recommended processes for the evaluation, selection, and implementation of appropriate technologies. This course has a fee that is non-refundable once the term begins.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>ART3130</td>
<td>Renaissance Art</td>
<td>ART</td>
<td>3</td>
<td>General surveys and intensive studies of the period, major movements, and artists of the time. Titles vary.</td>
<td>GR  LE  Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CNL9600</td>
<td>9600</td>
<td>Adv Instl Human Serv</td>
<td>CNL</td>
<td>Counseling</td>
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<tr>
<td>Fall 2020</td>
<td>FAS1050</td>
<td>1050</td>
<td>Amish Society</td>
<td>FAS</td>
<td>Food and Agricultural Systems</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ME4610</td>
<td>4610</td>
<td>Therm Fluids Lab</td>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS6450</td>
<td>6450</td>
<td>Adv Crim Invest</td>
<td>PLS</td>
<td>Political Science</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE4200</td>
<td>4200</td>
<td>Part-Time CPT in EE</td>
<td>EEE</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EXB6500L</td>
<td>6500L</td>
<td>Clinical Exercise Phys</td>
<td>EXB</td>
<td>Exercise Biology</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHM5880</td>
<td>5880</td>
<td>Independent Reading</td>
<td>CHM</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BI03160</td>
<td>3160</td>
<td>Vertebrate Zoology</td>
<td>BIO</td>
<td>Biology</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUE4970</td>
<td>4970</td>
<td>Paul L. Dunbar Chorale</td>
<td>MUE</td>
<td>Music: Ensembles</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHYS5150</td>
<td>5150</td>
<td>Physics Instrument Lab</td>
<td>PHYS</td>
<td>Physics</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ECE3150</td>
<td>3150</td>
<td>Literacy Meths: Reading</td>
<td>ECE</td>
<td>Education - Early Childhood</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES3100</td>
<td>3100</td>
<td>Earth Science Research</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS3430</td>
<td>3430</td>
<td>Civil Lib II Due Process</td>
<td>PLS</td>
<td>Political Science</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SPN3120</td>
<td>3120</td>
<td>Spanish Conversation II</td>
<td>SPN</td>
<td>Spanish</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PTX8000</td>
<td>8000</td>
<td>Selected Topics</td>
<td>PTX</td>
<td>Pharmacology/Toxicology</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE4480</td>
<td>4480</td>
<td>Remote Sensing Det &amp; Sys</td>
<td>EE</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUS7730</td>
<td>7730</td>
<td>Gen Music: Fund K-12 Instruct</td>
<td>MUS</td>
<td>Music</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SW3990</td>
<td>3990</td>
<td>Independent Study SW</td>
<td>SW</td>
<td>Social Work</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CTE4150</td>
<td>4150</td>
<td>CTE Practicum</td>
<td>CTE</td>
<td>Career and Technical Education</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ME4570</td>
<td>4570</td>
<td>Energy Materials</td>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS3370</td>
<td>3370</td>
<td>The Legislative Process</td>
<td>PLS</td>
<td>Political Science</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GEO3600</td>
<td>3600</td>
<td>Geo-Spatial Mapping</td>
<td>GEO</td>
<td>Geography</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSF9170</td>
<td>9170</td>
<td>Career Assessment</td>
<td>PSI</td>
<td>Professional Psychology</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SPN3310</td>
<td>3310</td>
<td>Survey of Spanish Lit</td>
<td>SPN</td>
<td>Spanish</td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Description</td>
<td>Credits</td>
<td>Term</td>
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</tr>
<tr>
<td>EE4470L</td>
<td>Antenna Tary Design Lab</td>
<td>Hands-on experience and fabrication of antenna elements with evaluation of antenna performance.</td>
<td>1</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>ECE3800</td>
<td>Language Dev &amp; ELL Education - Early Childhood</td>
<td>Language development, causes and effects of communication disorders, evaluations, interventions, second language acquisition, planning and implementing culturally responsive lessons and classroom environments.</td>
<td>3</td>
<td>Fall 2020</td>
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</tr>
<tr>
<td>ED4570</td>
<td>Multi-Age TESOL Methods</td>
<td>Curricular and instructional elements for PK-12 English language teachers, including: theoretical knowledge, goal setting, needs assessment, syllabus writing, lesson planning, instructional techniques, differentiated instruction, activity creation, inclusive/authentic assessment.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>ED4610</td>
<td>Curriculum &amp; Methods M/M</td>
<td>Practices and procedures used in developing elementary and secondary curricula for students with mild to moderate educational needs. Universal design, academic adaptations, and development/implementation of the IEP. Thirty hours of field experience required.</td>
<td>3</td>
<td>Fall 2020</td>
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</tr>
<tr>
<td>SOM702</td>
<td>Year 4 Medical Study</td>
<td>MD OT Other</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ISE4910</td>
<td>ISE Design I</td>
<td>Segment one of the ISE senior design sequence. Introduction to patents and engineering ethics included. Pracicum results in the definition of the capstone design project to be completed in ISE 4920. Integrated Writing course.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>MGT7730</td>
<td>Proj Pln Eval &amp; Contr Management</td>
<td>Focuses on project planning and control, with emphasis on practical application. Overview of the theoretical and practical mechanisms through which project planning, evaluation, and control occur. Additionally, a course project allows students to practice concepts and techniques presented in the course, in a live project scenario.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>CNL3000</td>
<td>Human Sexuality Counsel Counseling</td>
<td>The principles and practice of human sexuality and sexuality counseling are reviewed.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>EES6220</td>
<td>Intro to Geophysics Earth &amp; Environmental Sciences</td>
<td>In Introduction to Geophysics students learn the methods and concepts of practical exploration geophysics. We deal with the five main methods of exploration: seismic reflection, seismic reflection, gravity methods, electrical methods, and magnetic methods. The lectures are put into practice during Saturday field work in the vicinity of the campus to characterize the near surface.</td>
<td>4</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>PLS6280</td>
<td>Nat'l Security Politics Political Science</td>
<td>Study of U.S. national defense and security policy processes and the major strategic issues facing the U.S. government.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>SPN4810</td>
<td>Independ Read Adv Studen Spanish</td>
<td>Topics vary.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>ART4370</td>
<td>Install/Perform Sculpt Art</td>
<td>Development of personal computer and aesthetic expression in the fabrication and experimentation with sculptural media. Emphasis on individualized approach to sculptural media problem solving. This course has a fee that is non-refundable once the term begins.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>EE7080</td>
<td>Advanced MEMS Electrical Engineering</td>
<td>Classical and advanced micro-sensing and actuation methods. Analytical and finite element methods utilized in investigating MEMS with computed results compared to published experimental data findings. Topics covered include bioMEMS and microfluidics.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>ED6830</td>
<td>Reseach to Imp Class Inst Education</td>
<td>Introduction to reading educational research, including applied and theoretical and qualitative and quantitative. Differentiation of quality/applicability of research articles. Understanding researchable questions and how questions determine the methodology. Searching for appropriate literature.</td>
<td>2</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>PPH7140</td>
<td>Social Networks and Hlth Population &amp; Public Health</td>
<td>This course provides an introduction to the major theories, methods, models, and findings of social network analysis research and application with attention to medical and public health topics. While not a methods course, the goal of the course is to introduce scholars to the bodies of research of social networks and health. The emphasis of the course will be to apply the theory of social networks to practical public health situations through engaging peer-reviewed research and class discussion.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>COM3250</td>
<td>Health Communication Communication</td>
<td>Basic themes and issues that have developed in health communication research including physician-patient and nurse-patient communications, organizational communication in health care organizations, and relationships among care providers.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>EDL7990</td>
<td>Principal Practicum Educational Leadership</td>
<td>Provides experience in school leadership and administration at the building level.</td>
<td>3</td>
<td>Fall 2020</td>
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</tr>
<tr>
<td>PL6210</td>
<td>Am Constitutional Poli Political Science</td>
<td>The creation of the US Constitution and the ongoing struggle in American legal politics over its basic meaning.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>MBS250</td>
<td>Analysis Design Info Sys Management Information Systems</td>
<td>Overview of system analysis and design methodologies. Topics include planning, SDLC, project management overview, data, process and logic modeling techniques. Covers design, implementation, specifications, and testing plans.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>GTW0010</td>
<td>Clark State Gateway Pathway Gateway</td>
<td></td>
<td>0</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>NUR2124</td>
<td>Nur for Unlicensed HC Nursing</td>
<td>Introduces non-Registered Nurse healthcare personnel to the role of the professional nurse; introduction to nursing theories with emphasis on interprofessional, interprofessional, and patient-centered communication skills and critical reasoning in the application of nursing process. Includes laboratory and clinical experiences basic to clinical practice in care of adults. This is an integrated writing course. (3 cr didactic; 2 cr clinical total; 2 cr lab total).</td>
<td>1</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>EE7840</td>
<td>Computer Vision Electrical Engineering</td>
<td>Algorithms for low- and mid-level vision, including noise filtering, edge detection, image segmentation, texture analysis, feature extraction, stereo depth perception, camera calibration, 3-D reconstruction, shape from shading.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
<tr>
<td>REL5930</td>
<td>Faith &amp; Reason Religion</td>
<td>Issues in the philosophy of religion. Topics vary.</td>
<td>3</td>
<td>Fall 2020</td>
<td></td>
</tr>
</tbody>
</table>
Purpose and motivation for remote sensing, spectral temporal, spatial, and radiometric characteristics and resolution issues, propagation of electromagnetic energy, optics, atmospheric effects, image collection and quality, sensor performance measures, platforms and orbits.

Ideas of physical chemistry, including thermodynamics, properties of liquids and solids, solution properties, and kinetics. Emphasis for biologists, geologists, physicists, chemists, premedical students and others with an interest in physical chemistry.

Historical and contemporary survey of religious life in Japan. Primary focus on Shinto, both early Shinto and later nationalistic Shinto, the varieties of Japanese Buddhism, and Japanese non-religious. Topics include religious doctrine, faith and devotion, self-cultivation and enlightenment, monasticism, and religion and the state.

Problems of contemporary significance. Integrated Writing course.

Survey of contemporary perspectives in personality psychology. Computer research methods, assessment strategies, and applications.

Provides opportunities to explore special problems and approaches to printmaking including cross-media and interdisciplinary studies. Titles vary.

Fundamental skills and knowledge of Tai Chi. Competency-based approach. Course may accommodate disabled students when appropriate.

Supervised use of Chinese in workplace settings. Must complete an application available from the Department of Modern Languages. Minimum 45 hours a semester for 1 credit, including at least 40 hours of onsite work.

Senior standing and advisor permission required.<b> Department Managed Prerequisite(s): Undergraduate level CHI 3010 Minimum Grade of D and Undergraduate level CHI 3020 Minimum Grade of D+</b>

Problems, approaches, and topics in the field of sociology. Topics vary. Credit will not be awarded for repetition of courses with identical topic titles.<b> Department Managed Prerequisite(s): Undergraduate level SOC 2000 Minimum Grade of D or Undergraduate level SOC 2200 Minimum Grade of D+</b>

Nonlinear finite element analysis of elastic, plastic, and viscoplastic deformation. Flow formulation and solid formulation. Analysis and simulation of structures and metal forming processes.<b> Department Managed Prerequisite(s): Graduate level ME 6120 Minimum Grade of D and Graduate level ME 7100 Minimum Grade of D+</b>

Practices and procedures used in developing curricula for individuals with dyslexia and dyslexia tendencies. Clinical application, classroom accommodation, and development/implementation of the IEP.

Examines theories and various cases of nationalist movements/conflicts from different parts of the world in order to appreciate the relevance of nationalism to contemporary politics and international relations. Integrated Writing course.

Multidisciplinary interactions between the nervous and immune systems have been documented in homeostasis and pathologies ranging from multiple sclerosis and autism, to inflammation of acute and chronic inflammation. This course focuses on neuro-immune interactions at barrier surfaces—mostly the gut, but also including the skin and the airways, areas densely populated by neurons and immune cells that constantly sense and adapt to tissue-specific environmental challenges.

This course focuses on teaching systemic interventions and problem solving in the process of resolving marriage and family related concerns.

Students will independently write a 10-15 page scientific review on a current topic in Pharmacology & Toxicology with at least 25 references.

Senior standing and advisor permission required.<b> Department Managed Prerequisite(s): Undergraduate level SOC 2000 Minimum Grade of D or Undergraduate level CHI 3020 Minimum Grade of D</b>

Graduate level EE 6130 Minimum Grade of D and Graduate level EE 6130L Minimum Grade of D</b>

Clinical application, classroom accommodation, and development/implementation of the IEP.

Students will independently write a 10-15 page scientific review on a current topic in Pharmacology & Toxicology with at least 25 references.

The study of materials, equipment, and class instruction in playing and teaching woodwind instruments in public school.

Laboratory supporting EE 4600/6600. Students will experience hands on learning in lab environment. Designing, implementing, and testing autonomous UAV flight control systems.<b> Department Managed Prerequisite(s): Graduate level EE 6130 Minimum Grade of D and Graduate level EE 6130L Minimum Grade of D+</b>

Lab-based course. Students will experience hands on learning in lab environment. Application and timing of control systems theory with electromechanical systems.

Practical and procedural usages in developing curricula for individuals with dyslexia and dyslexia tendencies. Clinical application, classroom accommodation, and development/implementation of the IEP.

Graduate level EE 6130 Minimum Grade of D and Graduate level EE 6130L Minimum Grade of D</b>

Professional preparation, develop job-related skills, test career interests, relate course of study to practical work situations, and earn income to meet educational expenses. CPE registration records co-op experiences on the transcript. Career Services staff enroll students in the CPE course and monitor their learning.

Graduate level EE 6130 Minimum Grade of D and Graduate level EE 6130L Minimum Grade of D</b>

A summative computer engineering design project building upon previous engineering, science, mathematics, and communication course work focusing on professional practice in computer science and engineering. Must enroll in CEG 4981 in the following term.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN3120</td>
<td>Modern Dance III</td>
<td>DAN</td>
<td>3</td>
<td></td>
<td>Advanced modern technique class for pre-professional dancers. Principles and concepts of Horton technique with continued emphasis on flexibility, strength and coordination.</td>
</tr>
<tr>
<td>ECE4040</td>
<td>ECE-Gen Math Instruction</td>
<td>ECE</td>
<td>3</td>
<td></td>
<td>Methods for teaching middle level mathematics pertinent to the Ohio Learning Standards with an emphasis on content, developmentally appropriate pedagogy, curricula and materials suitable for teaching fourth and fifth grade mathematics education.</td>
</tr>
<tr>
<td>EES6750</td>
<td>Biological Safety</td>
<td>EES</td>
<td>2</td>
<td></td>
<td>Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.</td>
</tr>
<tr>
<td>REL5480</td>
<td>Hindu Mythology</td>
<td>REL</td>
<td>3</td>
<td></td>
<td>Exploration of the following questions: What is myth and why is it significant for the study of religion? Can we speak of a Hindu mythology? How have Hindus organized their sacred narratives and what kinds of religious themes do these stories convey? How are Hindu sacred narratives related to Hindu beliefs and practices? How have scholars analyzed Hindu mythic traditions? What intellectual issues are at stake in reading mythology across cultures?</td>
</tr>
<tr>
<td>REL5730</td>
<td>Genesis</td>
<td>REL</td>
<td>3</td>
<td></td>
<td>Examines Genesis as the foundation of the Bible in context with cultural tales such as the ancient Mesopotamian creation and flood myths.</td>
</tr>
<tr>
<td>EDL7330</td>
<td>Teacher Leadership</td>
<td>EDL</td>
<td>3</td>
<td></td>
<td>Review of published literature about classroom teachers as leaders. Critical and current issues relevant to the development of classroom teachers as leaders within the context of their roles.</td>
</tr>
<tr>
<td>ANT4880</td>
<td>Ind Reading Anatomy</td>
<td>ANT</td>
<td>480</td>
<td></td>
<td>Various anatomy topics will be discussed with an assigned faculty advisor.</td>
</tr>
<tr>
<td>MUA1220</td>
<td>Applied Music</td>
<td>MUA</td>
<td>1220</td>
<td></td>
<td>Music: Applied Music</td>
</tr>
<tr>
<td>SAA7530</td>
<td>Stress Management &amp; Resilience</td>
<td>SAA</td>
<td>7530</td>
<td></td>
<td>Learn resilience skill development strategies and stress management techniques that are used in personal and professional development. Develop key resilience and stress management competencies that are useful in working with students and adults.</td>
</tr>
<tr>
<td>PTX7500</td>
<td>Research Techniques</td>
<td>PTX</td>
<td>7500</td>
<td></td>
<td>Practical laboratory experiences in commonly used biological techniques including DNA purification and manipulation, protein expression and analysis, and the classical pharmacological techniques of mediating receptor binding. Designed to give hands-on experience along with a short weekly lecture providing background on the theory behind the topic.</td>
</tr>
<tr>
<td>MBA7550</td>
<td>Competitive Strategy</td>
<td>MBA</td>
<td>7550</td>
<td></td>
<td>Theory and practice of making decisions that shape the future of a firm. Content and process of the course will focus on the complexity of analytical decision-making from the perspective of managers who are responsible for an entire business unit and a wide range of competitive business situations.</td>
</tr>
<tr>
<td>PLS4860</td>
<td>Model UN Seminar</td>
<td>PLS</td>
<td>4860</td>
<td></td>
<td>Political Science</td>
</tr>
<tr>
<td>ASM7973</td>
<td>Aerospace Research</td>
<td>ASM</td>
<td>7973</td>
<td></td>
<td>Aerospace Medicine</td>
</tr>
<tr>
<td>KBH1420B</td>
<td>Orienting:Land Nav</td>
<td>KBH</td>
<td>1420B</td>
<td></td>
<td>Fundamentals and knowledge of Orienting:Land Navigation. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>ENG6100</td>
<td>Selected Subjects</td>
<td>ENG</td>
<td>510</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>ED4000</td>
<td>Ed Honors Project I</td>
<td>ED</td>
<td>4000</td>
<td></td>
<td>An in-depth independent study, under the guidance of a TED faculty advisor, in which students pursuing Education Departmental Honors complete the research portion of their Honors projects.</td>
</tr>
<tr>
<td>CEG6524L</td>
<td>Dig Integr Ckt Design Lab</td>
<td>CEG</td>
<td>6524L</td>
<td></td>
<td>Computer Engineering</td>
</tr>
<tr>
<td>CS5250</td>
<td>Comp Data Analysis</td>
<td>CS</td>
<td>5250</td>
<td></td>
<td>Computer Science</td>
</tr>
<tr>
<td>EE2020L</td>
<td>Intro to Mechatronic Lab</td>
<td>EE</td>
<td>2020L</td>
<td></td>
<td>EE Electrical Engineering</td>
</tr>
<tr>
<td>ART2320</td>
<td>Sculpture for Non-Majors</td>
<td>ART</td>
<td>2320</td>
<td></td>
<td>Art</td>
</tr>
<tr>
<td>MUE2920</td>
<td>Vocal Jazz Ensemble</td>
<td>MUE</td>
<td>2920</td>
<td></td>
<td>Music: Ensembles</td>
</tr>
</tbody>
</table>

**Fall 2020**

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UG: Undergraduate, GR: Graduate, ST: Studio, LB: Lecture, Combination: Lecture/Lab
| Fall 2020 ED7170 | 7170 | Word Study and Phonics | ED | Education | 3 | In-depth analysis of how people learn the printed word related to instructional procedures across the grade levels K-12. Students will apply knowledge through lesson design, delivery and analysis. | GR | LL | Lecture/Lab Combination |
| Fall 2020 ME7990 | 7990 | Independent Study | ME | Mechanical and Materials Engr | 1 | Independent study in Mechanical Engineering, Materials Science and Engineering, and Renewable and Clean Energy. Topics vary. | GR | IS | Independent Study |
| Fall 2020 PPH7650 | 7650 | Public Health Crisis and | PPH | Population & Public Health | 3 | This course provides an analysis of the players involved, coordination with governmental emergency management at the local, state, tribal and federal level; legal requirements; public health disaster awareness and preparedness; disaster mitigation and response; public health business resumption considerations and public policy considerations and community outreach. | GR | LE | Lecture |
| Fall 2020 CS7140 | 7140 | Adv Software Engineering | CS | Computer Science | 3 | This course covers advanced topics in software engineering. Aspects of problem specification, design, verification, and evaluation are discussed. We will focus on design methods, including software patterns and software architecture, plus some advanced topics involving formal methods of software specification or evaluation using software metrics. Students will participate in team projects to apply the methods discussed. | GR | LE | Lecture |
| Fall 2020 LSR8008 | 8008 | IT in Nursing & H Care | NUR | Nursing | 3 | Systematic assessment of clinical and administrative information needs of health care systems. Examines the technology and strategies needed to support patients, nurses, and health care delivery in dynamic environmental systems. | GR | LE | Lecture |
| Fall 2020 CS1150 | 1150 | Intro to Comp Sci | CS | Computer Science | 4 | Expose students to the scientific method as implemented in computer science. Topics include basic programming, web design, database, logic gates, algorithm development and fundamentals of networking. The course requires students to apply and extend the concepts in a laboratory setting. | UG | LE | Lecture |
| Fall 2020 ART3690 | 3690 | Beg Printmkg: Screenprint | ART | Art | 3 | Introduction to silkscreening techniques such as stencil cut, photo stencil, and crayon and touche resists. Exploration of aesthetic possibilities of the media. This course has a fee that is non-refundable once the term begins. | UG | LB | Lab |
| Fall 2020 PLS3220 | 3220 | State Government | PLs | Political Science | 3 | Survey and analysis of the structures and functions of the American states with special attention to the problems of federal-state and state-local relations, legislative apportionment, and urban growth. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 ME6530 | 6530 | Energy Conversion | ME | Mechanical and Materials Engr | 3 | Fundamentals of energy and energy conversion, the conversion of energy from mechanical, thermal, chemical, and nuclear sources. To demonstrate these energy forms - generators, wind, ocean, turbines, direct energy conversion, fossil fuels, biofuels, and nuclear power will be presented. | GR | LE | Lecture |
| Fall 2020 EE3310 | 3310 | Devices and Circuits | EE | Electrical Engineering | 3 | Introduction to basic solid-state electronic devices for discrete and integrated circuits. Major topics include carrier flow in semiconductors, p-n junction theory, semiconductor devices, bipolar junction transistors, field effect transistors, biasing, introduction to amplifiers, and frequency response. | UG | LE | Lecture |
| Fall 2020 EE7260 | 7260 | Autonomous Unmanned Syst | EE | Electrical Engineering | 3 | Understand quadrotor dynamics and construct state space models, conduct system identification using least squares, understand LQR theory and apply it for designing state feedback control laws for quadrotor attitude and position control, and understand extended Kalman filter theory and apply it to quadrotor state estimation. | GR | LL | Lecture/Lab Combination |
| Fall 2020 EES9990 | 9990 | Thesis | EES | Earth & Environmental Sciences | 0.5 | Supervised research and writing for a Master of Science thesis. | GR | IS | Independent Study |
| Fall 2020 GEO4840 | 4840 | Biogeography | GEO | Geography | 3 | Introduction to the factors affecting the distribution of plants and animals. | UG | LE | Lecture |
| Fall 2020 EE4800 | 4800 | AYA Prof Seminar | ED | Education | 3 | Seminar accompanying AYA Student Teaching focusing on pedagogical content knowledge and the achievement of and submission of the edTPA. | UG | SE | Seminar |
| Fall 2020 PL3560 | 3560 | Politics Society France | PLs | Political Science | 3 | The historic interaction of French culture and politics. Growth of the French nation and state, French society, the nature of modern politics and institutions, and France's role in world affairs. | UG | LE | Lecture |
| Fall 2020 CHI5120 | 5120 | Adv Chinese Conversation | CHI | Chinese | 3 | A continuation of Chinese 3110 or 5110: a balance of the four language skills: reading, writing, listening, and speaking in Chinese with a focus on conversation. | GR | LE | Lecture |
| Fall 2020 BIE6650 | 6650 | Six Sigma for Engr | BIE | Industrial & Hum Fac Engr | 3 | Introduction to the practical application of Six Sigma tools in production and service contexts. Includes videos and case studies of real-world applications. Six Sigma Green Belt Certificate awarded to students upon successful completion of the course and in-class project. | GR | LE | Lecture |
| Fall 2020 CS3820 | 3820 | Intro to Semantic Web | CS | Computer Science | 3 | Primary W3C standards for the Semantic Web, in particular the Web Ontology Language OWL, the Resource Description Framework RDF, and the SPARQL RDF Query Language. Obtain a solid understanding of their syntaxes, and also how these languages are used to convey information for machine-processing. Project-driven course format with a significant amount of hands-on modeling and programming. | UG | LE | Lecture |
| Fall 2020 BME3211R | 3211R | Human Biomechanics I Rec | BME | Biomedical Engineering | 0 | Required recitation for BME 3211. | UG | RE | Recitation |
| Fall 2020 URS6440 | 6440 | Adv. GIS Apps | URS | Urban Affairs | 4 | Study of advanced geo-spatial analysis techniques using ArcView and ArcGIS software. GIS analysis and technology used to describe spatial elements of public and private sector development issues and to forecast change. | GR | LE | Lecture |
| Fall 2020 PSY4060 | 4060 | Independent Research | PSY | Psychology | 1 | Original problems for investigation. Graded pass/unsatisfactory. | UG | IS | Independent Study |
Fall 2020  PLS4871  4871  Fundamentals of Intel  PLS  Political Science  3  Immerses students in the fundamental trademark standards of intelligence analysis used by the United States Intelligence Community. Integrated Writing course.  UG  LE  Lecture

Fall 2020  ED6755  6775  MA/CS Curr & Mth II  ED  Education  3  This course explores computer information science as a discipline that encourages inquiry, creativity and collaboration. This includes lesson planning, assessment, differentiation, technology and content for computer science courses.  GR  LE  Lecture

Fall 2020  EC4770  4770  Economic Studies  EC  Economics  3  Examine special economic issues. Topics vary.  UG  LE  Lecture

Fall 2020  KNSH1540  1540  Self Defense for Women  KNSH  Kinesiology & Health  1  Fundamental skills and knowledge of Self Defense for Women. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  MUE4440  4440  University Brass Choir  MUE  Music: Ensembles  1  A performance-oriented group which provides students with chamber brass music experience. Students learn elements of ensemble execution, professionalism, brass music history, orchestral styles, and sound production. Audition required.  UG  LL  Lecture/Lab Combination

Fall 2020  CS1300  1300  Data Science for Everyone  CS  Computer Science  4  An introduction to data science, the algorithms and process for preparing and analyzing data, generating predictions, and extracting relationships from data. Present fundamentals of decision analysis, data mining, and machine learning.  UG  LE  Lecture

Fall 2020  PTEX6000  6000  Prein Biomedical Research  PTEX  Pharmacology/Toxology  1  Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. PBR provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.  GR  LE  Lecture

Fall 2020  ENG3840  3840  Intro to Dramatic Wrtg  ENG  English  4  Techniques of dramatic writing emphasizing writing of original plays.  UG  LE  Lecture

Fall 2020  EE6550  6550  IC Hardware Security and Trust  EE  Electrical Engineering  3  Students learn to analyze hardware security/trust and be able to implement various countermeasures to improve trust for hardware IC systems. Topics include IC design flow/lifecycle, trust issues at each stage of the IC lifecycle, attack methodologies that threaten HW IC systems, countermeasures to improve trust for HW IC systems, improving Trust for both ASIC and FPGA based systems.<b> Department Managed Prerequisite(s): Undergraduate level EE 20001. Minimum Grade of D and Undergraduate level EE 45401. Minimum Grade of D or similar digital circuit design</b>  GR  LE  Lecture

Fall 2020  APS4000  4000  APS Personnel Management  APS  Applied Studies  3  A course to provide opportunities for students to gain knowledge, practice, and study in technical personnel management. Focus on fundamentals such as organizational analysis, employee selection, training, benefits, employer relations, etc. as they apply to business and organizational setting.  UG  LE  Lecture

Fall 2020  WGS4900  4900  Ldrshp&Action for Change  WGS  Women, Gender, and Sexuality  3  Coordinates internship experience with in-class coursework to provide advanced practice and supervision in the field of women, gender, and sexuality studies. Site selected with guidance of instructor prior to course organization. Service Learning Immersive.<b> Department Managed Prerequisite(s): Undergraduate level WGS 3600 Minimum Grade of C</b>  GR  LE  Lecture

Fall 2020  DEV0970  0970  Basic Algebra  DEV  Developmental Education  4  Review of arithmetic and basic algebra concepts and skills including operations involving signed numbers and fractions, factoring, polynomials, rational expressions and equations, exponents, solving systems of equations, radicals, quadratic equations, equations involving radicals or rational exponents, linear equations, and applications. This course has a fee that is non-refundable once the term begins.  UG  LL  Lecture/Lab Combination

Fall 2020  EES4570  4570  Site Remedl & Management  EES  Earth & Environmental Sciences  3  Physical, chemical, and biological methods used to remediate contamination in soils and groundwater, emphasizing practical applications. Strategies and technologies to address contamination, including the natural attenuation, containment techniques, pump-and-treat, and in situ technologies. Sufficient technical detail so the student can apply basic engineering design equations.  UG  LE  Lecture

Fall 2020  AED2600  2600  Creative Art in Ed Envir  AED  Art Education  3  Understanding the relationship between child development and creative expression with emphasis on materials and methods appropriate for elementary/secondary students. Includes curriculum implementation strategies adaptable to a variety of ages and grade levels.  UG  LL  Lecture/Lab Combination

Fall 2020  PSY1150  8150  Binaural Hearing  PSY  Psychology  3  Examines the psychophysical and physiological basis of binaural and spatial hearing. Topics include binaural detection, sound localization, the cocktail-party effect, models of spatial hearing, and 3-dimensional audio displays.<b> Department Managed Prerequisite(s): Graduate level PSY 8140 Minimum Grade of D</b>  GR  LE  Lecture

Fall 2020  P&N6300  6300  Med Cell Bio & Phys  P&N  Physiology & Neuroscience  3  This is an interdisciplinary course that brings together fundamental concepts of biochemistry, molecular biology, cell biology and cell physiology of invertebrate cells and applies this knowledge to explaining disease mechanisms.  GR  LE  Lecture

Fall 2020  PLS7030  7030  ICP Research Design  PLS  Political Science  3  Addresses fundamentals of qualitative and quantitative research in social science with emphasis on skills needed to complete master's thesis or project.  GR  SE  Seminar

Fall 2020  HLT7001  7001  Intro Multivar Bio Stats  HLT  Health  3  This course examines multivariate statistical procedures commonly used in health care literature. The focus is on understanding appropriate use of statistical procedures and interpretation of findings.  GR  LE  Lecture

Fall 2020  FR4910  4910  History of French Film  FR  French  3  Survey of the main movements of French cinema from 1895 to the present, featuring works by directors such as Vigo, Renoir, Carné, Cocteau, Tati, Brinon, Truffaut, Godard, Resnais, Varda, etc. Taught in French. Integrated Writing course.<b> Department Managed Prerequisite(s): Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D</b>  GR  LE  Lecture

Fall 2020  COM3330  3330  Persuasion & Rhet Theory  COM  Communication  3  Delimitation of the concept of persuasion together with an overview of general rhetorical theory. Preparation and presentation of persuasive communication. Integrated Writing course.  UG  LE  Lecture

Fall 2020  REL5210  5210  Christianity  REL  Religion  3  Examination of the historical development of Christianity from biblical times to the present, with an emphasis on the diversity of religious beliefs, practices, and institutions.  GR  LE  Lecture

Fall 2020  TH1150  1150  Singing for the Actor I  TH  Theatre  1  Private singing lessons for acting, theatre studies and dance majors only.  UG  ST  Studio

Fall 2020  PSY2420  2420  Psychology Men and Women  PSY  Psychology  3  Examination of the current state of research about sex differences in all aspects of human behavior, as well as patterns of public attitudes about the natures and proper roles of men and women.  UG  LE  Lecture

Fall 2020  MUS7330  7330  Analytical Techniques I  MUS  Music  3  Presentation of materials to help students develop skills to analyze core works in the Western musical tradition from the early Medieval period through the early Classical period.  GR  LE  Lecture

Fall 2020  IE4000  4000  International Education  IE  International Education  1  Placeholder for students studying abroad on Wright State University Education Abroad Programs. Course placeholder will be replaced with Wright State courses when student returns from abroad.  UG  IS  Independent Study
Fall 2020  PL5640  6640  Israel and Palestine  PLS  Political Science  3
This class examines the domestic politics of Israel and Palestine, and the international politics of the conflict between them. This course focuses on the causes, development, and prospects of the conflict in the area known as Israel/Palestine. It examines the political history of Israelis and Palestinians, their differing narratives that frame their worldview and how they see the conflict.

Fall 2020  FIN4260  4260  Estate Planning  FIN  Finance  3
Theoretical and practical approach to estate planning. Includes estate and gift taxes, wills, trusts, and estate planning techniques.

Fall 2020  MUE4405  4405  University Clarinet Choir  MUE  Music: Ensembles  1
Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks.

Fall 2020  PSY2810  2810  Psychology Inercarnation  PSY  Psychology  3
Instruction examines the socio-psychological, developmental, mental health factors surrounding the experience of incarcerated persons.

Fall 2020  PSY3710  5710  Perception  PSY  Psychology  3
Examines active processes by which organisms gather, interpret, and respond to environmental stimuli.

Fall 2020  BMB4001  4001  Fundamentals of Biochem  BMB  Biochem & Molecular Biology  3
The primary focus of this course is the basic principles of biochemistry covered in a one semester format. This course is intended for non-majors and will analyze the structure, metabolism, and function of biological compounds.

Fall 2020  ART2150  2150  Foundations of Art Ed  ART  Art  3
Introduction to art education. Approaches to aesthetic awareness; inquiry into theories of art, art appreciation and criticism; current issues; child development through art; and art education methodologies.

Fall 2020  ANT6040  6040  Biomedical Experimental Design  ANT  Anatomy  2
Students must have completed Biomedical Review Article (ANT 6030) in order to take this course. ANT 6030 sets the stage for what the Prenatalion will be focused on. Students will utilize the literature research completed in ANT 6030 to develop a research proposal that could, potentially, advance the selected biomedical field. (0) Department Managed Prerequisite(s): Graduate level ANT 6030 Minimum Grade of C/<b>

Fall 2020  DAN3110  3110  Musical Theatre Dance I  DAN  Dance  3
Group class applies ballet, jazz, and modern dance techniques to Musical Theatre dance.

Fall 2020  ED6170  6170  Midle Lvl Inq & Act Rack  ED  Education  3
This course provides an introduction to teacher-based action research. Students will learn content related to: types of research, types of data, research methodologies, data analyses and data interpretation within the context of education.

Fall 2020  APS4020  4040  African Diaspora  AFS  Afr / Afr Amer Studies  3
Examination of the evolution and development of the African diaspora in an international context. Integrated Writing course.

Fall 2020  APS4030  4030  History of Ideas of Race  AFS  Afr / Afr Amer Studies  3
Examines the development of various ideas of race from 1600 to the present.

Fall 2020  EE4840  4840  Intro Machine Learning  EE  Electrical Engineering  3
Introduction to the field of probabilistic machine learning. Examples are drawn from sensor signal exploitation, biology, text processing, computer vision, and robotics. Key techniques are demonstrated and implemented in MATLAB.

Fall 2020  PHY5220  5220  Optics  PHY  Physics  3
Study of optics using geometric and physical optics, theory and applications of interferometry and light detection devices. Study of optical instruments. Brief introduction to lasers and holography.

Fall 2020  TH3250  3250  Set Design  TH  Theatre  3
Scenic design and the dynamics of stage space use. Includes project design work emphasizing period research, communicating ideas visually with the director and production team, and designing for different types of spaces.

Fall 2020  FAS3800  3800  Undergrad Research FS  FAS  Food and Agricultural Systems  3
Application of research principles to solve or improve understanding of a relevant problem in food science or technology.

Fall 2020  EDL7200  7200  Analysis of Teaching  EDL  Educational Leadership  3
Analytic and practical approach to teaching methods and skills for inducing learning with attention to interaction analysis and cognitive science.

Fall 2020  BMB7030R  7030R  Research Ethics Rec  BMB  Biochem & Molecular Biology  0
Required recitation for BMB 7030.

Fall 2020  BOP4010  4010  Topics in Modern Biology  BIO  Biology  1
Advanced topics in modern biology of current interest. Topics vary. 

Fall 2020  SOC4080  4080  Independent Study  SOC  Sociology  1
Research project in an area of specialized interest in sociology. Minimum 3.0 grade point average.

Fall 2020  EDL3300  3300  Research on Teaching  EDL  Educational Leadership  3
Research method design and analysis for the classroom; culminates in the analysis of collected research data.

Fall 2020  EE3210  3210  Linear Systems I  EE  Electrical Engineering  3
Continuous-time signals and systems, time domain analysis. Laplace transform, Fourier series, Fourier transform, Bode analysis. Various approaches to system and signal modeling.

Fall 2020  MTH2240  2240  Applied Calculus  MTH  Mathematics  4
Functions (including exponential and logarithmic functions), limits, derivatives and rates of change, applications of derivatives including graphing and optimization, and indefinite and definite integrals with applications. Credit will not be given for MTH 2240 for students who have already successfully completed MTH 2300.

Fall 2020  ENG2130  2130  Research and Argument  ENG  English  3
Adopt principles introduced in ENG 1100 and equivalents to writing for professional audiences in the sciences and lay readers. Stresses argument, research, and effective use of source materials. Students may use any of the following courses to satisfy the requirements of the Core, but only one may count: ENG 2130, ENG 2110, ENG 2120, ENG 2130, ENG 2140.

Fall 2020  SW4860  4860  SW Field Practicum I  SW  Social Work  3
First of two field practicum courses where students apply generalist social work practice knowledge to practice in agency settings. Individual learning experiences under the supervision of an agency field instructor, with guidance from the faculty-field liaison. (0) Department Managed Prerequisite(s): Undergraduate level SW 3700 Minimum Grade of D and Undergraduate level SW 3700 Minimum Grade of D and Undergraduate level SW 3800 Minimum Grade of D and Undergraduate level SW 4000 Minimum Grade of D/<b>

Fall 2020  KNH1520  1520  SCUBA: Master Diver  KNH  Kinesiology & Health  2
Advanced skills and knowledge of SCUBA Master Diver. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.

Fall 2020  BIO6560  6560  Ecosystems/Global Change  BIO  Biology  3
Covers current understanding of ecosystem function and the impacts of humans on global biogeochemical cycles and the distribution of life on earth.

Fall 2020  ATH4020  4020  Anthropology of Religion  ATH  Anthropology  3
(also listed as REL 5810) Introduction to the anthropological study of religions of the world and how they relate to other domains of human cultural existence. Examples of contemporary nonwestern religions and other world religions. Integrated Writing course.

Fall 2020  BIO1150L  1150L  Organisms & Ecosystems Lab  BIO  Biology  0
Required laboratory for BIO 1150.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>SOC6710</td>
<td>Victimology</td>
<td>Social Work</td>
<td>3</td>
<td></td>
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<tr>
<td>HST4830</td>
<td>Topics in Gender History</td>
<td>History</td>
<td>3</td>
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<tr>
<td>ME4140</td>
<td>Mechanical Design I</td>
<td>Mechanical Engineering</td>
<td>3</td>
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<tr>
<td>ELP0480</td>
<td>LEAP Test Preparation</td>
<td>Education</td>
<td>0</td>
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</tr>
<tr>
<td>JPN3120</td>
<td>Adv Japanese Conv</td>
<td>Japanese</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>CS3100</td>
<td>Data Struc &amp; Algorithms</td>
<td>Computer Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG7510</td>
<td>TESOL: Speak/Listen</td>
<td>English</td>
<td>3</td>
<td></td>
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<tr>
<td>BIO4420</td>
<td>Adv Molecular Biology</td>
<td>Biology</td>
<td>4.5</td>
<td></td>
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<tr>
<td>CHM5120</td>
<td>Quantitative Analysis</td>
<td>Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PPN860</td>
<td>Prin Biomedical Research</td>
<td>Physiology &amp; Neuroscience</td>
<td>1</td>
<td>Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. PBIR provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.</td>
</tr>
<tr>
<td>FIN7810</td>
<td>Special Studies Fin</td>
<td>Finance</td>
<td>1</td>
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<tr>
<td>CS2200</td>
<td>Discrete Struc Algorithm</td>
<td>Computer Science</td>
<td>4</td>
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<tr>
<td>DMV8100</td>
<td>DMV Registration</td>
<td>DMV</td>
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<td></td>
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<tr>
<td>EES6270</td>
<td>Process Geomorphology</td>
<td>Earth &amp; Environmental Sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ISE3221</td>
<td>Adv Stats for Engineers</td>
<td>Industrial &amp; Systems Engineering</td>
<td>3</td>
<td>Combination</td>
</tr>
<tr>
<td>EDL9920</td>
<td>Sold Culture Prof Growth</td>
<td>Educational Leadership</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EDP6070</td>
<td>Reading and Literacy II</td>
<td>Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CS7100</td>
<td>Adv. Prog. Languages</td>
<td>Computer Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HPR2010</td>
<td>Teaching Invasion Games</td>
<td>Health Prof Educ &amp; Recreation</td>
<td>3</td>
<td></td>
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<tr>
<td>ENG4910</td>
<td>Directed Reading</td>
<td>English</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG4470</td>
<td>Post-Colonial Lit</td>
<td>English</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EDL7720</td>
<td>Ed Administrative Behav</td>
<td>Educational Leadership</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020  DAN3720  3720  Dance Pedagogy  DAN  Dance  1  Methods for teaching dance using an anatomical approach as the basis for sound training in all techniques.

Fall 2020  ANT2120  2120  Human Anatomy & Phys II  ANT  Anatomy  4  Introductory survey of the anatomy and physiology of the human body with an emphasis on clinical applications. Endocrine system, cardiovascular system, lymphatic system, respiratory system, urinary system, acid-base balance, fluid balance, reproductive system and digestive system. Laboratory exercises use human donors.

Fall 2020  MTH6060  6060  Mathematical Modelling  MTH  Mathematics  3  An introduction to mathematics as it is used in the real world. Graphical methods, curve-fitting, dimensional analysis, scaling, stability, growth, vibrations, circuits, probability, optimality, approximation, Monte Carlo simulation. Students will be encouraged to make creative use of mathematical and problem-solving skills, and asked to develop an original model. (b) Department Managed Prerequisite(s): Department Managed Prerequisite(s): Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level MTH 2530 Minimum Grade of D or Undergraduate level MTH 2350 Minimum Grade of D.

Fall 2020  MUIA420  1420  Applied Music  MUA  Music: Applied Music  4  Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.

Fall 2020  NEU6400  6400  Developmental Neuroscience  NEU  Neuroscience  3  Overview of the processes of neural differentiation, migration, synapse formation, and circuit refinement involved in neural development.

Fall 2020  GR4530  4530  Readings Greek Hist Bog  GR  Greek  3  Herodotus, Thucydides, Xenophon, Polybius, and Plutarch. Topics include methods of composition, influences on historiography from the sophists and philosophers, the development of Greek historical writing, and supplemental evidence from inscriptions and nonliterary sources. Titles vary.

Fall 2020  PL56920  6920  Indep Field Research  PLS  Political Science  1  Supervised individual projects. May include internships or other special projects.

Fall 2020  CEG6450  6540  Sensor Net and Systems  CEG  Computer Engineering  3  Introduction to wireless sensor networks. Overview of fundamental problems and their solutions. Focus on data aggregation, dissemination, localization, power management, security, algorithms and protocols. Students develop applications using Micaz motes and sensors running TinyOS operating systems. (b) Department Managed Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D or Graduate level CEG 6400 Minimum Grade of D.

Fall 2020  EES6290  6290  Remote Sensing of Earth  EES  Earth & Environmental Sciences  3  In Remote Sensing and Digital Image Processing students learn the methods and concepts of remote sensing from an Earth Sciences perspective. Students learn to interpret various types of images including stero air photos, airborne multi-spectral digital images and satellite images. Hands-on digital image processing is conducted using industry standard software.

Fall 2020  ED7990  7990  Adv Studies Seminar I  ED  Education  1  Midpoint seminar will focus on applying knowledge of preK-12 classrooms, developing capstone project, and completing mid-point key assessments.

Fall 2020  MUE4460  4460  University Saxophone Quartet  MUE  Music: Ensembles  1  Performs saxophone quartet repertoire ranging from classic to jazz to contemporary. Audition required.

Fall 2020  EE7440  7440  RF Power Amplifiers  EE  Electrical Engineering  3  The course covers the fundamental theory of radio frequency (RF) power amplifiers and their applications in wireless communications, radars, and radio and TV broadcasting. RF power passive and active devices are discussed.

Fall 2020  HST7900  7900  Capstone Project  HST  History  1  Capstone project that demonstrates achievement and is a significant contribution to the field (historical editing, exhibit design and creation, public program, documentary film, oral history, advanced processing, etc).

Fall 2020  REL3130  3130  Introduction to Islam  REL  Religion  3  Origin and development of Islam, including contemporary issues.

Fall 2020  ART4480  4480  Advanced Painting  ART  Art  3  Continued emphasis on pictorial organization with increased attention to the personal imagery of students. This course has a fee that is non-refundable once the term begins. (b) Department Managed Prerequisite(s): Undergraduate level ART 3490 Minimum Grade of D.

Fall 2020  ME3210  3210  System Dynamics  ME  Mechanical and Materials Eng  3  Introduction to the system level modeling of dynamic engineering systems including, but not restricted to, linear and rotational mechanical, fluid, thermal, and electrical systems. Modeling of control devices (motors, heaters, pumps) is addressed. (b) Department Managed Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D.

Fall 2020  TTW6500  6500  TTW Int: Wk Study  TTW  Transition to Work  1  Students assigned to an experienced Transition to Work Coordinator in the field for observing, discussing, researching, and practicing skills in coordinating direct and related transition services for students with various disabilities.

Fall 2020  CHM6020  6020  Adv Environ Chem & Anal Chem  CHM  Chemistry  3  Environmental sampling and analysis using instrumental techniques. Chemical fate prediction by measurement and examination of physical and chemical properties.

Fall 2020  MTH3260  3260  Num Mthds Comput Sci  MTH  Mathematics  3  Numerical methods for the sciences using modern programming languages. Solution of linear and nonlinear equations, symmetric matrix eigenvalue problems, interpolation and least squares. Initial value and boundary value problems for representative systems governed by ordinary and partial differential equations are also solved numerically.

Fall 2020  CNL9530  9530  Case Form Interven Supv  CNL  Counseling  3  This course reviews clinical decision making skills in counselor practice and emphasizes using sound, clinically defensible diagnostic assessment and clinical interventions supported in current outcome research. Advanced case conceptualization and counselor supervision also presented.

Fall 2020  EC7090  7090  Applied Econometrics  EC  Economics  3  Application of economic theory, mathematical modeling, and statistics to the measurement and forecasting of economic relationships. Emphasis is on specification, estimation, and hypothesis testing. (b) Department Managed Prerequisite(s): Graduate level MBA 5200 Minimum Grade of C or Graduate level MBA 5800 Minimum Grade of C or Undergraduate level EC 1050 Minimum Grade of C.

Fall 2020  CEG6400L  6400L  Comp Networks & Security Lab  CEG  Computer Engineering  0  Required laboratory for CEG 6400.
Survey of vocal literature from the 18th through the 20th centuries, with a focus on the performance of early music written before 1750. One period (Medieval, Renaissance, Baroque) will be emphasized each term.

Students will learn how to become good consumers of psychological research, how to use electronic databases efficiently, begin to consider how to design their own research, and refine APA style writing skills.

A survey of Confucianism in Chinese history beginning with various classical expressions of Confucian thought such as Confucius Ancestors, Mencius, and Xunzi. Focus on two influential Neo-Confucian thinkers: Zhu Xi and Wang Yangming. Consideration of the modern fate of Confucianism in Chinese society and culture. Important topics include: heaven, human nature and self-cultivation, conceptions of the sage, and Confucian political philosophy.

Students will learn to navigate and lead teams, develop and implement plans, work with others, and coordinate activities in simulated combat situations. Students will gain hands-on experience with a tactical action simulation that will accommodate disabled students when appropriate.

Students plan, coordinate, navigate, motivate and lead a team or squad in the execution of a tactical mission.

Introduction to basic concepts, ideas, issues and debates in cultural anthropology, using examples from Asia, Africa, Latin America, Native North America and the Middle East. Explores diverse ways in which humans relate to one another, and reveals the cultural milieus, political configurations, ways of speaking and environments which people have used to shape their world. Integrated Writing course. Credit will not be given to students who have completed CST 2410, ATH 2500 or ATH 2110. 

Grade of D and Graduate level EE 6540 Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D

Grade of D and Undergraduate level EE 4540L Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D

Evaluates the business and professional aspects of interpreting for the Deaf. Taxes, scheduling, peer relations, professional behavior, and communication with consumers, both hearing and Deaf, will be covered. 

Examination of physiological concepts, human responses, nursing assessments, and interventions related to actual and potential health problems in adults with cardiovascular alterations.

Students will explore a variety of instructional design concepts and theories, and how instructional design theory can be applied to practice.

On-the-job training and experience with an organization. Integrates classroom study with practical work experience.

Combination
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>部门</th>
<th>类型</th>
<th>课程</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER3110</td>
<td>German Conversation I</td>
<td>3</td>
<td>Emphasis on the culture of the German-speaking world.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MTH2110</td>
<td>Calculus II</td>
<td>4</td>
<td>Integration techniques, applications of the definite integral, first-order differential equations, vectors and vector operations, parametric equations and polar coordinates, infinite series.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY910</td>
<td>Psychobiology of Stress Cap</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on the psychology of stress.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>DMV1010L</td>
<td>DMV Lab Registration</td>
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<td></td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>NEU2010</td>
<td>Intro Neuroscience Research</td>
<td>2</td>
<td>Introduction to the primary neuroscience literature. Students will learn how to search for articles and begin to analyze the different components of them.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEG0120</td>
<td>Design of Info Tech Sys</td>
<td>3</td>
<td>Uses modern language features and software development practices to design and develop a distributed information technology system.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>FTX610</td>
<td>Ali Healthcare Sys India</td>
<td>3</td>
<td>The course includes a two-week visit to Agra Ayurvedic Medical College, Moundsale, Mungale, India where students will witness the way Ayurveda is practiced and integrated with modern medicine. This course is primarily designed to introduce a natural way of providing health care that is practiced in India as a complimentary health care system.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ART4130</td>
<td>Adv Stud Renaissance Art</td>
<td>3</td>
<td>Intensive studies of the period, major movements, and artists of the time.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>STT4660</td>
<td>Statistical Methods I</td>
<td>4</td>
<td>Simple linear regression and correlation analysis. Concepts of matrix algebra, the matrix approach for regression and multiple regression. The general linear model. An introduction to generalized linear models and logistic regression. One-way analysis of variance. Statistical software packages will be used.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PLS5230</td>
<td>Government of Ohio</td>
<td>3</td>
<td>Organization and functions of the government of Ohio with special attention to development, social structure, legal status, electoral processes, and fiscal problems.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ASM7853</td>
<td>Space Medicine III</td>
<td>2</td>
<td>Space Medicine III will introduce Aerospace physicians to the unique environment of medical operations involved in sub-orbital, orbital, and beyond-earth orbit space flight operations.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>KNH1570B</td>
<td>Soccer: Outdoor</td>
<td>1</td>
<td>Fundamental skills and knowledge of Soccer: Outdoor. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>ART2120</td>
<td>Art Hist II: Run/Contemp Art</td>
<td>3</td>
<td>Historical survey of modern painting and sculpture in the Western world from the Renaissance to the present.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PLS4930</td>
<td>Contemporary Problems</td>
<td>3</td>
<td>Advanced study in selected topics that frequently include new developments in the methodology or subject matter of the various sub fields of the discipline. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>BME4890</td>
<td>Special Topics in BME II</td>
<td>1</td>
<td>Undergraduate special topics in advanced biomedical engineering. Topics vary.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>UVC1020</td>
<td>FYS Service Learning</td>
<td>1</td>
<td>Success within selected majors. Focuses on critical thinking, faculty mentors, career exploration, professionalism, ethics, financial literacy and goal setting through service learning.</td>
<td>UG</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>TH4300</td>
<td>Movement III</td>
<td>2</td>
<td>Further training in group and solo movement/vocal techniques, intended to expand flexibility and strength of the actor's instrument, awareness, responsiveness, and instinctual choices.</td>
<td>UG</td>
<td>ST</td>
<td>Studio</td>
</tr>
<tr>
<td>PLS4610</td>
<td>Comp Social Movements</td>
<td>3</td>
<td>Examines group behavior motivated by the desire to change or maintain political, economic, cultural or social systems. Examination of movements in countries around the world, including cross-national and global movements. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MUE2670</td>
<td>Pep Band</td>
<td>2</td>
<td>Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities. Audition required.</td>
<td>UG</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>MUS2250</td>
<td>Orchestral Strings Ped.</td>
<td>1</td>
<td>This course will provide future instrumental music education majors with practical and artistic application, pedagogical techniques, methods, knowledge and literature for the elementary and secondary string program.</td>
<td>UG</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>PHL530</td>
<td>Modern Philosophy</td>
<td>2</td>
<td>History of philosophy from Descartes to Kant. Topics vary.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>SM4000</td>
<td>Senior Capstone in SSS</td>
<td>3</td>
<td>A survey course designed as a capstone to the Integrated Science Studies program. Invited speakers in the natural sciences will discuss their work. Students will evaluate scientific literature and present independent research projects. Integrated Writing course.</td>
<td>UG</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>PLS5030</td>
<td>Campaigns and Elections</td>
<td>3</td>
<td>American political electoral institutions and processes, and campaigns.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>BME4920</td>
<td>BME Design II</td>
<td>3</td>
<td>Segment two of the BME senior design sequence. Practicum results in the final design engineering and completion of the design project. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>LEP0040</td>
<td>Integrated Skills - Pre-LEAP</td>
<td>0</td>
<td>Reading, vocabulary, listening, cross-cultural discussions for low-beginning ESL students. This course has a fee that is non-refundable once the term begins.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>GR5350</td>
<td>Readings in Greek Poetry</td>
<td>3</td>
<td>Select readings in Greek epic and lyric poetry. Topics include structure and technique of oral epic, the didactic tradition, lyric and epic metres and diction, and the development of pastoral poetry.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>SAA7680</td>
<td>Finance &amp; Budget in SAHE</td>
<td>3</td>
<td>Current and emerging trends for funding higher education and budget models utilized provide the focus of this course. University budget and financial statements will be analyzed, budget proposals developed, and budget reduction techniques explained.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MLB4511</td>
<td>Basic Clinical Chem Lab</td>
<td>3</td>
<td>Topics include eigenvalues and eigenvectors, matrix factorizations, Fourier series, analytical and numerical solutions to the three classical partial differential equations, and complex functions, integration, and series and residues.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MTH6050</td>
<td>Adv Engineering Math</td>
<td>3</td>
<td>Topics include eigenvalues and eigenvectors, matrix factorizations, Fourier series, analytical and numerical solutions to the three classical partial differential equations, and complex functions, integration, and series and residues.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EDS4095</td>
<td>Pract 1: Dyslexia Meth&amp;Assess</td>
<td>4</td>
<td>Administration and interpretation of assessments to plan, implement, and communicate dyslexia remediation in a professional setting. Write professional case study integrating assessment and tutoring data. Required: 30 hours of field experience.</td>
<td>UG</td>
<td>PR</td>
<td>Practicum</td>
</tr>
</tbody>
</table>
An introduction to the language of business German with insight into Germany's place in the global economy.  

This is an introduction to epidemiology; including historical foundations, basic concepts, research designs, inferential quantitative statistics, using Statistical Package for Social Sciences. Includes theory and application of qualitative data analysis.  

Intermediate level of skills and knowledge in Rape Defense Strategies: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate. 

Students examine a range environmental issues using readings both pro and con. They also explore several issues in greater depth and present their findings to the class. 

Writing techniques and grammar review; literary and film analysis incorporating grammar points. Taught in German. Integrated Writing course. 

Introduction to elementary education program. Topics include preparation, licensure requirements, professional organizations, and undergraduate research opportunities; explore teaching identities, clarify values, communication strategies, goal setting, course planning; personal wellness to becoming a teacher. 

An immersive learning experience that broadens and deepens the students' knowledge, skills, and dispositions at the organizational executive level, while meeting doctoral program outcomes. 

Requires 3.0 GPA. 

This is an introduction to epidemiology; including historical foundations, basic concepts, research designs, infectious disease, screening, the influence of chance, bias, and confounding, and practical applications. The course discusses the calculation and interpretation of measures of frequency, association, and public health impact. Emphasis is placed on epidemiological principles, concepts, and methods used within public health settings. Students will complete an applied data project. 

This course covers basic theories, methods, and algorithms of atomic computer simulations of materials. Classical, semi-empirical, and ab initio quantum mechanical methods are explained. 

Combines knowledge, skills, and dispositions at the organizational executive level, while meeting doctoral program outcomes. 

Grades are assigned on the basis of a Written Exam, a Final Paper, and Class Participation. 

All students enrolled in this course must have Meet the following prerequisite (s): Undergraduate level EGR 4620 Minimum Grade of D and Graduate level EGR 6620L Minimum Grade of D(> = 0.5).
Fall 2020 GEO4200 4200 Remote Sensing Apps GEO Geography 3 Application of geographic methodology to social, political and environmental problems utilizing remote sensed imagery. Development of capacity to interpret remote sensed data and complete an analysis of data. UG LE Lecture

Fall 2020 STT7202 7020 Stochastic Processes STT Statistics 3 Stationary processes, Markov chains, Poisson processes, pure birth process, queuing processes, inventory problems, traffic flow problems, introduction to financial processes.<b> Department Managed Prerequisite(s):</b> Graduate level STT 6610 Minimum Grade of D/<b>/b</b> GR LE Lecture

Fall 2020 PSY6360 6360 Development Psych Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on current theory, research, and applied issues in selected aspects of development across the lifespan. Topics will vary. GR SE Seminar

Fall 2020 EC7830 7830 Research in Exams III EC Economics 1 Titles vary. Intensive reading or research in selected fields of economics.<b> Department Managed Prerequisite(s):</b> Graduate level EC 5930 Minimum Grade of D and Graduate level EC 5100 Minimum Grade of D and Graduate level EC 5210 Minimum Grade of D and Graduate level EC 5220 Minimum Grade of D/<b>/b</b> GR IS Independent Study

Fall 2020 URS4430 4430 Administrative Law URS Urban Affairs 3 Constitutional foundations of administrative law and the legal context of federal, state and local administrative rule making and adjudication. UG LE Lecture

Fall 2020 MTH6310 6310 Real Variables I MTH Mathematics 3 The real number system, inequalities, completeness, limits, sequences and the Cauchy criterion, functions, continuity, differentiability, the mean value theorem, L Hospital's rule, Taylor's theorem, the Riemann integral, fundamental theorem of calculus, approximate integration, improper integrals.<b> Department Managed Prerequisite(s):</b> Undergraduate level MTH 2000 Minimum Grade of D/<b>/b</b> GR LE Lecture

Fall 2020 URS7000 7000 Foundations/Tools of PA URS Urban Affairs 3 Examines the legal and political variables and tools that affect the management and operation of local governments and nonprofit agencies. Special emphasis is placed on Ohio. GR LE Lecture

Fall 2020 MUS1140 1140 Fund of Music Appreciation MUS Music 3 Class instruction in functional music theory, sight-singing and musicianship skills, keyboard skills including technique, chord inversions, harmonization, sight reading, and performing repertoire pieces. UG LE Lecture

Fall 2020 REL3550 3550 Asian Religious Ethics REL Religion 3 Explores ethics and morality as construed in a variety of Asian religious traditions including Hinduism, Buddhism, Jainism, and Confucianism. Reading of primary sources ranging from analytic ethical debates to popular folk tales in which moral and immoral behavior figure prominently. Exposure to a variety of cultural approaches to universal human problems and critical reading of primary sources. UG LE Lecture

Fall 2020 REL3750 3750 Intro New Testament REL Religion 3 Introduction to the literature, history, and religion of early Christianity. UG LE Lecture

Fall 2020 NUR6103 6103 Practicum in Neg Ed NUR Nursing 1 Observation, participation, and practice in teaching nursing concepts. Seminars synthesize previous learning with application to the role of the nurse educator. Clinical practicum required. GR SE Seminar

Fall 2020 KNH4890 4890 Workship-Health, PE & Rec KNH Kinesiology & Health 1 Intensive study of content, curriculum, method, or materials designed to meet the needs of preservice and in-service professionals in health, physical education, and recreation. Titles vary. Integrated Writing Course. UG SE Seminar

Fall 2020 EGR4980 4980 Special Topics in EGR EGR Engineering 1 Special topics in Engineering and Computer Science. UG LE Lab

Fall 2020 REL3200 3200 Topics in Christianity REL Religion 3 Examination of selected topics related to the history and practice of Christianity. UG LE Lecture

Fall 2020 ISE4350 4350 Comp Neuroe & Hlth App ISE Industrial & Systems Engr 3 Principles and application of computational methods and technologies to neuroergonomics and neuroengineering; analysis of applications related to brain-system interface and augmented sensory perception; articulation of various methods of non-invasive neuroscience measurements. UG LE Lecture

Fall 2020 BIO2140 2140 Intro Cell Bio Lab BIO Biology 2.5 Concepts pertaining to cell structure, the analysis of macromolecules, microscopy and the use of model organisms. UG LB Lab

Fall 2020 KNH1960B 1960B Yoga KNH Kinesiology & Health 1 Fundamental skills and knowledge of Yoga. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 KNH4840 4840 Practicum-Health, PE & Rec KNH Kinesiology & Health 1 Supervised field work for senior students seeking certification or a concentration in a specific area. Titles vary. Contact hours vary according to subject. May be taken for letter grade or pass/unsatisfactory. UG PR Practicum

Fall 2020 MBI000 8000 Microbiology Seminar MI Microbiology & Immunology 1 Graded pass/unsatisfactory. GR SE Seminar

Fall 2020 CEG6510 6510 3D Modeling/Animation CEG Computer Engineering 3 Covers transformations, interpolation, morphing, camera control, hierarchical kinematic modeling, rigid-body animation, controlling groups of objects, collision detection, image-based rendering. Students develop three programs and a final project relating to animation.<b> Department Managed Prerequisite(s):</b> Undergraduate level CEG 4500 Minimum Grade of D or Graduate level CEG 6500 Minimum Grade of D/<b>/b</b> GR LE Lecture

Fall 2020 PHL3320 3320 20th C Political Phil PHL Philosophy 3 Major thinkers in 20th century political philosophy. Topics vary, focusing on one or more themes such as rights, democracy, liberalism, pluralism, secularism, tolerance, torture, terrorism, or totalitarianism. Readings from thinkers such as Arendt, Marcuse, Habermas, Foucault, Derrida, Rawls, Rorty, Cohan, MacIntyre, Taylor, Nussbaum, and Agamben. UG LE Lecture

Fall 2020 SW3700 3700 Hum Behav Soc Env SW Social Work 3 Analysis of human behaviors in order to guide assessment, intervention, and evaluation of micro, mezzo, and macro social work practice. UG LE Lecture

Fall 2020 PSY4140 4140 Cond and Learning Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge within conditioning and learning. Integrated Writing course. UG SE Seminar

Fall 2020 KNH3140B 1340B Juda KNH Kinesiology & Health 1 Fundamental skills and knowledge of Juda. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 REL3510 3510 Comp. Asian Mysticism REL Religion 3 Examination of the religious phenomenon and category of “mysticism” in various Asian traditions including Daoism, Buddhism, and Buddhism (both early Indian Buddhism and Japanese Zen). UG LE Lecture

Fall 2020 MSE620L 620L Finite Element Analysis Lab ME Mechanical and Materials Engr 0 Required laboratory for ME 6120. GR LB Lab

Fall 2020 CEG8960 8960 PhD Candidacy Exam CEG Computer Engineering 1 Examination that tests for depth and understanding in a chosen computer engineering research area. Includes a written proposal for a Ph.D. topic and an oral examination that is open to the public. GR IS Independent Study

Fall 2020 MGT1900 1900 Character & Competence I MGT Management 3 An introduction to the competencies, character, and commitment required to achieve excellence in organizations. An opportunity for students to reinterpret their goals and identify steps that can be taken while in college toward success and well-being. UG LE Lecture
| Fall 2020 | ITA2010 | 2010 | Intermediate Italian I | ITA | Italian | 3 | Continued study of the Italian language. Grammar review, reading, and discussion of selected texts, with practice in speaking and writing the language. | UG | LE | Lecture |
| Fall 2020 | MUS3110 | 3110 | History of Music I | MUS | Music | 3 | History of western art music from ancient Greece to 1750. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 | ED2690 | 6990 | Ed Psych for Educators | ED | Education | 3 | Undergraduate theories of learning, motivation and assessment in the context of pre-K-12 education. | UG | LE | Lecture |
| Fall 2020 | KNH1600A | 1600A | Step Aerobics | KNH | Kinesiology & Health | 1 | Fundamental skills and knowledge of Step Aerobics. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | ECE4300 | 4300 | Diffen & Collab | ECE | Education - Early Childhood | 3 | An examination of modifications and teaching strategies necessary to facilitate the diverse learning needs of young students. Focus on developing and implementing differentiated lessons. | UG | LE | Lecture |
| Fall 2020 | EDL7910 | 7910 | Curr Design & Evaluation | EDL | Educational Leadership | 1 | Provides curriculum and supervision students with knowledge and skills necessary to perform curriculum and instruction design and evaluation functions. | GR | LE | Lecture |
| Fall 2020 | REL5450 | 5450 | Daoism | REL | Religion | 3 | A survey of the various expressions of Daoism in Chinese religious and intellectual history. Includes classical Daoist writings such as: Inward Training, the Daode jing, and the Zhuangzi. Topics include religion and politics, cosmology, self-cultivation, and the Daoist sage. Focus will also include more contemporary expressions of Daoism such as: influential Western interpretations of Daoism, Daoism and ecology, and Daoist body cultivation. | GR | LE | Lecture |
| Fall 2020 | KNH2270 | 1270 | H2O Kickboxing | KNH | Kinesiology & Health | 1 | Fundamental skills and knowledge of H2O Kickboxing. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | CHM1070L | 1070L | Chemistry: Energy & Env Lab | CHM | Chemistry | 0 | Required laboratory for CHM 1070. | UG | LB | Lab |
| Fall 2020 | EE2000 | 2000 | Digital Design with HDL | EE | Electrical Engineering | 3 | Introduction to combinational and synchronous sequential digital system design and optimization. Use of structural hardware description language (HDL) with CAD tools for design and simulation in a field programmable gate array (FPGA)-based laboratory environment. Design and testing of simple combinational and synchronous sequential circuits. | UG | LE | Lecture |
| Fall 2020 | ENG6830 | 6830 | Adv Fiction Wrk Seminar | ENG | English | 3 | Advanced practice in writing and revising fiction, refining craft and style, with the aim of producing fiction of superior merit. Group discussion of manuscripts and reading and discussion of contemporary fiction. | GR | SE | Seminar |
| Fall 2020 | NUR3480 | 3480 | Nursing Care of Adults | NUR | Nursing | 1 | Focuses on critical reasoning and nursing care of adults in acute care settings. Delivery of holistic, patient-centered care that incorporates understanding of pathophysiology, pharmacology, and medical and nursing care principles. (3 cr didactic; 4 cr clinical/lab) | UG | LE | Lecture |
| Fall 2020 | GER4260 | 4260 | 19th Cent German Drama | GER | German | 3 | Readings and reports in 19th-century drama. Representative works of Tieck, Klein, Grillparzer, Hoffel, Buchner, and others. | UG | LE | Lecture |
| Fall 2020 | ISG7260 | 7260 | Asensia in Gdr Ed | ISG | Intervention Specialist | 3 | National and State perspectives on the role of assessment in program design, identification of students, development of written education plans and classroom instruction. | GR | LE | Lecture |
| Fall 2020 | EGR3980L | 3980L | Special Topics in EGR Lab | EGR | Engineering | 0 | Required laboratory for EGR 2980. | UG | LB | Lab |
| Fall 2020 | ED6400 | 6400 | Practicum: MCE | ED | Education | 2 | Educators with prior teaching license(s), under the direct supervision of an experienced classroom teacher, are assigned to a school for field experience in grades 4-9 and their concentration area. | GR | IN | Internship |
| Fall 2020 | ECOS180 | 5180 | Eco Applica Internet II | ECO | Center for Economic Educ. | 2 | This course is a combination of Economic Applications Using the Internet I & II. It teaches basic economic concepts skills to K-12 teachers and how they may be applied to the classroom using resources available on the Internet. This course is an excellent foundation for teachers with little economic knowledge that desire/see expertise. This course has a fee that is non-refundable once the term begins. | GR | LL | Lecture/Lab Combination |
| Fall 2020 | REL5490 | 5490 | Hindu Goddesses | REL | Religion | 3 | Exploration of conceptualizations of the divine feminine in one of the oldest, largest, and most complex religious traditions in the world, Hinduism. Approach combines textual, historic, and anthropological resources to understand the nature of the various Hindu goddesses and how they are worshiped. | GR | LE | Lecture |
| Fall 2020 | HED4850 | 4850 | Foundations Hhs Ed II | HED | Health Education | 3 | During this culminating health methods experience, students apply health education pedagogical skills through the development of a comprehensive health education unit and health education resource plan. Integrated Writing course. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | ENG7330 | 7330 | Seminar: Major Writers | ENG | English | 3 | Reading, research, reports, and discussion on topics dealing with a single writer or a small group of writers either of the same milieu or linked by a common theme, style, or subject matter. | GR | SE | Seminar |
| Fall 2020 | ME8680 | 6580 | Fuel Cell Sci and Tech | ME | Mechanical and Materials Eng | 3 | This course will cover the fundamentals, technologies, and applications of various types of fuel cells. The fundamentals covered are thermodynamic prediction, electrochemistry, and electrode kinetics. The types of fuel cells covered are polymer electrolyte fuel cell, solid oxide fuel cell, and fuel cell stack. | GR | LE | Lecture |
| Fall 2020 | MIS4950 | 4950 | IS Proj Mgt & Develop | MIS | Management Information Systems | 3 | Introduces concept, practice, and the importance of project management. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing IS projects. Students teams will be assigned to an information systems business problem of a firm or organization in the Dayton metropolitan area. Teams analyze, design, implement, evaluate, and develop an information system while applying project management practices. | UG | LE | Lecture |
Fall 2020  ARA5220  5220  Adv ARA Syntax & Gram II  ARA  Arabic  3  An advanced course based in classical approaches to Arabic grammar and syntax, designed to prepare students to engage primary texts, both modern and classical.  Dep Prereq(s): Undergraduate level ARA 3210 Minimum Grade of C or Undergraduate level ARA 5210 Minimum Grade of D-  GR  LE  Lecture

Fall 2020  ME4930  4930  Research in ME  ME  Mechanical and Materials Engr  1  Second of a two-course sequence afforded students an experience in the methodology of solving realistic engineering design problems. Both courses require research of professional literature, application of systems engineering principles, and reporting of technical results. The student becomes acquainted with the demands of initiative, knowledge, intuition, and resourcefulness required for the successful solution of interdisciplinary open ended engineering problems. Integrated Writing course.  Dep Prereq(s): Undergraduate level ME 4920 Minimum Grade of D-  UG  IS  Independent Study

Fall 2020  REL5600  3600  Topics: Amer Religion  REL  Religion  3  Selected topics related to the history and practice of religion in America.  UG  LE  Lecture

Fall 2020  ED3030  3030  LA and SS Grades 4&5  ED  Education  3  Pedagogy and content knowledge of content area reading through the study of grades 4 and 5 social studies.  UG  LE  Lecture

Fall 2020  ME6180  6180  Additive Manufacturing  ME  Mechanical and Materials Engr  3  An introduction to additive manufacturing process. The course will address various additive manufacturing (AM) principles and concepts; Materials science for AM; Design for AM; Scope of additive manufacturing with application areas; bio-manufacturing.  GR  LE  Lecture

Fall 2020  REL3550  3550  Human Rights in China  REL  Religion  3  A survey of the debate on human rights as China in relation to events in modern Chinese history. Examines the impact of Confucianism on current Chinese thinking regarding modernization, democratization, and human rights. Examines other regions, including Singapore, Taiwan, and Tibet. Integrated Writing course.  UG  LE  Lecture

Fall 2020  OBS5300  2560  Internship  OBS  Office Information Systems  3  Practical experience coordinated by faculty, student, and business representative.  UG  IN  Internship

Fall 2020  PHIL2100  2100  Phil of State & Soc  PHL  Philosophy  3  An examination of the ongoing political debate within our culture, including an examination of the role government should play in a good society. Among the questions to be considered: Should governments exist? If so, how much power should they possess, and to what end should they exercise this power? This course, with EC 2100, part of a two-course Wright State Core sequence on government and society.  UG  LE  Lecture

Fall 2020  MGT3900  3900  App Managerial Skills/Character  MGT  Management  3  An advanced introduction to the competence, character, and commitment required to achieve excellence in organizations. An opportunity for students to retranslate their goals and identify steps that can be taken while in college toward success and well-being.  UG  LE  Lecture

Fall 2020  DAN3202  3202  Ballet III  DAN  Dance  3  Vocabulary, techniques, and theory of advanced ballet. Emphasis on body alignment and flexibility.  UG  ST  Studio

Fall 2020  MUA3120  3120  Applied Music  MUA  Music: Applied Music  1  Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.  UG  IS  Independent Study

Fall 2020  DEV0950  0950  Elementary Algebra  DEV  Developmental Education  3  Review basic algebra concepts and skills including operations involving signed numbers and fractions; polynomials; exponential, solving systems of equations; and applications.  UG  LL  Lecture/Lab Combination

Fall 2020  CNE6220  6220  Group Behavior &Theory  CNE  Counseling  3  Surveys the background, theory, patterns of function, techniques of facilitating, and the uses of small groups in counseling.  GR  LL  Lecture/Lab Combination

Fall 2020  HPR2030  2030  Teaching Net/Wall Games  HPR  Health Pfy Educ & Recreation  3  This activity class models best teaching practices in net/wall games such as badminton, tennis, and volleyball. Students are required to demonstrate skill competency.  UG  LE  Lecture

Fall 2020  HIST7000  7000  Historical Methods  HST  History  3  Intensive training in the research methods and materials of history.  GR  LE  Lecture

Fall 2020  TH4290  4290  Advanced Theatre Crafts  TH  Theatre  3  Theatre design and technology, such as furniture building, advanced lighting or sound design, make-up, prosthetics and special effects. Topics vary.  UG  LL  Lecture/Lab Combination

Fall 2020  BHE6150  6150  Adv Prob & Stats for Engineers  BHE  Industrial & Hdm Fsc Engr  3  Topics in probability and statistics with an emphasis on solving engineering problems. Following this course, students will be able to analyze data, design and analyze statistically valid experiments, and draw statistically valid conclusions. Topics include probability, sampling distributions, probability distributions, confidence intervals, hypothesis testing, regression and correlation, analysis of variance (ANOVA), design of experiments, statistical process control, classification, and computer software for basic statistical analysis.  GR  LE  Lecture

Fall 2020  PN6400  6400  Development Neuroscience  PN  Physiology & Neuroscience  3  Overview of the processes of neural differentiation, migration, synapse formation, and circuit refinement involved in neural development.  GR  LE  Lecture

Fall 2020  URS4470  4470  Pub/Hum Service Team  URS  Urban Affairs  3  Principles of developing and managing public and human service transportation systems including its role in society, the history and geography of public transportation, and funding, organizational, cost benefit, labor, and customer service issues.  UG  LE  Lecture

Fall 2020  CEG4981  4981  Team Projects II  CEG  Computer Engineering  3  CEG 4981 is a continuation of CEG 4980 and must be taken in the term immediately following CEG 4980. Project groups maintain their composition and project from CEG 4980.  UG  LE  Lecture

Fall 2020  KNI5760  1760  Walk-Jog-Run  KNI  Kinesiology & Health  1  Fundamental skills and knowledge of Walk-Jog-Run. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  FIN4140  4140  Real Estate Law  FIN  Finance  3  Includes all areas of law commonly concerned with the typical real estate practitioner and investor-consumer. Topics include the law of agency as applied to real estate brokers and salespeople, law of fixtures, estates (including leases), conveyancing of real estate, real estate managers, zoning, cooperative, condominiums, and license laws of Ohio. Successful completion of this course meets one of the licensing requirements for real estate salespeople in Ohio.  UG  LE  Lecture

Fall 2020  BMS5780  7800  Digital Signal Process  BMS  Biomedical Sciences  3  Introduces principles and applications of digital signal processing (DSP) from the design and implementation perspective. Introduction to advanced digital signal processing design concepts. Focus on time and frequency domain algorithms. Methods include multirate signal processing. Filter banks, time-frequency analysis, and wavelets.  GR  LE  Lecture
Fall 2020  CEG3110  3110 Intro Software Testing  CEG  Computer Engineering  3  This course introduces software testing strategies and established best practices for testing software in a systematic manner. Focus is on planning, writing, and executing a software test plan along with documented results. Integrated Writing course: 300-499. Department Managed Prerequisite(s): Undergraduate level CS 1161 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D: 30

Fall 2020  PSY5130L  5130L Meth in Clinical Psy Lab  PSY  Psychology  0  Required laboratory for PSY 3150. 30

Fall 2020  MUS3340  3340 Music in the Elementary  MUS  Music  3  Materials, techniques, organization, and administration of vocal and general music programs in the public school. Reading components and teaching strategies included. 30

Fall 2020  ED4450  4450 AYA Intern Part I  ED  Education  1  Candidates, mentored by an educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a 7-12th grade setting applying pedagogical content knowledge from content and methods courses. 30

Fall 2020  REL6500  6500 Seminar on Am Religion  REL  Religion  3  Seminar examining selected topics related to the history and practice of religion in America. 30

Fall 2020  REL3630  3630 Women Religions America  REL  Religion  3  Role of women in American religious history, with special reference to the diversity of women's religious experiences. 30

Fall 2020  COM1010  1010 Essential Public Address  COM  Communication  3  Fundamentals of verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of a speech. 30

Fall 2020  ED4200  4200 Undergrad Practicum Multi- Age  ED  Education  2  Educators with prior teaching license(s), under the direct supervision of an experienced classroom teacher, are assigned to a school for field experience in grades pK-12 and their concentration area(s). 30

Fall 2020  PSY6500  6500 Social Psych Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on Social Psychology. Topic will vary by title. 30

Fall 2020  ECO5580  5580 ECO and Geography  ECO  Center for Economic Edu.  2  This course will focus on two specific geographic perspectives/epistemological–to help students understand spatial patterns and processes and the interaction of living and nonliving elements in complex sets of relationships within nature and between nature and society. People look at the world from varying personal perspectives shaped by complex combinations of personal experience, occupational roles, self-interests, and community interest. This course has a fee that is non-refundable once the term begins. 30

Fall 2020  LE1150  1150 Police Academy 6  LE  Law Enforcement  3  Ohio Police Training Academy curriculum. Crime-related problems and procedures. Examinations patrol procedures, civil disorders and homeland security. Requires admission to Grand Lake Law Enforcement Academy. 30

Fall 2020  HED1230  1230 Personal Health  HED  Health Education  3  Basic concepts and skills needed to adopt and maintain a healthy lifestyle. 30

Fall 2020  REL1780  1780 Apocalypse of John  REL  Religion  3  A literary and historical study of the Book of Revelation in its original setting with a consideration of its ongoing influence. 30

Fall 2020  DMV2020  2020 DMV Registration  DMV  DMV Consortium  0.5

Fall 2020  FAS2720  2720 Clim Weather Crop Growth  FAS  Food and Agricultural Systems  3  Impacts of weather and climate on agriculture crop production. Topics include growing degree days, weather systems, risk management tools for crop production, plant disease issues, and the principles of weather and climate. 30

Fall 2020  STT4310  4310 Stat Meth Clinical Trial  STT  Statistics  3  Basic clinical design methodology, types of clinical trials, analysis of trial data, and statistical issues that commonly arise in clinical trials: 30

Fall 2020  MBS7000  7000 Mgt of Tech Services  MBS  Management Information Systems  3  Introduction to state-of-the-art service management thinking. Provides an understanding of the unique challenges inherent in profit-delivering service excellence. This course has a fee that is non-refundable once the term begins. 30

Fall 2020  ED6800  6800 AYAMA Capstone Research  ED  Education  3  Initiation of a research project as a reflective investigation and progressive problem solving effort by individuals or groups to improve the quality of education in an AYAMA educational environment. 30

Fall 2020  BME6350  6350 Comp Neuroeng & Hlth App  BME  Biomedical Engineering  3  Principles and application of computational methods and technologies to neuroergonomics and neuroengineering; analysis of applications related to brain-system interface and augmented sensory perception; articulation of various methods of non-invasive neuroscience measurements. 30

Fall 2020  TH3260  3260 Costume Design  TH  Theatre  3  Costume design for the theatre. Includes project design work with an emphasis on professional technique and period design. 30

Fall 2020  MUS3260  3260 Orchestral Conducting  MUS  Music  2  Practical applications of conducting, teaching, and rehearsing in actual conducting situations with live orchestral performers. 30

Fall 2020  BMS7260  7260 Synthetic Polymer Chem  BMS  Biomedical Sciences  2  (Also listed as CHM 6610.) Step-growth and chain-growth polymerization in homogeneous and heterogeneous media. Properties of commercial polymers. 30

Fall 2020  PSY8210  8210 Paradigms in Exp. Psych.  PSY  Psychology  3  The topic of scientific revolutions (as described by Kuhn) and how they apply to experimental psychology is described. Students will learn about the concepts of normal vs. revolutionary science, the rational vs. conventional rules of science and scientific paradigms. Students will analyze paradigmatic shifts occurring in experimental psychology over the past century, including behaviorism, information processing, and ecological approaches to psychology. 30

Fall 2020  EE4170  4170 Digital Control Sys  EE  Electrical Engineering  3  Sampled spectra and aliasing, analysis and design of digital control systems using root locus and transform techniques; discrete equivalents of continuous controller and quantization effects. 30

Fall 2020  PTX8120  8120 Case Studies CBMR Defense  PTX  Pharmacology/Toxicology  3  This course will provide an opportunity for students to review historical chemical and biological scenarios to evaluate means, methods, motivation and effects of such uses. 30
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Department</th>
<th>Instructor</th>
<th>Semester</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA7800</td>
<td>Supply Chain Mgmt</td>
<td>3</td>
<td>MBA</td>
<td></td>
<td>Fall 2020</td>
<td>Explores the fundamentals of supply chain management, including the strategic role of the supply chain, key drivers of supply chain performance, and analytical tools and techniques for supply chain analysis. Cases and in-class exercises.</td>
</tr>
<tr>
<td>BME6440L</td>
<td>Biomechanics Lab</td>
<td>4</td>
<td>BME Biomedical Eng</td>
<td></td>
<td>Fall 2020</td>
<td>Required laboratory for BME 6440.</td>
</tr>
<tr>
<td>PLS4350</td>
<td>Political Corruption</td>
<td>3</td>
<td>PLS Political Science</td>
<td></td>
<td>Fall 2020</td>
<td>Analysis of political corruption including campaign activities, graft, the executive branch, congressional ethics, corruption in law enforcement, organized crime and abuse of authority.</td>
</tr>
<tr>
<td>STT5910</td>
<td>Statistics for Nursing</td>
<td>0.5</td>
<td>STT Statistics</td>
<td></td>
<td>Fall 2020</td>
<td>Coverage of concepts, principles, interpretation and practical rules of thumb for advanced statistical methods used in nursing research.</td>
</tr>
<tr>
<td>PLS4320</td>
<td>Intl Politics Cyber Security</td>
<td>3</td>
<td>PLS Political Science</td>
<td></td>
<td>Fall 2020</td>
<td>Examines the power and politics of cyber security, and the international implications of political and legal issues of digital technology on individuals, institutions, and states. Explorers cyber security in the context of national and international security, with emphasis on computer espionage, cyber influence, and cyber conflict operations.</td>
</tr>
<tr>
<td>LA3800</td>
<td>Internship Liberal Arts</td>
<td>1</td>
<td>LA Liberal Arts</td>
<td></td>
<td>Fall 2020</td>
<td>Career Services facilitated. Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and written reports, employer evaluation, and conference with the faculty supervisor. May be repeated 3 times.</td>
</tr>
<tr>
<td>REL5610</td>
<td>Religion in America</td>
<td>3</td>
<td>REL Religion</td>
<td></td>
<td>Fall 2020</td>
<td>Historical exploration of the variety of forms of religious expression in America and the role in religion in American life.</td>
</tr>
<tr>
<td>PLS6550</td>
<td>Politics of Iraq</td>
<td>3</td>
<td>PLS Political Science</td>
<td></td>
<td>Fall 2020</td>
<td>Traces recent political history of Iraq since its formation in 1920s. Examines reasons for recent war and implications for Iraq's political future.</td>
</tr>
<tr>
<td>PLS6930</td>
<td>Contemporary Problems</td>
<td>3</td>
<td>PLS Political Science</td>
<td></td>
<td>Fall 2020</td>
<td>Advanced study in a selected topic that frequently includes new developments in the methodology or subject matter of the various subfields of the discipline.</td>
</tr>
<tr>
<td>GEO3100</td>
<td>Economic Geography</td>
<td>3</td>
<td>GEO Geography</td>
<td></td>
<td>Fall 2020</td>
<td>Geographical factors that influence human economic activities and explain patterns of production, consumption of goods and services, and location change.</td>
</tr>
<tr>
<td>GER2010</td>
<td>Intermediate German I</td>
<td>3</td>
<td>GER German</td>
<td></td>
<td>Fall 2020</td>
<td>Grammar review, reading, and discussion of selected texts with practice speaking and writing the language. Department Managed Prerequisite(s): Undergraduate level GER 1020 Minimum Grade of C or AP German Language 3.0.</td>
</tr>
<tr>
<td>NUR7622</td>
<td>Supervision: Psych NP Student</td>
<td>1</td>
<td>NUR Nursing</td>
<td></td>
<td>Fall 2020</td>
<td>This course is the second in a sequence that focuses on the role of the psychiatric nurse practitioner as a counselor and the skills necessary to function effectively in that role, with emphasis on treatment modalities. Assurteableness, self-reflection, therapeutic communication, ethics, and professionalism are emphasized with increased focus on clinical reasoning. Advanced practice role development is incorporated. A case-study approach is utilized. Students meet with faculty in small groups.</td>
</tr>
<tr>
<td>MLB4320</td>
<td>Advanced Hematology</td>
<td>3</td>
<td>MLB Medical Laboratory Science</td>
<td></td>
<td>Fall 2020</td>
<td>Advanced topics in hematology with an emphasis on the diagnosis and treatment of anemias, myelodysplastic and myeloproliferative disorders.</td>
</tr>
<tr>
<td>CH5210</td>
<td>Chinese Composition</td>
<td>3</td>
<td>CHI Chinese</td>
<td></td>
<td>Fall 2020</td>
<td>Development of composition skills using famous Chinese writings as guided examples of grammar and techniques. Department Managed Prerequisite(s): Undergraduate level CHI 3020 Minimum Grade of D or Undergraduate level CHI 5020 Minimum Grade of D+.</td>
</tr>
<tr>
<td>CS7700</td>
<td>Adv. Database Systems</td>
<td>3</td>
<td>CS Computer Science</td>
<td></td>
<td>Fall 2020</td>
<td>Introduction of design concepts, operating principles, current trends, and research issues in database systems. Department Managed Prerequisite(s): Undergraduate level CS 4700 Minimum Grade of D or Graduate level CS 6700 Minimum Grade of D+.</td>
</tr>
<tr>
<td>BHE7010</td>
<td>Hum Dev Mkt</td>
<td>3</td>
<td>BHE Industrial &amp; Hum Fac Engr</td>
<td></td>
<td>Fall 2020</td>
<td>Methods, concepts, theories and practice of decision analysis and its role in providing decision-making assistance to human decision makers. Applications-oriented issues are emphasized. Department Managed Prerequisite(s): Graduate level BHE 6120 Minimum Grade of D or Undergraduate level BHE 2211 Minimum Grade of D+.</td>
</tr>
<tr>
<td>SW6130</td>
<td>Social Work Ethics</td>
<td>3</td>
<td>SW Social Work</td>
<td></td>
<td>Fall 2020</td>
<td>Addresses ethical dimensions of social work in policy and law and frameworks for decision-making. Teaches skills for professional self-care to decrease incidents of vicarious trauma.</td>
</tr>
<tr>
<td>CHM102D</td>
<td>Elem Organic Chem w/App</td>
<td>4</td>
<td>CHM Chemistry</td>
<td></td>
<td>Fall 2020</td>
<td>Introduction to the principles of organic chemistry and biochemistry.</td>
</tr>
<tr>
<td>SPN4315</td>
<td>SPN Practicum J</td>
<td>1</td>
<td>SPN Spanish</td>
<td></td>
<td>Fall 2020</td>
<td>Observe elementary and/or intermediate level classes; teach mini-units on culture, language, and literature using the Proficiency Method and the National Standards for Language Teaching.</td>
</tr>
<tr>
<td>SCM7140</td>
<td>Global SCM</td>
<td>3</td>
<td>SCM Supply Chain Management</td>
<td></td>
<td>Fall 2020</td>
<td>Management of the logistics function in supply chains, including physical distribution activities such as transportation, facility location and materials handling.</td>
</tr>
<tr>
<td>LA2010</td>
<td>Effective Career Plan</td>
<td>3</td>
<td>LA Liberal Arts</td>
<td></td>
<td>Fall 2020</td>
<td>Assists students in developing academic major and career goals through identifying skills and interests and then researching appropriate options.</td>
</tr>
<tr>
<td>CEG4422</td>
<td>Secure Computing Pract</td>
<td>3</td>
<td>CEG Computer Engineering</td>
<td></td>
<td>Fall 2020</td>
<td>Computing practices that improve security in all computer work. Topics include secure deletion of files, secure wireless connections, covert channels, Steganography, cryptography, Sandboxes, Zombie Machines, DDoS and Man-in-the-Middle Attacks. Will use tools such as snort, TrueCrypt, GnuPG, virtual-box.</td>
</tr>
<tr>
<td>ECE4550</td>
<td>Independent Study in ECE</td>
<td>0.5</td>
<td>ECE Education</td>
<td></td>
<td>Fall 2020</td>
<td>Independent study in a selected area of Early Childhood Education.</td>
</tr>
<tr>
<td>PLS5410</td>
<td>Fund Crime Investigation</td>
<td>3</td>
<td>PLS Political Science</td>
<td></td>
<td>Fall 2020</td>
<td>Survey of investigative techniques focusing on specific problems and crimes to illustrate proper methods and procedures of criminal investigation.</td>
</tr>
<tr>
<td>CTE4400</td>
<td>Learning Environment</td>
<td>3</td>
<td>CTE Career and Technical Education</td>
<td></td>
<td>Fall 2020</td>
<td>Examination, discussion, application and reporting of best practices for creating an environment conducive to learning and achievement.</td>
</tr>
<tr>
<td>SW7160</td>
<td>Grad SW Research I</td>
<td>3</td>
<td>SW Social Work</td>
<td></td>
<td>Fall 2020</td>
<td>First of three research courses required in MAWSP program. Basic skills of quantitative and qualitative social research methodology and techniques of gathering, analyzing and interpreting data. Evaluation of research reports for relevance to practice with at-risk populations. Development of initial research or evaluation design for social work practice.</td>
</tr>
<tr>
<td>ECE3600</td>
<td>Phonics &amp; Word Study</td>
<td>3</td>
<td>ECE Education</td>
<td></td>
<td>Fall 2020</td>
<td>An in-depth analysis of how children learn printed words and use this knowledge while reading and writing.</td>
</tr>
</tbody>
</table>
Fall 2020  ED6110  6110  Early Lit Assess/Inst I  ED  Education  3  Teachers learn and apply Marie Clay’s theory of literacy processing while tutoring students who struggle with literacy in early childhood settings. Key concepts include assessment, targeted instruction, reciprocity of reading and writing, and acceleration.  GR  LE  Lecture

Fall 2020  ATH2200  2200  Intro to Archaeology  ATH  Anthropology  3  Introduces the nature of archaeological data, techniques of archaeological dating, and methods of data collection, analysis, and interpretation.  UG  LE  Lecture

Fall 2020  SM1010  1010  Scientific Literacy  SM  Science and Mathematics  4  Collaborative skills-driven course designed to develop the critical thinking and reasoning skills associated with scientific inquiry. Work involves interdisciplinary units in the physical and natural sciences that focus on hypothesis generation, experimental design, data collection, objective evaluation of empirical evidence, and organization. Integrated Writing course.  UG  LL  Lecture/Lab Combination

Fall 2020  EDL7760  7760  Sup of Inst & Personnel  EDL  Educational Leadership  3  Focus is on the supervision of curriculum and instruction. A systems approach to formative and summative assessment of instruction. The evaluation of curriculum and program effectiveness will be emphasized.  GR  LL  Lecture/Lab Combination

Fall 2020  MTH2060  3060  Mathematical Modeling  MTH  Mathematics  3  Introduction to mathematical models as used in the real world. Graphical methods, curve-fitting, dimensional analysis, scaling, stability, growth, vibrations, circuits, probability, optimality, approximation, Monte Carlo simulation. Students will be encouraged to make creative use of mathematical and problem-solving skills, and asked to develop an original model.  UG  LE  Lecture

Fall 2020  LEP0340  0340  Integrated Skills - Level 3  LEP  LEAP  0  Reading, vocabulary, listening and note-taking, cross-cultural discussions for high-intermediate ESL students. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture

Fall 2020  MUE4050  4050  Chamber Music  MUE  Music: Ensembles  1  Small chamber ensembles of varying instrumentation. Audition required  UG  LL  Lecture/Lab Combination

Fall 2020  BIO4410  4410  Behavioral Ecology  BIO  Biology  3  How and why animals behave the way they do. How an individual’s behavior contributes to its survival and reproductive success. Environmental influences on optimal behavioral strategies. Theory is emphasized, but real behaviors will also be examined as case studies.  UG  LE  Lecture

Fall 2020  MUS2140  2140  Music in Western Culture  MUS  Music  3  Introduction to the music of Western culture from the Middle Ages to the present. Emphasis on listening skills; elements of music; major styles, genres, and compositions; and cultural context.  UG  LE  Lecture

Fall 2020  PSY6310  6310  Clinical Psychology Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge within Clinical Psychology.  GR  SE  Seminar

Fall 2020  KINE2000B  2000B  Army Fitness Tr. III  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of Army Fitness Training. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  PHLS650  650  Human Nature  PHL  Philosophy  3  Theories of human nature. Topics vary.  GR  LE  Lecture

Fall 2020  PSY3230L  3230L  Cognition & Learning Lab  PSY  Psychology  0  Required laboratory for PSY 3230. Integrated Writing course.  UG  LB  Lab

Fall 2020  CNL6110  6110  Principles of Counseling  CNL  Counseling  3  Introduction and overview of major counseling principles, theories, techniques, historical foundations, and services. Also, addresses counseling specialties and professional organizations.  GR  LE  Lecture

Fall 2020  PLS3120  3120  City Politics  PLS  Political Science  3  Governments and politics of metropolitan regions; government structure and functions; interests and power relations.  UG  LE  Lecture

Fall 2020  REL5520  5520  Western Mystics  REL  Religion  3  Studies expressions of spirituality by exploring mysticism in Judaism, Christianity, and Islam.  GR  LE  Lecture

Fall 2020  NUR7003  7003  Hlth Policy & Politics  NUR  Nursing  3  Critical analysis of public policies and issues affecting nursing and health care delivery. Encompasses economic, political, social, technological, ethical and legal influences on consumers and health care providers from a global perspective.  GR  LE  Lecture

Fall 2020  THH4400  4400  Movement IV  TH  Theatre  2  Beginning training in underlying principles and specific techniques in stage combat. Emphasis on three weapons styles, which may include unarmed, single sword, rapier and dagger, broadsword, quarterstaff, smallsword, etc.  UG  ST  Studio

Fall 2020  PSY4500  4500  Social Psych Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on social psychology. Topic will vary by title. Integrated Writing course.  UG  SE  Seminar

Fall 2020  BIO2100  2100  Orientation Sems. Bio Sci  BIO  Biology  1  Overview of programs, career options, department activities, and research opportunities in the biological sciences.  UG  LE  Lecture

Fall 2020  PTX7011  7011  Thesis Develop Workshop  PTX  Pharmacology/Toxicology  1  Students will learn how to develop thesis proposals and how to present research projects. Students will learn about requirements and receive instructions for preparing oral proposals. A step-by-step program will guide students toward assembling complete presentations.  GR  LE  Lecture

Fall 2020  ART3160  3160  Studies 20th Century Art  ART  Art  3  General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course: GE Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D and Undergraduate level ART 2120 Minimum Grade of D-.  UG  LE  Lecture

Fall 2020  ENG7120  7120  Rhetoric  ENG  English  3  Introduction to rhetoric as related to the written word. Covers the history of rhetoric, current rhetorical theory, and the application of rhetorical theory to the study of literature and composition.  GR  LE  Lecture

Fall 2020  RHB7310  7310  Treatment of Addictions  RHB  Rehabilitation  12  Theory and practice of a variety of treatment modalities and settings. Explores interdisciplinary treatment planning, evidence based practices, family, individual and group interventions, systems, holistic intervention strategies, recovery supports including self-help groups.  GR  LE  Lecture

Fall 2020  BIO3530L  3530L  Exercise Physiology Lab  BIO  Biology  0  Required laboratory for BIO 3530.  UG  LB  Lab

Fall 2020  SOC4610  4610  Gender and Crime  SOC  Sociology  3  Examines how crime and the criminal justice system are shaped by gendered social forces. Specifically, addresses how these forces affect crime-related constituents including perpetrators, victims/survivors, and society as a whole.  UG  LE  Lecture

Fall 2020  ATH4030  4030  Urban Anthropology  ATH  Anthropology  3  Explores the nature of the city from an anthropological perspective, confronting basic questions such as the extent to which the urban environment is a different kind of culture from its rural counterpart and the factors that have contributed to the growth and expansion of urbanism over the last few centuries? Integrated Writing course.  UG  LE  Lecture

Fall 2020  RHB7200  7200  Case Management  RHB  Rehabilitation  3  Assists students in conducting intake interviews, case recording, facilitation of multidisciplinary teams, writing rehabilitation plans with appropriate justifications and measurable outcomes, and case management skills.  GR  LE  Lecture
Develops students' abilities to derive and solve vehicle equations and introduces how dynamic analysis is used in vehicle design. Various performance criteria, control concepts, and HEVs will be studied.

Course provides an understanding of how firms identify, develop and execute different types of international strategies. We have three primary objectives: One, what influences the success and failure of firms in the international context? Two, in the global economy of the 21st century, competition is increasingly shaped by the presence of firms from a variety of national contexts. Three, the nature of competition faced by firms is therefore not only more fierce, but also more culturally diverse.

Provides conceptual framework for effective social work practice with persons from diverse backgrounds. Addresses interlocking, complex configuration of personal and cultural identity, while facilitating understanding and respect for diverse populations. Gives students culturally appropriate interventions for use with affected groups.

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Fall 2020
WGS7200 7200 Seminar Select Subj  WGS  Women, Gender, and Sexuality 3 Explores problems, approaches, and topics in feminist studies, and is intended to provide intensive examination of interesting issues of race, class, gender, and sexuality within a range of sociopolitical, cultural, and historical contexts. Titles and topics vary.  GR  SE  Seminar

Fall 2020
CS7910 7910 Advanced Proposal Writing  CS  Computer Science 3 Emphasizes strategies for competitive research proposal writing in STEM fields, with a focus on communicating highly technical concepts at an appropriate level of complexity for a given audience and purpose. Includes evaluating requests for proposals, closely examining each section of research proposals, navigating the review process, and tailoring proposals to the major funding agencies.  GR  LE  Lecture

Fall 2020
ME7360 7360 Cardio Biofluid Mech  ME  Mechanical and Materials Eng 3 This course describes the intricate relationships between the fluid mechanics and biomedical aspects of the cardiovascular system.  GR  LE  Lecture

Fall 2020
NUR7201 7201 Acute Adult Hist Prob I  NUR  Nursing 8 Focus is on complex symptom management related to acute and emergent physiological alterations in renal, cardiovascular, pulmonary, and integumentary function, along with multi-system disorders. Health promotion, maintenance and restoration are emphasized with risk assessment and prevention. Pharmacological management of complex symptomatology and advanced role development are incorporated.  GR  SE  Seminar

Fall 2020
MP3810 3810 Advanced MP Production I  MP  Motion Picture 6 Production of film and video projects under faculty supervision including budgeting, financing, and production. Emphasis on the documentary, fiction, and independent film within the freelance motion picture market.  UG  LL  Lecture/Lab  Combination

Fall 2020
ME7210 7210 Comp Meths Struct Dyna  ME  Mechanical and Materials Eng 3 Vibration of discrete and continuous systems. Computational methods for the eigenvalue problem. Large-dimensional systems. Approximate methods for continuous systems. Substructure synthesis. Response of vibrating systems. 3 hours lecture, 2 hours lab.  GR  LE  Lecture

Fall 2020
TH2580 2580 Singing Min Theatre IV  TH  Theatre 2 Private singing lessons for musical theatre.  UG  ST  Studio

Fall 2020
EE4560 4560 Intro Robotics  EE  Electrical Engineering 3 Introduces the mathematics of robots with emphasis on coordinate systems and transformations, manipulator kinematics and inverse kinematics, Jacobian, trajectory planning, dynamics and control.  UG  LE  Lecture

Fall 2020
PLS6620 6620 US-India-Pak-Afghan Rela  PLS  Political Science 3 Examination of various aspects of United States relations with India, Pakistan and Afghanistan.  GR  SE  Seminar

Fall 2020
TH2390 2390 Movement I  TH  Theatre 2 Continued study of physical alignment, improvisation, warm-up methods, and exploration of movement dynamics as they relate to acting. A range of established disciplines will be incorporated in this study.  UG  ST  Studio

Fall 2020
NUR4460 4460 Lchsel Mtnt to Prof Nreq  NUR  Nursing 10 Facilitates the transition from student to professional nursing role through concentrated experience in selected clinical areas. Managerial and leadership concepts, issues and roles are examined and applied in various health care settings. (2 didactic hrs. & clinical hrs.)  UG  LE  Lecture

Fall 2020

Fall 2020
MTH3120 3120 Theory of Interest  MTH  Mathematics 4 Theory of financial transactions involving interests, annuities, derivatives, options and futures. Compound and simple rates of interest and discount, force of interest, annuity certain and annuity due, mortgage amortizations, evaluation of bonds, durations, asset and liability matching, cash flow analysis, short sales of stocks and options, arbitrage, and an introduction to risk management and immunization. Covers the SoA/CAS syllabus for the actuarial exam FM/2.  UG  LE  Lecture

Fall 2020
MIS6560 6560 Vocal Literature II  MUS  Music 3 Survey of vocal literature from the 18th through the 20th century emphasizing opera, and oratorios.  GR  LE  Lecture

Fall 2020
KNH1600 1600 Step Aerobics  KNH  Kinesiology & Health 1 Fundamental skills and knowledge of Step Aerobics. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020
ED4750 4750 MA Int Pr II: Std Teach  ED  Education 9 Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in a grades P-12 classroom.  UG  IN  Internship

Fall 2020
FR4210 4210 Literature of Middle Age  FR  French 3 Selected medieval texts: epic, poetry, romance, and plays. Taught in French.  UG  LE  Lecture

Fall 2020
EE5450L 4540L Subsurface Fluid Flow Lab  EES  Earth & Environmental Sciences 0 Required laboratory for EES 4540.  UG  LB  Lab

Fall 2020
HST710 710 Public Health Internship  HST  History 1 Practical training in various aspects of public health and historical administration. Completion of a 300-clock-hour internship and preparation of a report on the experience.  GR  IN  Internship

Fall 2020
EDL9610 9610 Carr & Instruct Ldrshp  EDL  Educational Leadership 3 Emphasizes the roles of the curriculum, instructional, and professional development leader. Focuses on developing a strong base of understanding organizational structure and skill building in leadership, communication, decision-making, and problem solving.  GR  SE  Seminar

Fall 2020
TMG2100 2100 Personnel Management  TMG  Technical Management 3 Characteristics, purposes, objectives, and techniques of supervision and coordination of the work of others. Employment interviewing, training procedures, supervision, and improvement of human relations.  UG  LE  Lecture

Fall 2020
CHM2120L 2120L Organic Chemistry Lab II  CHM  Chemistry 2 Laboratory investigations of CHM 2120 lecture material and techniques of preparative organic chemistry.  UG  LB  Lab

Fall 2020
FR4630 4630 Adv Studies/Lang Civil  FR  French 3 Advanced level course on French or Francophone literature, culture or films. Topics vary. Taught in French.  UG  LE  Lecture

Fall 2020
ART170 170 Adv St Non Western Art  ART  Art 3 Intensive studies of periods, major movements, and artists in non-Western art. Titles vary.  GR  LE  Lecture

Fall 2020
EE3030 3030 Circuit Analysis II  EE  Electrical Engineering 3 Circuit review, alternating current concepts, computer-aided circuit analysis, two-port networks, power.  UG  LE  Lecture

Fall 2020
KNH1400B 1400B Lifeguard Training  KNH  Kinesiology & Health 1 Intermediate level of skills and knowledge in lifeguard training. Competency-based approach. Students should check competency levels posted in physical education building before enrolling.  UG  LB  Lab

Fall 2020
SOM703 703 Year 3 Medical Study  SOM  School of Medicine 24  MD  CL  Clinical

Fall 2020
PSY9220 9220 Diversity Integration III  PSI  Professional Psychology 2 This is the third (capstone) course in a series of three diversity courses on the integration of multiple identities in professional practice. Students are expected to demonstrate diversity competence via reflective learning. The purpose of the course is to help students become more confident in using the competencies that they have acquired as a result of diversity courses and clinical training.  GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
<th>Minimum Grade of D</th>
<th>UG/LB/GR</th>
<th>Lab/Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM1060L</td>
<td>Required laboratory for CHM 1060.</td>
<td>0</td>
<td>Required lab</td>
<td>Laboratory course in methods and problems involved in social psychology research. Integrated Writing course.</td>
<td></td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>PSY5530</td>
<td>Social Psychology Mth</td>
<td>3</td>
<td>Lecture</td>
<td>Students study the theoretical foundations of psychology.</td>
<td></td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>TMG2800</td>
<td>Technical Management</td>
<td>3</td>
<td>Lecture</td>
<td>Stresses business management functions important to small businesses, including single ownership, partnership, incorporation, capitalization and financing requirements, legal requirements, production, and marketing arrangements.</td>
<td></td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>PN6690</td>
<td>Quanti Asp-Mm Trans</td>
<td>2</td>
<td>Lecture</td>
<td>Emphasizes a quantitative approach to the properties of solutes, bio-electrical phenomena, the properties of transport systems that move solutes across biological membranes, and the interactions of these solutes with membranes. Completion of calculus, cell biology, and cellular physiology and biophysics required. May be taken for letter grade or pass/unsatisfactory.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>RHB7040</td>
<td>Psychosocial Rehab</td>
<td>3</td>
<td>Lecture</td>
<td>Psychological issues associated with specific disabling conditions. An in-depth review of the general adjustment process to disability and definitions of normality and abnormality.</td>
<td></td>
<td>GR</td>
<td>LB</td>
</tr>
<tr>
<td>ME7500</td>
<td>Advanced Thermodynamics</td>
<td>3</td>
<td>Lecture</td>
<td>Thermodynamics is studied from both the classical (macroscopic) and statistical (microscopic) viewpoints with an emphasis on statistical thermodynamics. Property relationships, Maxwell relations, partition functions, distribution functions, kinetic theory and the Boltzmann transport equation are discussed.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PHS870</td>
<td>Clinical Neuropsychology</td>
<td>3</td>
<td>Course</td>
<td>The course is intended to provide individuals with a broad understanding of the field of human neuropsychology and the study of brain-behavior relationships within a clinical context. The course will introduce students to models of higher cortical and training issues within the field, behavioral neuropsychology, and issues of normal and abnormal cognitive functioning. While the areas of assessment and intervention will be discussed, neuropsychological assessment strategies will be covered in greater detail in the neuropsychological assessment course.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>BMB7500</td>
<td>Molecular Biochemistry I</td>
<td>3</td>
<td>Course</td>
<td>Also listed as BMS 7500. Survey course emphasizing experimental and problem-solving approaches to understanding amino acids, proteins structure, enzymes, nucleic acid structure and DNA replication.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PLS4730</td>
<td>American Foreign Policy</td>
<td>3</td>
<td>Lecture</td>
<td>Role of the United States in contemporary international politics and the relationship of the domestic political system to that role. Discussion of current policy and events. Integrated Writing course.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>CHM6720</td>
<td>Chemical Crystallography</td>
<td>3</td>
<td>Lecture</td>
<td>Methodology and techniques in the determination of crystal and molecular structures using single-crystal x-ray diffraction.</td>
<td></td>
<td>GR</td>
<td>LL Lecture/Combination</td>
</tr>
<tr>
<td>PHS4070</td>
<td>Clinical Neuropsychology</td>
<td>3</td>
<td>Course</td>
<td>The course is intended to provide individuals with a broad understanding of the field of human neuropsychology and the study of brain-behavior relationships within a clinical context. The course will introduce students to models of higher cortical and training issues within the field, behavioral neuropsychology, and issues of normal and abnormal cognitive functioning. While the areas of assessment and intervention will be discussed, neuropsychological assessment strategies will be covered in greater detail in the neuropsychological assessment course.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>CEG4525</td>
<td>Sci Vis and Virt Env</td>
<td>3</td>
<td>Lecture</td>
<td>Visualization approaches for different data types, using real-world data sets. Different usage modalities, including non-traditional input devices and display types.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>BSE1110</td>
<td>Fundamentals of BIE</td>
<td>1</td>
<td>Lecture</td>
<td>Introduction to the disciplines of Biomedical, Industrial &amp; Systems and Human Factors Engineering. Provides an overview of how engineers design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy. Consists of lecture classes and computer-based instrumentation lab sessions; includes freshman design experience with emphasis on teamwork and problem solving. Department faculty provide interesting insights in their areas of expertise.</td>
<td></td>
<td>GR</td>
<td>LL Lecture/Combination</td>
</tr>
<tr>
<td>EE7480</td>
<td>Adv Microwave Eng</td>
<td>3</td>
<td>Lecture</td>
<td>Concepts and fundamental principles of advanced high-speed electronic devices operating at frequencies greater than 1 GHz, including MESFET, HEMT, RF MOSFET, HBT, and carbon electronics. Models and discussions of semiconductor devices fabricated in a variety of material systems, such as strained Si, III-V compound semiconductors, Si-Ga, CNT and graphene. A description of advanced optoelectronic devices including light-emitting diodes, semiconductor lasers and photovoltaic systems (solar cells) is given. Department Managed Prerequisite(s): Undergraduate level EE 4420 Minimum Grade of D or Undergraduate level EE 4420L Minimum Grade of D or (Graduate level EE 4420 Minimum Grade of D or Graduate level EE 4420L Minimum Grade of D) or combination.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>EGR3940</td>
<td>Internship II</td>
<td>1</td>
<td>Internship</td>
<td>Second internship course. Students are supervised via weekly seminars and regular feedback from employers.</td>
<td></td>
<td>UG</td>
<td>IN Internship</td>
</tr>
<tr>
<td>BBO3160L</td>
<td>Vertebrate Zoology Lab</td>
<td>1</td>
<td>Lab</td>
<td>Required laboratory for BBO 3160.</td>
<td></td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>KNI2280</td>
<td>H2O Moves with Stip</td>
<td>1</td>
<td>Lecture</td>
<td>Fundamental skills and knowledge of H2O Movers with Stip. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td></td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>NUR7720</td>
<td>Pri Cr to Age 2 Form III</td>
<td>2</td>
<td>Lecture</td>
<td>This course is for students enrolled in the neonatal nursery practicum concentration in the MS in Nursing program. The focus of this course is on the growth and development of former preterm and critically ill infants and the impact of morbidity that originated in the newborn period. Differential diagnosis and treatment plans will be directed towards achieving the highest level of wellness obtainable.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>ATH3950</td>
<td>Special Topics Archaeolo</td>
<td>1</td>
<td>Lecture</td>
<td>Intensive study of selected topics in archaeology.</td>
<td></td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>PPH7430</td>
<td>Health Awareness and Adv</td>
<td>3</td>
<td>Lecture</td>
<td>This course introduces the concepts, principles, and practices of health communications. It utilizes social/behavioral theory to develop a comprehensive, integrated plan that provides communications targeting interpersonal, community, and policy/systems. Students will learn how to communicate risk, identify and segment target audiences, develop culturally appropriate messages and materials, social marketing and using new media, communicating with the media and policy makers, and evaluation.</td>
<td></td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>RHB4040</td>
<td>Assisted Tech Ind Living</td>
<td>3</td>
<td>Lecture</td>
<td>History, legislation, and philosophy of independent living and assistive technology; includes experience using AT equipment, accessibility study, and an independent living project.</td>
<td></td>
<td>UG</td>
<td>LE</td>
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</table>
Fall 2020  PPH7110  7110  Public Health Research  PPH  Population & Public Health  3  This class will examine a range of research designs in the context of methods commonly used in public health departments and community based organizations. Students will also learn data analysis skills using SPSS needed to analyze data collected. Students will conduct a research project using a secondary data set.  GR  LE  Seminar

Fall 2020  PSY2710  2710  Psycholinguistics  PSY  Psychology  3  Physical, neurological, and cognitive processes underlying the acquisition, production, and application of language. Examinations of contributions of psychology, linguistics, computer science, and neurosciences to this discipline.  UG  LE  Lecture

Fall 2020  PSY2520  2520  Forensic Psychology  PSY  Psychology  3  Examinations of applications of psychology in law and the U.S. legal systems. Address issues such as the history of forensic psychology, research methods, criminal behaviors such as juvenile delinquency, eyewitness testimony, profiling, jury decision-making, and sentencing.  UG  LE  Lecture

Fall 2020  GEO6460  6460  Transportation Principle  GEO  Geography  3  Overview of principles related to developing and managing public and human service transportation systems. Examines role of public and human service transportation in society, the history and geography of public transportation, and spatial, funding, organizational, cost benefit, labor, and customer service issues.  GR  LE  Lecture

Fall 2020  MUS3650  3650  Mills & Mirla Music K-6  MUS  Music  3  Materials and methods for teaching general music in grades K-6. Laboratory session required in addition to regular class meeting times to develop skills in sight singing and in the use of traditional classroom instruments.  LG  LL  Lecture/Lab Combination

Fall 2020  ENG7020  7020  Meths & Mat: Rhet/Write  ENG  English  3  Introduction to research in the field of composition and rhetoric. Emphasis on finding and using library resources, surveying research designs, and understanding and reporting research in the human sciences.  GR  LE  Lecture

Fall 2020  RBH6670  8670  Rehab Couns Internship  RHB  Rehabilitation  1  Opportunity to utilize all skills, techniques, and competencies acquired in previous coursework while delivering rehabilitation counseling services to consumers. The internship experience is determined individually between the student, university supervisor and site supervisor.  GR  IN  Internship

Fall 2020  TH3520  3520  Stage Management II  TH  Theatre  3  Skills and processes required of the working stage manager. Explores practical solutions to problems of stage management in opera, dance, and union.  UG  LL  Lecture/Lab Combination

Fall 2020  COM4620  4620  Mass Media Law  COM  Communication  3  Laws and regulations affecting mass media.  UG  LE  Lecture

Fall 2020  OIS2170  2170  Integ Office Software  OIS  Office Information Systems  3  Study of computer skills by utilizing and integrating Microsoft Office software. Students will use Microsoft Office software to complete discipline specific projects. *Course cannot be taken for credit by students with credit for OIS 2300, OIS 3300, OIS 3300M, or OIS 3300M01.  UG  LL  Lecture/Lab Combination

Fall 2020  SOC4320  4320  Neighbor and Communities  SOC  Sociology  3  Theoretical, methodological, and substantive issues related to neighborhoods and communities. Emphasis on residential differentiation, segregation, neighborhood change, and neighborhood effects.  UG  LE  Lecture

Fall 2020  CS4830  4830  Systems Simulation  CS  Computer Science  3  Introduction to simulation concepts and techniques. Modeling, discrete simulation, continuous simulation, random number generators, input distribution selection and analysis of simulation results. Emphasis on the application of simulation techniques for analyzing behavior of real systems. Integrated Writing course.  UG  LE  Lecture

Fall 2020  PHY1110R  1110R  Principles of Physics I Rec  PHY  Physics  0  Required recitation for PHY 1110.  UG  RE  Recitation

Fall 2020  BIO6440L  6440L  Plant Physiology Lab  BIO  Biology  0  Required laboratory for BIO 6440.  GR  LB  Lab

Fall 2020  PHL5150  5150  Philosophy of Language  PHL  Philosophy  3  A study of major issues such as sense and reference, theories of meaning and truth, language games, nature of grammar and syntax, language and thought.  GR  LE  Lecture

Fall 2020  TH3440  3440  Acting III  TH  Theatre  3  Training in approaches to such playwrights as the Greeks, Shakespeare, Moliere, Restoration and 18th century playwrights, etc. Builds on fundamentals learned in the first two years of the Professional Actor Training Program.  UG  LL  Lecture/Lab Combination

Fall 2020  ECE4700  4700  Content Seminar: ECE  ECE  Education - Early Childhood  2  Reflection on ECE theories, philosophies and content in preparation for entry into the ECE profession.  UG  SI  Seminar

Fall 2020  COM4103  1030  Writing for Comm  COM  Communication  3  Introduction to fundamentals of critical inquiry. Study of critical thinking, conducting research and analysis. Comprehensive academic writing included.  UG  LL  Lecture/Lab Combination

Fall 2020  ISE1110L  1110L  Fundamentals of BIE Lab  ISE  Industrial & Systems Eng  0  Required laboratory for ISE 1110.  UG  LB  Lab

Fall 2020  CS5510  5510  Intro to Bioinformatics  CS  Computer Science  3  Tool-oriented approach to bioinformatics emphasizing DNA data structure, string representation in PERL, data searches, pairwise alignments, substitution patterns, protein structure prediction and modeling, proteinics, and use of web-based bioinformatic tools.  GR  LE  Lecture

Fall 2020  MP2210  2210  Hist of Motion Picture I  MP  Motion Picture  3  Historical development of the art of the film from 19th-century scientific experiments through the silent era and the advent of sound to mid 20th century. Examination of technical, social, economic, and cultural factors that have shaped motion pictures. Integrated Writing course.  UG  LE  Lecture

Fall 2020  PSY7910  7910  Internship  PSY  Psychology  1  Internship in private or governmental organizations under the direction of a faculty advisor. Student must not have defended their Master's thesis prior to enrollment in this course. Does not count for graduate credit toward the M.S. degree in psychology. Grade pass/unsatisfactory.  GR  IN  Internship

Fall 2020  ED6430  6430  AYA Intern Pt II: Mth ISS  ED  Education  1  Candidates, mentored by a social studies educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a 7-12th grade setting applying pedagogical content knowledge from social studies content and methods courses.  GR  IN  Internship

Fall 2020  MTH1280  1280  College Algebra  MTH  Mathematics  4  Graphs and equations for linear, polynomial, rational, exponential, and logarithmic functions, and systems of equations.  UG  LE  Lecture

Fall 2020  ED6030  6030  Read & Lit II: Int Spec  ED  Education  3  Extends knowledge of literacy instruction and addresses more advanced levels of literacy including content reading and writing for research and extended responses.  UG  LE  Lecture

Fall 2020  SLJ4400  4400  Specialized Interpreting  SLI  Sign Language Interpreting  3  Speciality settings of medical, mental health, legal, Deaf-Blind or oral interpreting. Discussions include ethical decision making, specialized vocabulary and legal ramifications. Students will demonstrate specialized vocabulary and sign competence. Integrated Writing course.  GR  LE  Lecture

Fall 2020  EE7200  7200  Modern Control II  EE  Electrical Engineering  3  Analysis and design of digital control systems using the state approach, multirate digital control systems, and digital state observer and microprocessor control. *Course cannot be taken for credit by students with credit for EE 4350, EE 4351, or EE 4352.  GR  LE  Lecture

Fall 2020  CSD3870  3870  CSD Practicum II  CSD  Community Services Development  1  Individual supervised learning experiences and on-site seminars under the direction of instructor and site staff. *Course cannot be taken for credit by students with credit for CSD 2870.  UG  PR  Practicum
Fall 2020  ED8800  8800  Theor Issue Lifespan Dev  ED  Education  3  Fulfills the theoretical views of lifespan human development, mechanisms underpinning development, and the influence of nature and nurture in human development.  GR  LE  Lecture
Fall 2020  KNH1260  1260  H2O Deep Conditioning  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of H2O Deep Conditioning. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  MUS4650  4650  Computer Applications in Music  MUS  Music  2  Study of computer technology and music software applications. Emphasis is placed upon using MIDI for electronic score notation, sequencing, and basic coursework design.  UG  LE  Lecture
Fall 2020  ED6860  6860  Reading and Literacy I  ED  Education  3  Introduction to the content knowledge of the structure of literacy and reading-writing instruction. Candidates explore instructional strategies for reading and writing and the theory that supports scientifically based instruction.  GR  LL  Lecture/Lab Combination
Fall 2020  MGT6250  6250  Compensation and Benefits  MGT  Management  3  Application of compensation and benefits theory to local small businesses, job analyses, job descriptions, wage and benefit surveys, market pricing, point-factor job evaluations, graded salary structure, and related policies.  GR  LE  Lecture
Fall 2020  HST7220  7220  Sem Early Mod Eur Hist  HST  History  3  Examines facets of European history from the Renaissance and Reformation through the French Revolution. Topics vary.  GR  SE  Seminar
Fall 2020  NEU4990  4990  Ind Research Neurosci  NEU  Neuroscience  1  Students will actively participate in neuroscience research opportunities and gain proficiency in techniques used to study various aspects of neuroscience.  UG  IS  Independent Study
Fall 2020  MP3330  3330  Studies in Film Theory  MP  Motion Picture  3  Intensive study in film theory. Topics vary.  UG  LE  Lecture
Fall 2020  PHL5310  5310  Modern Political PHL  PHL  Philosophy  3  Introduction to classic texts and thinkers in political philosophy from the 16th century to the present. Topics include the foundations of society, theories of justice and rights, the concept of property, and the defense and critique of liberalism, democracy, socialism, and libertarianism. Readings may include Machiavelli, Hobbes, Locke, Hume, Rousseau, Smith, Mill, Marx, Nozick, Rawls, and Nussbaum.  GR  LE  Lecture
Fall 2020  MUS6550  6550  Vocal Literature I  MUS  Music  2  Survey of vocal literature from the 18th through the 20th century emphasizing German lied, French melodic, English and American art songs.  GR  LE  Lecture
Fall 2020  DMV6010  6010  DMV Registration  DMV  DMV Consortium  0.5
Fall 2020  FAS2400  2400  Food Microbiology  FAS  Food and Agricultural Systems  3  Microorganisms of importance to the food industry: their characteristics, utilization and control.  UG  LE  Lecture
Fall 2020  ED3060  3060  MCE Gen Soc Studies Inst  ED  Education  3  Methods for teaching 4th, 5th, and 6th grades social studies pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula, and materials.  UG  LE  Lecture
Fall 2020  ENG2010  2010  Topics in Reading  ENG  English  3  Exploration of topics of interest in literature with focus on knowledge, enjoyment, and informed critical reading.  UG  LE  Lecture
Fall 2020  ED6675  6675  MA/CIS Cur & Mth I  ED  Education  3  This course explores computer information science as a discipline that encourages inquiry, equity and collaboration. This includes liaison planning, creation of a nurturing learning environment, media literacy, and content for computer science courses.  GR  LE  Lecture
Fall 2020  MUS4430  4430  Vocal Pedagogy  MUS  Music  2  Familiarizes with physiological and psychological aspects of voice so they will better understand their own instruments and will be better equipped to teach others.  UG  LE  Lecture
Fall 2020  EE5260  5260  Random Signals and Noise  EE  Electrical Engineering  3  Provides a practical introduction to the concepts of random events, characterization of stochastic signals, first and second order moment descriptions of random processes, and input/output descriptions of random signals and noise in linear systems.  GR  LE  Lecture
Fall 2020  MIL1011  1011  Leadership Dev Lab  MIL  Military Science  0  Supervision of techniques introduced in the Army organizational structure, customs and courtesies in cadet life, cadre-supervised lab. Mandatory weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises for all contracted cadets.  UG  LB  Lab
Fall 2020  LAT5510  5510  Readings in Roman Drama  LAT  Latin  3  Drama in Latin by Seneca, Plautus, and/or Terence. Discussion of dramatic techniques, Greek influence, and the role of drama in Roman society. Titles vary.  GR  LE  Lecture
Fall 2020  PTX4003  4003  Intro to Pharmacology  PTX  Pharmacology/Toxicology  3  This course provides an introduction to basic concepts in drug action. Students will become acquainted with the types of pharmacological agents, their general mechanisms for influencing cell behavior, the duration of effective action, and the vocabulary and delivery of pharmacological agents.  GR  LE  Lecture
Fall 2020  PL6650  6650  Politics of Nationalism  PLS  Political Science  3  Introduction to different dimensions of nationalism. Examination of theorists and cases of nationalist movements/conflicts from different parts of the world in order to appreciate relevance of nationalism to contemporary politics and international relations.  GR  SE  Seminar
Fall 2020  ANT5100  5100  Adv Hum Struc & Func I  ANT  Anatomy  4  Detailed study of the structure and function of the human body. The course begins with anatomical terminology and the characteristics, maintenance and basis of life and moves onto the structure of cells with emphasis on function. Body systems are then covered, which include the integumentary system, skeletal system and articulations, nervous system, special senses and muscular system. Laboratory exercises use human donors.  GR  LE  Lecture
Fall 2020  ENG7550  7550  Seminar in TESOL  ENG  English  3  Reading, research, reports, projects, and discussion on English linguistic/TESOL topics, including phonetics, phonology, morphology, syntax, semantics, pragmatics, discourse analysis, text linguistics, sociolinguistics, psycholinguistics, language acquisition, historical linguistics, and TESOL pedagogy.  GR  SE  Seminar
Fall 2020  MTH2280  2280  Business Calculus  MTH  Mathematics  4  Functions, rates of change, limits, derivatives of algebraic functions, applications including maxima and minima, exponential and logarithmic functions, and indefinite and definite integrals with applications. Credit will not be given for MTH 2280 for students who have already successfully completed MTH 2300.  UG  LE  Lecture
Fall 2020  SW6640  6640  SW Field Ed Seminar I  SW  Social Work  1  Designed to integrate Field Education I experience and coursework. Offered concurrently with Foundation fieldwork.  GR  SE  Seminar
Fall 2020  BIO7990  7990  Literature Critique  BIO  Biology  1  Independent project to write a critical review of literature on a specific topic. Graded pass/unsatisfactory.  GR  IS  Independent Study
Fall 2020  EDS6010  6010  Ident & Clar Autism  EDS  Education - Special Education  3  Examines the psychological, physiological, social and educational characteristics of individuals with classic autism, pervasive developmental delay, Rett, Asperger's syndrome and childhood disintegrative disorder, including prevalence, diagnosis, underlying characteristics and strengths of these individuals.  GR  LL  Lecture/Lab Combination
| Fall 2020 | BIO2120 | 2120 | Cell Biology | BIO | Biology | 3 | Eukaryotic cell structure and function, including energetics and involvement of various organelles. | UG | LE | Lecture |
| Fall 2020 | ECE3100 | 3100 | Reading Methods & Mat | ECE | Education - Early Childhood | 4 | Formal reading instruction in early childhood classrooms, strategies and materials for teaching reading to young children based on IRA and Ohio Content Standards. | UG | LE | Lecture |
| Fall 2020 | PSYC230 | 6230 | Problem Solving Cap | PSY | Psychology | 3 | Writing and oral communication intensive seminar integrating knowledge on problem solving and reasoning. | GR | SE | Seminar |
| Fall 2020 | CS5250 | 5260 | CS Numerical Methods | CS | Computer Science | 3 | Numerical methods for the sciences using modern programming languages. Solution of linear and nonlinear equations, symmetric matrix eigenvalue problems, interpolation and least squares. Initial value and boundary value problems for representative systems governed by ordinary and partial differential equations are also solved numerically. | GR | LE | Lecture |
| Fall 2020 | PSY9440 | 9440 | Child Psychotherapy | PSI | Professional Psychology | 3 | Overview of current theory, research, and techniques of psychotherapy for children and adolescents with specific emphasis on behavior therapy, play therapy, group therapy, family therapy, and milieu therapy. | GR | LE | Lecture |
| Fall 2020 | RBH8650 | 8650 | Rehab Counseling Pract | RBH | Rehabilitation | 3 | Demonstrate basic skills, techniques, and competencies learned in previous coursework while delivering rehabilitation counseling services to consumers. The practicum experience is determined individually between the student, university supervisor and site supervisor. | GR | PR | Practicum |
| Fall 2020 | BMST7060 | 7060 | Modern Control I | BMS | Biomedical Sciences | 3 | State variable representations of continuous and discrete systems. Linear vector spaces and similarity transformations; eigen-analysis, time and transform domain solutions of linear state equations, controllability, observability, and stability of linear systems. | GR | LE | Lecture |
| Fall 2020 | CNL4610 | 4610 | Principles of Counseling | CNL | Counseling | 3 | An overview of major counseling principles, theories, techniques, historical foundations, and services. | UC | LE | Lecture |
| Fall 2020 | EDT2001 | 2001 | Orientation Seminar Math & Stat | MTH | Mathematics | 1 | An overview of programs in mathematics and statistics, internship opportunities, career options, department activities, and undergraduate research opportunities. | UC | LE | Lecture |
| Fall 2020 | BIO4520 | 4520 | Exercise Pharmacology | BIO | Biology | 3 | Effect of exercise on the therapeutic actions of commonly used prescription and over-the-counter drugs. The effect of drugs on athletic performance is also emphasized. | UC | LE | Lecture |
| Fall 2020 | SLI1200 | 1200 | Interpreting Profession | SLI | Sign Language Interpreting | 3 | Overview of the profession of sign language interpreting, including the Code of Professional Conduct, certification criteria, the roles and responsibilities of an interpreter, compensation, group dynamics, cross-cultural issues, historical developments, and current trends. | UC | LE | Lecture |
| Fall 2020 | SOC2700 | 2700 | Intro to CJ in Society | SOC | Sociology | 3 | Overview of the essential functions, processes, and structure of key agencies responsible for the administration of justice in the U.S. (police, courts, and corrections), as well as those of the criminal justice system as a whole. Consideration of how the system affects, and is affected by, vectors of social inequality (e.g. age, race, class, gender). | UC | LE | Lecture |
| Fall 2020 | EDI100 | 1100 | Intro to MCE | ED | Education | 3 | An introduction to middle level teaching. Topics include preparation of teachers, requirements for teacher licensure, professional organizations, middle school curricula, and effective practices. School visits will be part of the course. | UC | LE | Lecture |
| Fall 2020 | SPN4030 | 4030 | Adv Studies: Lang Civil | SPN | Spanish | 3 | Topics vary. Conducted in Spanish. Integrated writing course. | UC | LE | Lecture |
| Fall 2020 | SOC6610 | 6610 | Gender and Crime | SOC | Sociology | 3 | Examination of how crime and the criminal justice system are shaped by gendered social forces. Specifically addresses how these forces affect crime-related constituencies including perpetrators, workers, victims/survivors, and society as a whole. | UC | LE | Lecture |
| Fall 2020 | PPH2100 | 2100 | Climate Change & Health | PPH | Population & Public Health | 3 | Awareness of our changing climate and climate adaptation. Students will learn about changing climate such as extreme weather events, hurricanes, floods, fires, increasing temperature and climate's direct impact on human health including heat-related disorders, infectious diseases, respiratory and allergic disorders, malnutrition, and mental health problems. | UC | LE | Lecture |
| Fall 2020 | EDT7510 | 7510 | Media Literacy | EDT | Educational Technology | 3 | Use of communication competencies and critical thinking skills, including the ability to access, interpret, evaluate, and communicate information delivered in formats that use images, voice and sound. | UC | LE | Lecture |
| Fall 2020 | COM6260 | 6250 | Health Com | COM | Communication | 3 | Basic themes and issues that have developed in health communication research including physician-patient and nurse-patient communications, organizational communication in health care organizations, and relationships among care providers. | UC | LE | Lecture |
| Fall 2020 | REL3930 | 3930 | Faith and Reason | REL | Religion | 3 | Introduction to issues in philosophy of religion. Topics vary. | UC | LE | Lecture |
| Fall 2020 | ME4340 | 4340 | Sim of Thermal-Fluids | ME | Mechanical and Materials Eng | 3 | Commercial computational fluid dynamics software is used to solve practical engineering problems, including fluid, heat and mass transfer. | UC | LE | Lecture |
| Fall 2020 | BIO7120 | 7120 | Ev Bio Genes Org & Eco | BIO | Biology | 3 | Graduate level introduction to environmental biology at multiple levels of biological organization including molecular biology, organismal physiology and evolutionary biology, and community and ecosystem ecology. | UC | LE | Lecture |
| Fall 2020 | KNH1200 | 1210 | Motor Dev: Low Incidence | KNH | Kinesiology & Health | 3 | Understanding how disabilities impact psychomotor development, ADLs, mobility, and independence of individuals with disabilities. Knowledge of activities that contribute to an active lifestyle. | UC | LE | Lecture |
| Fall 2020 | EDL7370 | 7370 | Curriculum Analysis | EDL | Educational Leadership | 3 | Improve the school leader's ability to manage and lead the development and organization of curriculum, course planning, and materials. | UC | LE | Lecture |
| Fall 2020 | ED4610 | 4610 | Practicum in TESOL | ED | Education | 2 | Candidates holding a valid teaching license, under direct supervision of an experienced classroom teacher, are assigned to a school for teaching experience in grades K-12 in Teaching English as a Second Language (TESOL). | UC | IN | Internship |
| Fall 2020 | ED56480 | 6480 | Sust Tchng: IS M/I | EDS | Education - Special Education | 8 | Candidates, under the direct supervision of an experienced intervention specialist, are assigned to a school for intensive teaching experience in grades K-12 special education for students with moderate/intensive needs. | UC | IN | Internship |
Fall 2020
ED2260 2260 Math PCK Seminar ED Education 3 Teacher candidates will form a foundation for math pedagogical content knowledge. Through readings, discussions, observations, and reflections, students will understand the specialized knowledge about how students learn math and how best to teach it. UG SE Seminar
Fall 2020
BUS1000 1000 Bus. & Career Opp BUS Business 1 Perspectives on an undergraduate degree in Business. Professional career opportunities, preparation for a business career, academic profis, and resources available to students through both Wright State University and the Raj Soin College of Business. UG LE Lecture
Fall 2020
RHB3630 3630 Behavioral Analysis RHB Rehabilitation 3 Introduction to applied behavior analysis. Principles and interventions related to applied behavior analysis as well as potential benefits of applied behavior analysis treatment. UG LE Lecture
Fall 2020
LDR4600 4600 Ind Study in Leadership LDR Leadership 1 Independent study. UG IS Independent Study
Fall 2020
CEG3730 7370 Distributed Computing CEG Computer Engineering 3 Semaphores: weak and strong, split-binary, distributed. Distributed Algorithms. UG GR Lecture/Lab
Combination
Fall 2020
BBIO700 4700 General Entomology BIO Biology 4 Basic biology of insects, including their morphology, physiology, life history, ecology, evolution and taxonomy. UG LE Lecture
Fall 2020
ED5710 6710 Grad Field Experience ED Education 1 Introduces students to the educational process through participation in a P-12 classroom and through an examination of classroom dynamics within a natural setting. UG PR Practicum
Fall 2020
ECO5230 5230 Strecth Your Buck ECO Center for Economic Educ. 2 Financial planning and personal finance topics geared toward the family, with emphasis on aspects teachable in the K-12 classroom. This course has a five hour non-refundable once the term begins. UG LE Lecture
Fall 2020
PHIL3250 3250 Inductive Logic PHIL Philosophy 3 Introduction to the techniques of inductive and probabilistic reasoning with emphasis on the problems encountered in attempting to justify those techniques. Students who have taken PHIL 2150 cannot take PHIL 3250. UG LE Lecture
Fall 2020
CEG3400 3400 Intro to Cyber Security CEG Computer Engineering 3 Focuses on educating students with essential security knowledge in modern cyber space. Covers security issues across all layers of cyber space, including data, host, infrastructure, human, and economics. UG LE Lecture
Fall 2020
NUR7611 7611 Psych MH NP Prac I NUR Nursing 7 The focus is on comprehensive symptom assessment and diagnostic reasoning in the management of individuals and families with acute and chronic alterations in psychiatric/mental health status across the lifespan. UG LE Lecture
Fall 2020
BME3121 3212 Human Biomechanics II BME Biomedical Engineering 3 Linear and angular kinematics and kinetics applied to human performance. Other topics include human systems analysis with work-energym methods and injury biomechanics utilizing impulse-momentum methods. UG LE Lecture
Fall 2020
SCM790R 7990R SCM Capstone Project Rec SCM Supply Chain Management 0 Required recitation for SCM 7990. UG LE Lecture
Fall 2020
PSY4840 9400 Humanistic Psychotherapy PSI Professional Psychology 3 Theory, technique, and research base of client-centered psychotherapy. Theory of assessment procedure and techniques of transactional analysis, Gestalt psychotherapy, and selected existential approaches. UG LE Lecture
Fall 2020
PLS6600 6600 Sem Comp Politics PLS Political Science 3 Readings, research, reports, and discussion of selected topics and problems. Topics vary. UG SE Seminar
Fall 2020
PTX3700 7600 Biostats for Health Prof PTX Pharmacology-Toxins 3 Introduction to the basic principles and applications of statistical methods as they are applied to data arising in the health professions. UG LE Lecture
Fall 2020
EC3450 3450 Economics of Diversity EC Economics 3 Uses economic theory to explore the implications of ethnic, racial, religious and other kinds of diversity in the U.S. and globally. UG LE Lecture
Fall 2020
PLS4770 4770 International Org PLS Political Science 3 Examines the competing theoretical perspectives on international organization and analyzes the structure, functions, and the evolving role of key international organizations. Integrated Writing course. UG LE Lecture
Fall 2020
ME4940 4940 Mech & Mat EGR Intern ME Mechanical and Materials Eng 3 Department internship course. Students are supervised by weekly seminars and regular feedback from employer. Most have completed all of the 2nd year courses as listed in the program guide. Minimum of 30 hours a week for a total of no less than 450 hours of work is required. UG IN Internship
Fall 2020
ACC7750 7750 Accounting Internship ACC Accountancy 3 One semester, faculty-supervised internships in the area of public, industrial, or not-for-profit accounting. Course requires written reports. Students may reenroll for internship once during their graduate programs. May be taken for letter grade of pass/unsatisfactory. UG IN Internship
Fall 2020
DOO9020 9020 Org Leadership Skills DOS Doctor Org Studies 3 Doctoral-level course studying factors that influence leadership skills and motivation of leaders, employees, and networks in complex organizations, with concentration on communication, ethics, and intrinsic aspects of leadership. UG LE Lecture
Fall 2020
EDL7550 7550 Research Projects EDL Educational Leadership 1 Individual research to satisfy requirements of a program's research study. UG LE Lecture
Fall 2020
CLS5600 5600 Ancient Mythology CLS Classics 3 Greek and Roman mythology, aspects and approaches to the study of myth. UG LE Lecture
Fall 2020
EDT7860 7860 Ed Apps of Computers EDT Educational Technology 3 Explores types of educational software and applications, software evaluation, curriculum development, and lesson planning integrating computer coursework. UG LE Lecture/Lab
Combination
Fall 2020
CS6900 6900 Special Topics in CS CS Computer Science 3 Special topics in computer science. UG LE Lecture
Fall 2020
CS7810 7810 Meta Represent Languages CS Computer Science 3 The course provides an introduction to how to represent knowledge and how to use it for automated reasoning. Currently, the primary focus is on Knowledge Representation for the Semantic Web, and as such representation languages for Ontologies will be covered in depth. UG LE Lecture
Fall 2020
M&I8000 8000 Microbiology Seminar M&I Microbiology & Immunology 1 Graded pass/unsatisfactory. UG SE Seminar
Fall 2020
REL3770 3770 The Letters of Paul REL Religion 3 Literary and historical study of the letters of Paul. When and why they were written, and how they fit into the development of the early Jesus movement. Some consideration of the biography of Paul and his influence on the development of early Christianity. UG LE Lecture
Fall 2020
REL3160 2160 Asian Religions REL Religion 3 General introduction to the major religious traditions of South Asia and East Asia: Hinduism, Buddhism, Confucianism, Daoism, Zem, and Shinto. UG LE Lecture
Fall 2020
FIN4780 4780 Hon: Ind Study in Finance FIN Finance 1 Research in finance for fulfillment of the Honors program project requirement. UG IS Independent Study
Fall 2020
ME4170 4170 Mechanics of Composites ME Mechanical and Materials Engr 3 Introduce composites as an engineering material and emphasize the basic concepts of their nature and mechanical properties. Micromechanics and macromechanics and laminar theory of composites will be emphasized. UG LE Lecture

Fall 2020
ECE7700 7700 Long Dev and Comm Disorder ECE Education - Early Childhood 3 Speech and language development, causes and effects of communication disorders, speech and language assessment and intervention strategies. GR IS Independent Study

Fall 2020
ME5260L 6260L Intro Robotics Lab ME Mechanical and Materials Engr 1 Laboratory supporting EE 6560. Students will experience hands on learning in lab environment. GR LB Lab

Fall 2020
MUS2230 2230 Brass Pedagogy MUS Music 1 Develops an understanding of brass playing techniques and related pedagogy, with special attention to beginning-level instruction. UG LE Lecture

Fall 2020
OIS1240 2400 Independent Study OIS Office Information Systems 1 Directed study on selected topics. UG IS Independent Study

Fall 2020
BSO4340 4330 Vertebrate Histology BSO Biology 5 Study of structure/function relationships in vertebrate tissues, organs and organ systems. UG LE Lecture

Fall 2020
CS3810 3810 Intro to Bioinformatics CS Computer Science 3 Task-oriented approach to bioinformatics emphasizing data structure and DNA, string representation in PERL, data searches, pairwise alignments, substitution patterns, protein structure prediction and modeling, protomomics, and web-based bioinformatic tools. GR LE Lecture

Fall 2020
MSE6450 6450 Tissue Eng & Regen Med BME Biomedical Engineering 3 Principles and underlying strategies for employing selected cells, biomaterial scaffolds, soluble regulators or their genes, and mechanical loading and culture conditions, for the regeneration of tissues and organs. Methods for fabricating tissue-engineered products and devices under development and currently in clinical use. GR LE Lecture

Fall 2020
ED7960 7860 Assess & Eval for Instr ED Education 3 This course provides students (teachers and leaders) with foundational background in the design and implementation of Project Based Learning (PBL) in a K-12 classroom. GR LE Lecture

Fall 2020
EE36420 6420 Paleo of Vert/Plants EES Earth & Environmental Sciences 3 The rise and evolution of Paleozoic vertebrate and plant groups with an emphasis on the evolution of jawed fishes, early tetrapods, and the taphomorphization of Earth. Phylogentic and molecular analysis, and recent discoveries in the field of Paleo-Devo will be employed to determine the origin and diversification of major vertebrate groups, and uncover connections between macroevolutionary trends and paleoenvironmental changes. GB LB Lab

Fall 2020
PSY4050 4050 Honors Seminar PSY Psychology 2 Primarily derived from current honors thesis research. Literature surveys, experimental designs, and special analytical problems presented and discussed by students and faculty. Topics vary. UG SE Seminar

Fall 2020
ENG3830 3830 Intro to Fiction Writing ENG English 3 Theory and practice of writing fiction, including critical reading of contemporary fiction and group discussion of student-written fiction. UG LE Lecture

Fall 2020
ME7720 7720 Engineering Polymers II ME Mechanical and Materials Engr 3 Polymer physics including phase diagrams, phase separation, the amorphous and crystalline states, liquid crystals, thermal transitions, viscoelasticity and rheology, as well as deformation and fracture. GR LE Lecture

Fall 2020
PLS3440 3440 Police Procedures & Ops PLS Political Science 3 Procedures and operations of law enforcement at various levels from patrol to senior administration, emphasizing duties, responsibilities and leadership. Integrated Writing course. UG LE Lecture

Fall 2020
CHM1220 1220 General Chemistry II CHM Chemistry 3 Properties of liquids, solids and solutions, phase changes, chemical kinetics and equilibrium, acid-base chemistry and its applications, thermodynamics and electrochemistry. UG LE Lecture

Fall 2020
ART5780 5780 Sculpture ART Art 3 Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using media selected by the students. This course has a fee that is non-refundable once the term begins. GR LB Lab

Fall 2020
DS6310 6310 Soc & Fil Issues in DS DS Data Science 1 Qualitative examination of the consequences of data collection and analytics on corporations, governments, people, and society at large. Legal structures for the collection and study of data. Studies of current social, ethical, legal, and philosophical topics surrounding data science, which may include people analytics, wearable sensors, data breaches, customer, user, vote, and human profiling, and surveillance through data. GR LE Lecture

Fall 2020
BMS7310 7310 Advanced Ergonomics BMS Biomedical Sciences 3 Design of workstations and hand-tools using Physiology and Biomechanics approaches. Ergonomic analysis of assembly, machining and manual materials handling operations. Practical solutions and real world case studies to improve productivity and reduce Worker Compensation costs. GR LE Lecture

Fall 2020
PLS4870 4870 Politics of Intelligence PLS Political Science 3 Evolution of intelligence gathering, analysis, and application in policy making in the United States. Tensions inherent between a democracy and a secret agency, and the role of technology. Integrated Writing course. UG LE Lecture

Fall 2020
ENG1140 1140 Acad Writing & Reading ENG English 4 Introduces students needing additional instruction in writing to principles of effective written communication and critical reading. Stress revision, drafting, revising, editing, and self-assessment, along with effective critiquing and collaborating. Students may use any of the following courses to satisfy the requirements of the Core, but only one may count. ENG 1100, ENG 1110, ENG 1130, or ENG 1140. UG LE Lecture

Fall 2020
ED7820 7820 Literacy Inquiry Project ED Education 1 Continuation of the literacy research from ED 7800. Candidates will complete the following components: data collection, transcription, analysis, dissemination, limitations, and implications for the Master’s Research Project. This course involves supervision. GR IS Independent Study

Fall 2020
EE6730L 6730L Wireless Comm Lab EE Electrical Engineering 1 Required laboratory for EE 6730. GR LB Lab
Fall 2020
BMS7450  7450  Rehab Eng Serv Delivery  BMS  Biomedical Sciences  3  Introduces rehabilitation engineering design principles. Includes practical design experiences in workplace modification, ergonomics, and accessibility evaluations. Provides experience in technical report writing and presentation.  GR  LE  Lecture
Fall 2020
ENG7210  7210  Teaching College Comp II  ENG  English  2  Introduction to the theory and pedagogy of research writing and argumentation and the teaching of ENG 2100. Requires concurrent teaching or tutorial experience.  GR  LE  Lecture
Fall 2020
KNI1040B  1040B  Army Fitness Training  KNI  Kinesiology & Health  1  Fundamental skills and knowledge of Army Fitness Training. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020
CHM3100  3100  Chem Lit & Comp  CHM  Chemistry  2  Literature searching of journals, handbooks, abstracts, and patents. Writing of literature reports, abstracts, papers, and reports. Integrated Writing course.  UG  LE  Lecture
Fall 2020
REL5440  5440  Hinduism  REL  Religion  3  Exploration of some of the major beliefs and practices of Hinduism, an ancient, widely practiced, and amazingly diverse religious tradition.  GR  LB  Lecture/Recitation Combination
Fall 2020
ME4260L  4260L  Intro Robotics Lab  ME  Mechanical and Materials Engr  1  First exposure to plant modeling and controller design to realize elementary control strategies in a laboratory environment.  UG  LB  Lab
Fall 2020
ME5760  5760  Diffusion and Kinetics  ME  Mechanical and Materials Engr  3  Fundamentals of structure property relations in metals and alloys related to transformations and kinetics. Application to recovery and recrystallization, solidification, precipitation strengthening, and dispersive transformations.  GR  LE  Lecture
Fall 2020
BIO4550  4550  Plant Systematics  BIO  Biology  4  The diversity of vascular plant species with an emphasis on angiosperms, phylogenetic relationships and methods, terminology pertinent to taxonomic classification and nomenclature.  UG  LE  Lecture
Fall 2020
EDL9620  9620  Ldrship Indy Coll Change  EDL  Educational Leadership  3  Exploring theory, research, and practice related to leading and managing organizational environments requiring creating and sustaining personal, professional, and organizational change and adaptation.  GR  SE  Seminar
Fall 2020
EDD490  6490  MCE Inquiry Project  ED  Education  3  Students will be required to complete an inquiry project and the unit portfolio in order to partially fulfill the requirements for the Masters of Education Degree in Middle Childhood Education.  GR  IS  Independent Study
Fall 2020
ATH5010  5010  Cultures of Africa  ATH  Anthropology  3  An introduction to the diverse, complex and fascinating peoples of sub-Saharan Africa.  GR  LE  Lecture
Fall 2020
ATR4630  4630  Evid Based Prac in AT  ATR  Athletic Training  3  An in-depth course of study into the utilization of evidence-based medicine in the athletic training profession.  UG  LL  Lecture/Lab Combination
Fall 2020
NUR4820  4820  PopNursing Pol Sys  NUR  Nursing  6  Integrates population-based concepts to assess populations. Emphasizes all levels of prevention to promote health of individuals, families, and groups, including lifestyle and genetic factors impacting population health. Examines global aspects of the demographic, social, political, legal-ethical, and environmental issues influencing health care and health policy. Fieldwork provides opportunities for the professional nurse to provide and coordinate care among vulnerable populations.  UG  LE  Lecture
Fall 2020
KNI1820A  1820A  Winter Camping  KNI  Kinesiology & Health  1  Fundamental skills and knowledge of Winter Camping. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020
MUE4680  4680  Jazz Band  MUE  Music: Ensembles  1  A jazz performance-oriented group. Students learn elements of ensemble execution, professionalism, jazz history, jazz styles, and jazz improvisation. Audition required.  UG  LL  Lecture/Lab Combination
Fall 2020
LE1070  1070  Criminal Justice Ethics  LE  Law Enforcement  3  Comprehensive, balanced, and practical coverage of ethics across all three arms of the criminal justice system: the police, the courts, and corrections. Philosophical principles and theories that are the foundation of ethical decision-making and the latest challenges and issues in criminal justice.  UG  LE  Lecture
Fall 2020
TH1450  1450  Acting I  TH  Theatre  3  Exploration of acting through the lens of characters in more demanding scenes from established scripts, using script analysis as the foundation for acting choices.  UG  LL  Lecture/Lab Combination
Fall 2020
STT3260  3260  Survival Analysis  STT  Statistics  3  Censoring and truncation, survival and hazard functions, estimation and hypothesis tests, Cox proportional hazards model, diagnostics of the Cox model, state-of-the-art software for survival analysis models.  GR  LE  Lecture
Fall 2020
REL5400  5400  Topics in Asian Religion  REL  Religion  3  Studies in the religious dimension of Asian cultures, with emphasis on historical, social, and aesthetic perspectives.  GR  LE  Lecture
Fall 2020
Fall 2020
CEG575B  5750  Digital Image Processing  CEG  Computer Engineering  3  Image representation, sampling/quantization, spatial/frequency concepts, image enhancement, color image theory, unitary image transforms, image data compresison, image models, image coding, image restoration, feature extraction and description, and computer implementation of concepts and algorithms introduced.  GR  LE  Lecture
Fall 2020
HST7910  7910  History Internship  HST  History  1  Applies skills learned in coursework to work and/or study outside the academy, in ways that benefit a student's educational experience. Approved and supervised by the Director of Graduate Studies, and ranges from 100 to 300 hours of work. May be repeated for a total of 3 credit hours.  GR  IN  Internship
Fall 2020
SRV4010  4010  Service-Learning Intern  SRV  Service Learning  3  Internship with community organization addressing a community-defined need. Field experience integrated with in-class course work focusing on engaged citizenship themes. Site selected with guidance of instructor prior to registration. Registration by Service-Learning department permission.  UG  IN  Internship
Fall 2020
EDS4690  4690  Clinical Pract Remediate  EDS  Education - Special Education  3  Use assessment data to plan and implement remediation in a clinical setting. Write professional case study integrating assessment and tutoring data. Includes class meetings in an off-campus clinical setting.  UG  LE  Lecture
Fall 2020
P&N8600  8600  Prin Biomedical Research  P&N  Physiology & Neuroscience  1  Principles of Biomedical research is appropriate for students who will be involved in biomedical research. PBIR provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.  GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Instructor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>PSI9180  Integrative Assessment PSI Professional Psychology</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>REL3210  Christianity REL Religion</td>
<td>3</td>
<td></td>
<td>UG Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>EES6060  Earth Sys for Educators EES Earth &amp; Environmental Sciences</td>
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<td>GR Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PN7010   Sel Topics in Physiology PN Physiology &amp; Neuroscience</td>
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<td>GR Lecture Lab Combination</td>
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<tr>
<td>Fall 2020</td>
<td>PTX8006  Case Study Chem Defense PTX Pharmacology/Toxicology</td>
<td>3</td>
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<td>GR LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>BIO4720  Ornithology BIO Biology</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>CS2570R  Recitation for MTH 2570 CS Computer Science</td>
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<td></td>
<td>UG RE Recitation</td>
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<tr>
<td>Fall 2020</td>
<td>ITL4090  Intl Cont'd Registration ITL Intl Continued Registration</td>
<td>0</td>
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<td>UG LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>SLIS400  Linguistics of ASL SLI Sign Language Interpreting</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>CHE320  Advanced Chinese II CHI Chinese</td>
<td>3</td>
<td></td>
<td>LL Lecture Lab Combination</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>HST7700  Research in Local Hist HST History</td>
<td>3</td>
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<td>GR LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>CHM5510R Physical Chemistry Lab I RE Chem</td>
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<td>RE Recitation</td>
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<tr>
<td>Fall 2020</td>
<td>BIO4770  Pop &amp; Comm Ecology BIO Biology</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>ART150  Adv Modern/Contemp Art ART Art</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>HST4550  Middle Eastern History HST History</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PLS4060  Globalization PLS Political Science</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PHI140  Philosophy of Law PHL Philosophy</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>CNL6700  Counseling Workshop CNL Counseling</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>FAS2690  Ag Science Topics FAS Food and Agricultural Systems</td>
<td>1</td>
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<tr>
<td>Fall 2020</td>
<td>LDR3700  Workshop in Leadership LDR Leadership</td>
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<tr>
<td>Fall 2020</td>
<td>PSY3100  Clinical Psy Career Prep PSY Psychology</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PSW610  Consultation PSI Professional Psychology</td>
<td>3</td>
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<td>GR LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>ANT5120L Human ANT &amp; Phys II Lab ANT Anatomy</td>
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<td>LB Lab</td>
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<tr>
<td>Fall 2020</td>
<td>SW6740  Child Welfare II SW Social Work</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>EDSD080  Dyp Multi Sensory Instruction EDSD Education - Special Education</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PLS4825  Washington DC Internship PLS Political Science</td>
<td>3</td>
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<tr>
<td>Fall 2020</td>
<td>MU41410  Applied Music MUA Music: Applied Music</td>
<td>4</td>
<td></td>
<td>IS Independent Study</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PPH2720  HP with Indv with Disab PPH Population &amp; Public Health</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PSY9040  Neural Networks PSY Psychology</td>
<td>3</td>
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<td>LE Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>KHN1720A Tennis KHN Kinesiology &amp; Health</td>
<td>1</td>
<td></td>
<td>LB Lab</td>
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<tr>
<td>Fall 2020</td>
<td>GER5260  Business German II GER German</td>
<td>3</td>
<td></td>
<td>LE Lecture</td>
</tr>
</tbody>
</table>

*Note: The course codes and credits are based on the Fall 2020 semester offerings.*
Fall 2020  
TH1470  1470  Acting Aesthetics  TH  Theatre  2  Generalized acting course that includes various aspects of movement, vocal technique, improvisation, and some work.  UG  LL  Lecture/Lab Combination  
Fall 2020  
ME3560  3760  Diffusion and Kinetics  ME  Mechanical and Materials Engr  3  This course introduces the fundamentals of structure-property relations in metals and alloys related to transformations and kinetics. Application of basic thermodynamics, relation to microstructure, diffusion, interfaces, solidification transformation, and kinetics are covered.  UG  LE  Lecture  
Fall 2020  
EC1751  7150  Applied Microeconomics  EC  Economics  3  Emphasis on advanced microeconomics applications in consumption/work decisions of households, production/price strategies of firms, and public policy toward businesses. Special attention paid to the roles of labor unions/nut-for-profit firms.  GR  LE  Lecture  
Fall 2020  
KNH1220B  1220B  Fencing: Competitive  KNH  Kinesiology & Health  1  Intermediate level of skills and knowledge in Fencing: Competitive. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab  
Fall 2020  
NUR840  8840  HI Care Informatics Inform Prof  NUR  Nursing  3  This course examines health care information technologies and their use in health care systems to promote positive patient outcomes.  GR  LE  Lecture  
Fall 2020  
MKT7800  7800  MKT Analytics  MKT  Marketing  3  Analysis of online and internal company data, with an emphasis on application and recommendations.  GR  LE  Lecture  
Fall 2020  
UVC1095  1095  Prior Lrng Assessment  UVC  University College  3  Helps students identify areas of learning to have evaluated for college-level equivalency. Guides students through the preparation and compilation of all components required for the evaluation of a portfolio of prior learning through LearningCounts.org.  UG  IS  Independent Study  
Fall 2020  
ED6410  6410  MCE: Student Teaching  ED  Education  8  Teacher candidates are assigned to a school for intensive teaching experience in grades 4-9 under the direct supervision of an experienced classroom teacher.  GR  IN  Internship  
Fall 2020  
MS7900  7900  IS Mgt Research Project  MES  Management Information Systems  1  The Capstone IT Project provides students the opportunity to individually explore a problem or issue within the IT field study. This course has a fee that is non-refundable once the term begins.  GR  PR  Practicum  
Fall 2020  
ENG3510  3510  Content Writing Pedagogy  ENG  English  3  Introduction to teaching writing process strategies for middle childhood majors.  UG  LE  Lecture  
Fall 2020  
BIO1120B  1120B  Genes & Cells Recitation  BIO  Biology  3  Optional recitation for BIO 1120. Meetings provide just-in-time support for the course's laboratory reports and on-line quizzes.  UG  RE  Recitation  
Fall 2020  
MGT4900  4900  Character & Comp II  MGT  Management  3  Drawing on their management studies, students will integrate essential managerial competencies and their personal strengths to develop a plan for their career as a manager and leader.  UG  LE  Lecture  
Fall 2020  
ED3K20  8200  Adv Stud Sem II: Capstone  ED  Education  2  Seminar will focus on the major's capstone project and other program key assessments.  GR  SI  Seminar  
Fall 2020  
ENG7230  7230  The Study of Writing  ENG  English  3  Current approaches to writing and the study of composition in the classroom. Topics include whole language, invention, revision, stylitics, editing, the analysis of student writing, and effective pedagogical practice.  GR  LE  Lecture  
Fall 2020  
EED4210  4210  EED Internship Part I  EED  Elementary Education  1  Candidates, mentored by an elementary educator, assume additional responsibilities in planning, organizing, delivering, and assessing instruction in a P-5 grade setting applying pedagogical content knowledge from elementary methods courses.  UG  IN  Internship  
Fall 2020  
BIO1010  1010  Medical Terminology  BIO  Biology  3  Sequential, programmed study of the language of health care. Illustrations, practice quizzes and exercises support the material and reinforce learning.  UG  LE  Lecture  
Fall 2020  
ARA2020  2020  Intermediate Arabic II  ARA  Arabic  3  Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language.  UG  LE  Lecture  
Fall 2020  
FIN3110  3110  Financial Management II  FIN  Finance  3  Emphasizes financial decisions. Topics include dividend policy, current asset management and financing, derivatives and risk management, international finance, hybrid forms of financing, and mergers and acquisitions.  UG  LE  Lecture  
Fall 2020  
MUS1320  1320  Beg Guitar Class II  MUS  Music  3  Based on technique covered in MUS 1130, this class concentrates on note-reading, more chords, and accompaniment styles.  UG  LE  Lecture  
Fall 2020  
RHB3830  3830  Disability Studies Cap  RHB  Rehabilitation  3  Provides culminating experience of the minor, focusing on integration and application of interdisciplinary research and theory within disability studies relative to student major, research interests, and professional goals.  UG  LE  Lecture  
Fall 2020  
PLS4670  4670  Chinese: Domestic Politics  PLS  Political Science  3  Governmental structures and processes within modern China, emphasizing both elite and mass politics. Overview of the role of state socialism and socialism of some of the key issues in Chinese politics and society today.  UG  LE  Lecture  
Fall 2020  
IBM4444  4444  Cell Signaling  BMB  Biochem & Molecular Biology  3  An in depth study of major cell signaling pathways as related to human health and disease.  UG  LE  Lecture  
Fall 2020  
PSY5000  5000  PSY Core Topics  PSY  Psychology  1  A selected topic in a core area of psychology. The topic and structure of this course will vary according to the discretion of the instructor.  GR  LE  Lecture  
Fall 2020  
ED4070  4070  Reading and Literacy II  ED  Education  3  Extends knowledge of literacy instruction and addresses more advanced levels of literacy including content reading and writing for research and extended response.  UG  LL  Lecture/Lab Combination  
Fall 2020  
ENG3200  3200  Topics in Writing  ENG  English  3  Approaches and topics in the field of Writing  UG  LE  Lecture  
Fall 2020  
ENG6650  6650  Professional Editing  ENG  English  3  Instruction and experience in editing technical and professional documents, including both print and online publications. Covers types of editing, the production process, and issues in editing.  GR  LE  Lecture  
Fall 2020  
KNH1290B  1290B  H2O Zumba  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of H2O Zumba. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab  
Fall 2020  
PSY4000  4000  PSY Capstone Topics  PSY  Psychology  1  A selected psychology capstone topic. Topics vary.  UG  SE  Seminar  
Fall 2020  
URS7010  7010  Budgeting & Fiscal Mgt  URS  Urban Affairs  3  Focuses on budget processes and financial management practices in the public and nonprofit sectors.  GR  LE  Lecture  
Fall 2020  
IBE7950  7950  Thesis Research in MIE  BIE  Industrial & Hum Fac Engr  1  M.S. Thesis Research in Industrial and Human Factors Engineering  GR  IS  Independent Study
Fall 2020 MGT1010 1010 Community Leadership MGT Management 3 Provides experiential skill development in the areas of leadership and community service. Students will complete a group community service project, which will be developed in conjunction with the Junior Leadership Dayton program. Open only to Junior Leadership Dayton students. Gradual pass/unsatisfactory. UG LE Lecture

Fall 2020 GEO2200 2200 Human Geography GEO Geography 3 Introduction to key themes and perspectives in geography. Examines social, economic, environmental, and political challenges confronting people and societies. Themes include globalization, nature and sustainability, food and agriculture, political boundaries, urbanization, and development, and other issues pertaining to the livability of the planet. UG LE Lecture

Fall 2020 NEU4040 4040 Sr Cap Neuro Ele Des NEU Neuroscience 2 Senior neuroscience majors will develop a grant proposal on a neuroscience topic that could push the field forward. Students will prepare a written grant proposal and deliver an oral presentation summarizing their proposal. Integrated Writing course.

Fall 2020 RHB3631 3631 Behavioral Analysis II RHB Rehabilitation 3 Development of applied behavioral analysis plans and assessing intervention strategies. UG LE Lecture

Fall 2020 MUS6800 6800 Workshops in Music MUS Music 1 Selected topics or problems in music, or special areas of music teaching. Titles vary. GR LE Lecture

Fall 2020 CST210 7210 Network Science CS Computer Science 3 Emphasizes theoretical concepts that underpin the study of network or relational data emerging in many fields of interest. Topics may include network representations, social network modeling, structural measures, node ranking and similarity, social network analysis, graph partitioning and community detection, large-scale networks, and diffusion processes.


Fall 2020 PS4970 9470 AIDS: Clinical Issues PSI Professional Psychology 3 Explores the physiological, psychological, social, economic, and political aspects of HIV infection and AIDS with an emphasis on the unique role of psychologist in the health care professions. Titles vary. UG LE Lecture

Fall 2020 SAA7630 7630 Diversity Issues SAA Student Affairs in Higher Ed 2 Multidisciplinary learning opportunity for students to explore and broaden their understanding of multicultural issues, privilege and oppression in the United States of America, with particular attention paid to these issues within higher education and student affairs.

Fall 2020 EES4550 4550 Aquat Environ Geochem EES Earth & Environmental Sciences 3 Interactions between natural fresh waters and their geologic environments. Includes chemical equilibria, modeling using PHREEQC, carbonate system, water-rock interactions, sorption isotherms, redox reactions, biologic influences on aqueous geochemistry, and applications of environmental isotopes.

Fall 2020 ART4050 4050 Studies in Sculpture ART Art 3 Opportunities to explore problems and approaches to sculpture. May include cross-media and interdisciplinary studies. UG LB Lab

Fall 2020 MUS1350 1350 Guitar Pedagogy MUS Music 1 The study of materials, equipment, and class instruction on guitar for the elementary teacher.

Fall 2020 CEG9910 8910 PhD Seminar in CEG CEG Computer Engineering 1 Seminar discussion of current research in computer engineering. GR SE Seminar

Fall 2020 BME3520L 3520L Microprocessors for BME Lab BME Biomedical Engineering 0 Required laboratory for BME 3520.

Fall 2020 ED6270 6270 Literacy Lessons Training II ED Education 3 Teachers certified/licensed in special education, ESL, or bilingual education deepen their understanding of Clay’s literacy processing theory to help students in special populations to develop effective reading and writing systems.

Fall 2020 BIO4750 4750 Ichthyology BRO Biology 4 Overview of the major themes of fish evolution, anatomy, physiology, and ecology, with special emphasis on fresh water species. Includes practical field experiences in collection, dissection, and identification.

Fall 2020 RHB7110 7110 Voc Eval & Assessment RHB Rehabilitation 3 Theoretical orientation, development and utilization of work samples, situational assessments, analysis of work relevant data for hypothesis testing and communicating significant vocational data, and job placement strategies which facilitate employment of people with disabilities.

Fall 2020 SW6610 6610 SW Field Ed I SW Social Work 1 Completion of 300 hours of field education. Provides opportunity for students to engage in selected and organized activities with clients that apply the social work skills, knowledge, and values learned in the classroom. Meeting with a range of clients, encouraging diversity, and growing self-awareness and abilities to help clients of various backgrounds.

Fall 2020 PL6750 6750 Weapons of Mass Destruction PLS Political Science 3 Examines various issues relating to weapons of mass destruction, including their manufacture, use, effects, and the political decisions surrounding those decisions to acquire them. GR LE Lecture

Fall 2020 URS6290 6290 Issues in Urb. Mgt. URS Urban Affairs 3 Explores issues and topics related to the administration of community development agencies and local governments in metropolitan areas. Required laboratory for URS 5430. Integrated Writing course.

Fall 2020 KNSH2010 2010 Army Fitness Training IV KNSH Kinesiology & Health 1 Fundamental skills and knowledge of Army Fitness Training. Competency-based approach. Course may accommodate disabled students when appropriate.
Fall 2020  MUE6900  6900  University Chorus  MUE  Music: Ensembles  1  Development of choral and vocal skills. Choral literature from a wide range of historical and compositional styles. No audition required.  GR  LL  Lecture/Lab  Combination

Fall 2020  PTX7002  7002  Journal Club  PTX  Pharmacology/Toxicology  1  WSU faculty driven course. Students are presented with current literature on a specific topic. The students will give presentations on the material.  GR  LE  Lecture

Fall 2020  PL56871  6871  Fundamentals of Intel  PLS  Political Science  3  Immerses students in the fundamental tradecraft standards of intelligence analysis used by the United States Intelligence Community.  GR  LE  Lecture

Fall 2020  CS4800  4800  Web Information Systems  CS  Computer Science  3  Covers topics in building Web-based applications involving variety of data; covers data, metadata, knowledge and ontologies, key words and languages; projects, social networking, Web 2.0, semantic web. Good programming skills are prerequisite.  UG  LE  Lecture

Fall 2020  ASM7772  7772  Fund Aerospace Med II  ASM  Aerospace Medicine  2  Fundamentals of Aerospace Medicine II is the second in a series of three courses that provide a foundation of basic principles and concepts applicable to the multiple realms encompassed in the field of aerospace medicine. The third and final course in the series will build upon the knowledge gained in this second exposure and further expand and progressively integrate knowledge attained.  GR  SE  Seminar

Fall 2020  SLJS520  4520  Ed Intervp: Sign to Eng.  SLI  Sign Language Interpreting  3  Enhancing sign to English skills for interpreters working in K-12 educational settings with deaf students. Emphasizes requisite skills for the Educational Interpreter Performance Assessment (EIPA).  UG  LE  Lecture

Fall 2020  EES4200  4200  Micropaleontology  EES  Earth & Environmental Sciences  4  Origin, evolution, and diversity of microfossil organisms. Use of microfossils as biostratigraphic indicators, and their role in interpreting the geological history of the Earth. Paleoclimatic and paleoenvironmental reconstruction using specific microfossil organisms. Microfossils as indicators of metamorphism and their use in locating geologically derived energy resources. Integrated Writing course.  UG  LE  Lecture

Fall 2020  HST7820  7820  Practica Archives Museum  HST  History  1  Practical training in the techniques and skills of archive and museum work, including artifact and archival preservation, documentary film making, exhibit design technology, archival technology, documenting the built environment, field study, and outreach. Titles vary.  GR  LE  Lecture

Fall 2020  PHY4620  4620  Nucl & Part Physics  PHY  Physics  3  Nuclear properties and models, radioactive decay, nuclear applications, elementary particle properties and interactions, the standard model.  UG  LE  Lecture

Fall 2020  AES2240  2240  FTP Leadership Lab  AES  Aerospace Studies  0  Preparation for Field Training program. Training is cadet-led. Requires participation in two weekly physical training sessions.  UG  LB  Lab

Fall 2020  NCR713  713  Na Admin Practice  NUR  Nursing  5  Focusing on creating safe and quality health care, students develop knowledge and skills in leadership, management, application, synthesis and evaluation of evidence to create healthy work environments.  GR  LE  Lecture

Fall 2020  MTH6990  6990  Selected Topics  MTH  Mathematics  1  Selected topics in mathematics.  GR  IS  Independent Study

Fall 2020  HST7600  7600  Intro Archives Manuscript  HST  History  3  Fundamental problems, theoretical principles, techniques, and practical administration of archives and manuscripts; the importance of records in the modern information age and the relationship of archives administration and records management; history of archives.  GR  LE  Lecture

Fall 2020  MKT4150  4150  Viral Med & Social Media  MKT  Marketing  3  Focuses on theory, application and practice associated with viral marketing activities. Goals for students are to identify the major components of a viral marketing campaign, understand how the viral marketing approach is being used strategically by advertisers and marketers and understand the psychological motivations associated with content sharing.  UG  LE  Lecture

Fall 2020  MUS2260  2260  Band Methods/Voice/Str  MUS  Music  1  The course is designed to give vocal and string music educators a foundation in music and percussion pedagogy, band teaching techniques, methodology, and resources.  UG  LL  Lecture/Lab  Combination

Fall 2020  EE4420L  4420L  Microwave Ege I Lab  EE  Electrical Engineering  1  Hands-on experience with microwave devices, microwave testing equipment and representative microwave systems. Prerequisite(s): Undergraduate level EE 3450 Minimum Grade of D and Undergraduate level EE 3450L Minimum Grade of D or higher.  UG  LB  Lab

Fall 2020  DAN4310  4330  Pas de Deus Class  DAN  Dance  1  Partnered dance from basic social dance, theatre partnering to contemporary and pointe partnering. Stress cooperation, trust, and technique.  UG  ST  Studio

Fall 2020  ED6610  6610  Stl Tchg. MA/CIS  ED  Education  8  Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades K-12. Computer Information Science classroom.  GR  IN  Internship

Fall 2020  MUS6810  6810  Adv Studies in Spec Subj  MUS  Music  1  Studies in selected subjects.  GR  IS  Independent Study

Fall 2020  ASM7573  7573  Aerospace Skills III  ASM  Aerospace Medicine  2  Aerospace Skills for Healthcare Providers III is the third in a series of three courses designed to bridge traditional didactic knowledge obtained in the classroom with the post-graduation operational aerospace environment. Areas studied include, but are not limited to, hypobaric/hypoxic, astrophysical evacuation/transfer, centrifuging, microgravity, spaceflight launch/landing, EVA, survival, fitness to fly evaluations, aircraft hygiene and international travel and disease mitigation operations.  GR  SE  Seminar

Fall 2020  EDD7970  7970  Data Drv Des-Mkg Schl Ltds  EDD  Educational Leadership  3  Exploring the use of appropriate, meaningful data for making decisions for leading schools as a normative professional standard.  GR  SE  Seminar

Fall 2020  ED6540  6540  AYA Int Pr II: Std T LA  ED  Education  8  Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades 7-12 in Integrated Language Arts.  GR  IN  Internship

Fall 2020  PHY7210  7210  Complexity in Env. Sys.  PHYS  Physics  4  Mathematical methods for quantitative analysis and modeling of complex, nonlinear environmental systems. Applications of scaling in space and time, feedback, and self-organization in environmental systems including ecology, hydrology, global climate change, and geodynamical systems.  GR  LE  Lecture

Fall 2020  EES6190L  6190L  Paleobiology Laboratory  EES  Earth & Environmental Sciences  0  Required laboratory for EES 6190.  GR  LB  Lab

Fall 2020  EDD9450  9450  Adv Curriculm Theory  EDD  Educational Leadership  3  Studying curriculum theories from original sources and relating those theories to philosophical presuppositions and social-cultural foundations. The course also focuses on the critical evaluation of curriculum theories and models.  GR  LE  Lecture

Fall 2020  PTX7020  7020  Laboratory Management  PTX  Pharmacology/Toxicology  3  The topics are designed to give students laboratory management experience along with a short weekly lecture that will provide background information on the theory behind the project.  GR  LE  Lecture

Fall 2020  COM4810  4810  Independent Study  COM  Communication  1  Faculty-directed readings and research.  UG  IS  Independent Study
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS4700</td>
<td>Data Science for Bus App</td>
<td>MIS</td>
<td>3</td>
<td>Introduction to the process of extracting information and answers from multi-dimensional datasets to generate business insights. It will provide a broad overview of the entire data analytics pipeline, from data collection and preprocessing, to storing, exploring, visualizing, modeling, and interpretation. Modern computing tools (e.g., R, SAS) and essential data mining, machine learning, text, and network analytic methods will be discussed. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>ART6080</td>
<td>Studies in Photography</td>
<td>ART</td>
<td>3</td>
<td>Provides opportunities to explore special problems and approaches that help or hinder economic growth? The course concludes with acid-base balance, fluid balance, reproductive system and digestive system. Laboratory exercises use human donors.</td>
</tr>
<tr>
<td>MGT7060</td>
<td>Organ Dev and Change</td>
<td>MGT</td>
<td>3</td>
<td>A detailed analysis of planned organizational change. Questions like, Why do some economies grow and prosper while others remain stagnant or decline? What causes people to make choices that help or hinder economic growth? Are among the topics that will be explored. This course will assist students in grades 6-12 in developing economic concepts into existing world history curriculum. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>GFR5320</td>
<td>Survey of German Lit II</td>
<td>GFR</td>
<td>3</td>
<td>Historical survey of German Literature. Classicism, Romanticism, Poetic Realism and Modern Period. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>URS4990</td>
<td>Applied Research Project</td>
<td>URS</td>
<td>3</td>
<td>Includes writing a senior seminar paper. Integrated Writing course. Learning to design structured group experiences, from conception through program delivery and evaluation is the class focus. Training skills for exploring controversial issues including gender, role, class, language, spirituality, sexuality, and politics are covered.</td>
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<tr>
<td>SAA3590</td>
<td>Design Diverse Learns Exp</td>
<td>SAA</td>
<td>3</td>
<td>Involves students in the process of researching and writing a senior seminar paper. Integrated Writing course. Learning to design structured group experiences, from conception through program delivery and evaluation is the class focus. Training skills for exploring controversial issues including gender, role, class, language, spirituality, sexuality, and politics are covered.</td>
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<tr>
<td>ESE211</td>
<td>Human Biomechanics 1</td>
<td>ESE</td>
<td>3</td>
<td>Mechanical engineering statics and deformation concepts are applied to problems involving human systems. This is then followed by the respiratory system and urinary system. The course concludes with acid-base balance, fluid balance, reproductive system and digestive system. Laboratory exercises use human donors.</td>
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<tr>
<td>ECO5540</td>
<td>Eco and World Hist</td>
<td>ECO</td>
<td>2</td>
<td>This course is designed to link world historical events and economic concepts. Questions like, Why do some economies grow and prosper while others remain stagnant or decline? What causes people to make choices that help or hinder economic growth? Are among the topics that will be explored. This course will assist students in grades 6-12 in developing economic concepts into existing world history curriculum. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>ANT5120</td>
<td>Adv Human Str &amp; Func II</td>
<td>ANT</td>
<td>4</td>
<td>Detailed study of the structure and function of the human body. The course begins with the endocrine system and moves onto the cardiovascular and lymphatic systems. This is then followed by the respiratory system and urinary system. The course concludes with acid-base balance, fluid balance, reproductive system and digestive system. Laboratory exercises use human donors.</td>
</tr>
<tr>
<td>WGS6700</td>
<td>Research Methods</td>
<td>WGS</td>
<td>4</td>
<td>Examines feminist methodologies and methods of research with emphasis on qualitative inquiry and/or mixed methods. This course is designed to link world historical events and economic concepts. Questions like, Why do some economies grow and prosper while others remain stagnant or decline? What causes people to make choices that help or hinder economic growth? Are among the topics that will be explored. This course will assist students in grades 6-12 in developing economic concepts into existing world history curriculum. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>ART2310</td>
<td>Painting for Non-Majors</td>
<td>ART</td>
<td>3</td>
<td>Introduction to the materials, techniques, concepts and practice of painting. Using acrylic paint, students will explore the fundamentals of observational painting with an emphasis on drawing, composition, color mixing and composition.</td>
</tr>
<tr>
<td>EE5030L</td>
<td>Circuit Analysis II Lab</td>
<td>EE</td>
<td>3</td>
<td>Application of AC concepts, computer-aided circuit analysis, two-port networks, and power theory. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>PLS3450</td>
<td>Public Administration</td>
<td>PLS</td>
<td>3</td>
<td>Nature and scope of public administration and interest in the administrative process.タイ. Must be enrolled in CoBA.</td>
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<tr>
<td>WGS5800</td>
<td>Topics Feminist Theory</td>
<td>WGS</td>
<td>3</td>
<td>Issues, approaches and topics in feminist theory. Titles and topics vary. Integrated Writing. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>IT2360</td>
<td>Found of Package Design</td>
<td>IT</td>
<td>3</td>
<td>Fundamental concepts and applications of package design. History of field and useful package patterns. Hands-on experience in formulating package design. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>PHL6710</td>
<td>Philosophy of Science</td>
<td>PHL</td>
<td>3</td>
<td>Analysis of the techniques of reasoning used in both natural and social science. Exploration of the history of science and the rise of the scientific method, including important theories, discoveries and disputes, as well as the difference between science and pseudo science. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>SOC6410</td>
<td>Application of Methods</td>
<td>SOC</td>
<td>3</td>
<td>Advanced course in social research techniques providing students the opportunity to design and carry out full-scale research project related to their major interest area. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>EC4810</td>
<td>Independent Reading</td>
<td>EC</td>
<td>4</td>
<td>Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>PLS6880</td>
<td>Conflict Resolution</td>
<td>PLS</td>
<td>3</td>
<td>Survey of literature on causes and resolution of conflict and application of concepts and theories to analysis of a real-world international conflict. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>PLS6660</td>
<td>Politics in South Asia</td>
<td>PLS</td>
<td>3</td>
<td>Examine political institutions and political, economic, security and international relations issues in India, Pakistan, Sri Lanka, Bangladesh and Nepal. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>IE7000</td>
<td>International Education</td>
<td>IE</td>
<td>3</td>
<td>Placement for students studying abroad on Wright State University Education Abroad Programs. Course placeholder will be replaced with Wright State courses when student returns from abroad.</td>
</tr>
<tr>
<td>KNH6880</td>
<td>Independent Study</td>
<td>KNH</td>
<td>1</td>
<td>Independent reading, writing, and/or reporting in an area related to health, physical education, or recreation. Titles and topics vary. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>SOC4200</td>
<td>Ethnographic Methods</td>
<td>SOC</td>
<td>3</td>
<td>Explores the meaning, scope and dilemmas of ethnography using both a hands-on ethnographic project and a wide array of readings. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>MKT3400</td>
<td>Integrated Marketing Comm</td>
<td>MKT</td>
<td>3</td>
<td>Introduces integrated marketing communications including advertising, direct marketing, public relations and sales promotion. Includes discussion of creative and media strategies. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>URS3460</td>
<td>Public Personnel Admin</td>
<td>URS</td>
<td>3</td>
<td>Methods of employment, training, compensation, and employee relations in various levels of civil service. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>PLS3410</td>
<td>Fund Crim Investigation</td>
<td>PLS</td>
<td>3</td>
<td>Survey of investigative techniques focusing on specific problems and crimes to illustrate proper methods and procedures of criminal investigations. Must be enrolled in CoBA.</td>
</tr>
<tr>
<td>ENG6720</td>
<td>History of Engl Language</td>
<td>ENG</td>
<td>3</td>
<td>Study of the ancestry and early growth of the English language, the history of English sounds and inflections, the development of the English vocabulary, and variations in pronunciation and usage in modern British and American English. Must be enrolled in CoBA.</td>
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<td>Course Code</td>
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<td>PL6860</td>
<td>Model United Nations Sim</td>
<td>PLS</td>
<td>CS7120</td>
<td>Functional &amp; Logic Prog</td>
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<td>Course Code</td>
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<td>School/Department</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>BMB6001</td>
<td>Fundamentals of Biochemistry</td>
<td>BMB Biochem &amp; Molecular Biology</td>
<td>3</td>
<td>The primary focus of this course is the basic principles of biochemistry covered in a one semester format. This course is intended for non-BMB graduate students and will analyze the structure, metabolism, and function of biological compounds.</td>
</tr>
<tr>
<td>CHM3520L</td>
<td>Physical Chem Lab II</td>
<td>CHM Chemistry</td>
<td>2</td>
<td>Experimental methods of physical chemistry. Integrated Writing course.</td>
</tr>
<tr>
<td>AVI2001</td>
<td>Priv Pilot Grad School</td>
<td>AVI Aviation</td>
<td>3</td>
<td>Conduct flight training in a single engine land airplane. Preparation for computer-based private pilot knowledge test.</td>
</tr>
<tr>
<td>BMS3870</td>
<td>Human Gross Anatomy</td>
<td>BMS Biomedical Sciences</td>
<td>6</td>
<td>(Also listed as ANT 710) Lectures and discussion of human cadaver donor.</td>
</tr>
<tr>
<td>CNL6020</td>
<td>Techniques of Counseling</td>
<td>CNL Counseling</td>
<td>3</td>
<td>Laboratory practice in individual counseling techniques, focuses on the development of basic skills and procedures.</td>
</tr>
<tr>
<td>ATHD710</td>
<td>Ethnographic Fieldwork</td>
<td>ATH Anthropology</td>
<td>3</td>
<td>Explores the meaning, scope and delineations of ethnography using both a hands-on ethnographic project and a wide array of readings. Integrated Writing course.</td>
</tr>
<tr>
<td>PLC8270</td>
<td>Urban Policy Analysis</td>
<td>PLIS Political Science</td>
<td>3</td>
<td>Study of selected urban problems and their relationship to the political environment. Use of simulation gaming to understand community development processes.</td>
</tr>
<tr>
<td>MUS4460</td>
<td>Medieval &amp; Renaissance Music</td>
<td>MUS Music</td>
<td>3</td>
<td>Study of music and critical analysis of representative works from major composers of Medieval and Renaissance music.</td>
</tr>
<tr>
<td>ENG4110</td>
<td>Literature Practicum</td>
<td>ENG English</td>
<td>3</td>
<td>Opportunities to use and refine the skills of Literary Study in specific applied contexts.</td>
</tr>
<tr>
<td>SAA4110</td>
<td>Special Topics: Campus Pump</td>
<td>SAA Student Affairs in Higher Ed</td>
<td>1</td>
<td>Topics related to the development of student organizations and student leaders.</td>
</tr>
<tr>
<td>ART3180</td>
<td>Art Theory &amp; Criticism</td>
<td>ART Art</td>
<td>3</td>
<td>Historical surveys and intensive studies of art theory and criticism. Integrated Writing course.</td>
</tr>
<tr>
<td>EDLE710</td>
<td>Management of the School</td>
<td>EDL Educational Leadership</td>
<td>3</td>
<td>Focuses on the day-to-day operation of a school building and a school system. State requirements are emphasized in relation to operational procedures in all aspects of managing a school and a school system.</td>
</tr>
<tr>
<td>THS570</td>
<td>One Person Shows</td>
<td>TH Theatre</td>
<td>3</td>
<td>Elements necessary in the development of a one person show resulting in a solo performance.</td>
</tr>
<tr>
<td>ME6680</td>
<td>Experimental Nanoscience</td>
<td>ME Mechanical and Materials Engr</td>
<td>3</td>
<td>This course will provide a series of laboratory experiments similar to the state-of-the-art R&amp;D in nanotechnology and nanoscience. The experiments include: 1) fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets; 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses; and 3) computational modeling of nanoscale physical phenomena. Department Managed Prerequisite(s): Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level CHM 1210L Minimum Grade of D at or below.</td>
</tr>
<tr>
<td>OSIS2480</td>
<td>Capstone</td>
<td>ORS Office Information Systems</td>
<td>2</td>
<td>Comprehensive project in office applications.</td>
</tr>
<tr>
<td>SLIS4510</td>
<td>Ed Interp. Eng. to Sign</td>
<td>SLI Sign Language Interpreting</td>
<td>3</td>
<td>Enhancing English to sign skills for interpreters working in K-12 educational settings with deaf students. Proficiency related to the requisite skills for the Educational Interpreter Performance Assessment (EIPA) at the Intermediate level.</td>
</tr>
<tr>
<td>PSY6140</td>
<td>Counseling and Learning Cap</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge within conditioning and learning.</td>
</tr>
<tr>
<td>CS4990</td>
<td>Undergraduate Thesis</td>
<td>CS Computer Science</td>
<td>3</td>
<td>Completion of a computer science research project. Writing and defending a thesis that describes the research and summarizes the results. Department Managed Prerequisite(s): Undergraduate level CS 4970 Minimum Grade of D at or below.</td>
</tr>
<tr>
<td>NUR4420C</td>
<td>Cri Care Across Lifespan Clin</td>
<td>NUR Nursing</td>
<td>0</td>
<td>Required clinical for NUR 4420.</td>
</tr>
<tr>
<td>SOC4810</td>
<td>Health Vulnerable Pops</td>
<td>SOC Sociology</td>
<td>3</td>
<td>Overview of health vulnerability and health disparity and key historical events periods in the development of the American healthcare system, particularly for vulnerable populations. Social, public health, and theoretical issues influencing the multi-faceted barriers to healthcare for specific vulnerable populations.</td>
</tr>
<tr>
<td>ENGT420</td>
<td>Seminar: Wg Practicum</td>
<td>ENG English</td>
<td>3</td>
<td>Reading, practice, research and discussion of writing practices in academic and non-academic genres for pedagogical purposes. Focus on topics such as ethnography, media genre writing, new media literacies.</td>
</tr>
<tr>
<td>SPN2500</td>
<td>Int Span II Study Abroad</td>
<td>SPN Spanish</td>
<td>3</td>
<td>Intensive course on the culture of Puerto Rico in which the classroom has no walls. On-site lectures will be given throughout the two-week program on the island. The main objective of this course is to transport students to another culture so that intellectual learning is replaced with a visual and authentic understanding of the people, places, ideas, art, and events that transformed Puerto Rico and impacted the world on a cultural, social and historical level. Department Managed Prerequisite(s): Undergraduate level SPN 2010 Minimum Grade of D at or below.</td>
</tr>
<tr>
<td>PSY6440</td>
<td>Work Stress Capstone</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on work stress.</td>
</tr>
<tr>
<td>EC7810</td>
<td>Research in Economics I</td>
<td>EC Economics</td>
<td>1</td>
<td>Titles vary. Intensive reading or research in selected fields of advanced economics. Department Managed Prerequisite(s): Graduate level EC 5900 Minimum Grade of D and Graduate level EC 5100 Minimum Grade of D and Graduate level EC 5210 Minimum Grade of D and Graduate level EC 5220 Minimum Grade of D at or below.</td>
</tr>
<tr>
<td>PSY4360</td>
<td>Development Psych Cap</td>
<td>PSY Psychology</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on current research, theory, research, and applied issues in selected aspects of development across the lifespan. Topics will vary. Integrated Writing course.</td>
</tr>
<tr>
<td>MGT4300</td>
<td>Conflict &amp; Negotiation</td>
<td>MGT Management</td>
<td>3</td>
<td>This course will cover some very basic work in the factors that cause conflict especially when dealing with managers, co-workers, employees, customers and all stakeholders in the business world, and most importantly provide techniques for resolving conflict.</td>
</tr>
<tr>
<td>ACC7800</td>
<td>Special Topics in ACC</td>
<td>ACC Accountancy</td>
<td>3</td>
<td>Titles vary. Seminar in accounting topic of current interest.</td>
</tr>
</tbody>
</table>

Grade Requirements:
- UG: Undergraduate level
- GR: Graduate level
- LB: Laboratory
- LE: Lecture
- Lab: Laboratory

Courses with Combination: GR PKG Combination
Fall 2020 ME6190 6190 Intro to Egr Lubrication ME Mechanical and Materials Eng 3 Define various lubrication regimes where mechanical elements in automotive, aerospace, heavy machinery, wind turbine applications operate; introduce surface topography metrics & parameters; describe lubricant properties including viscosity & density dependencies on pressure as well as temperature, non- & Newtonian behavior; derive Reynolds equation; solve governing equations for disulph- & hydrodynamic lubrication; introduce egr approaches for lubrication performance assessment in machine elements. Department Managed Prerequisite(s): Graduate level ME 3350 Minimum Grade of D and ((Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level MTH 2351 Minimum Grade of D) or (Undergraduate level MTH 2320 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D)) or ((Undergraduate level MTH 2350 Minimum Grade of D) or (Undergraduate level MTH 2320 Minimum Grade of D)).

Fall 2020 PPH6300 6300 Environmental Health PPH Population & Public Health 3 Students taking this course will develop a broad knowledge base in the multidisciplinary field of environmental health. The class will focus on topics of environmental health that have the greatest affect on the community, such as food-borne health hazards, zoonotic disease, housing, water treatment, and solid and hazardous waste and substances. Contemporary concerns, such as climate change, environmental disaster, and the built environment, will also be thoroughly discussed.

Fall 2020 SLI9000 3900 Interpreter Prof Readiness SLI Sign Language Interpreting 3 Preparation for practicum - reading and discussing current events and topics within the field, development of professional portfolio, resume, work samples, practicum goals and planning with 30 hour field observational experience journal.

Fall 2020 BME4450 4450 Tissue Eng & Regen Med BME Biomedical Engineering 3 Principles and underlying strategies for employing selected cells, biomaterial scaffolds, soluble regulators or their genes, and mechanical loading and culture conditions, for the regeneration of tissues and organs. Methods for fabricating tissue-engineered products and devices under development and currently in clinical use.

Fall 2020 PHY2220 3220 Applied Optics PHY Physics 3 Physical optics, with some review of geometrical optics. Topics include optical instrumentation, interference of light, optical interferometry, diffraction, fiber optics, lasers and nonlinear optics.

Fall 2020 FAS2810 2810 Intro Precision Ag FAS Food and Agricultural Systems 3 Introduction to precision agriculture. Topics include rate controllers, monitors, weather modeling software, GPS, WAAS, RTK, variable rate fertilizers, variable rate planting, variable rate nitrogen, SST software, and development of variable rate product recommendations.

Fall 2020 SOC5410 3410 Intro Research Methods SOC Sociology 3 Methodological issues required for sociological investigation, including the link between theory and research, ethical issues, operationalization, measurement, sampling, quantitative and qualitative research design, and theory building. Prior completion of SOC 2000 is strongly recommended. Integrated Writing course.

Fall 2020 PSY4600 4600 Human Factors Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on human factors psychology. Topics will vary. Integrated Writing course.

Fall 2020 MUA1210 1210 Applied Music MUA Music: Applied Music 2 Open only to music majors or minors. All students must have auditioned for and received departmental approval before registering for applied music.

Fall 2020 STT4620 4620 Theory of Statistics II STT Statistics 4 Point estimation, properties of estimators, sufficiency and completeness, single parameter interval estimation, hypothesis testing, most powerful and UMP tests, likelihood ratio tests; the multivariate normal distribution, random vectors and covariance matrices; linear and quadratic forms. The general linear model and the Cochran-Fisher theorem. Hypothesis testing and confidence regions for a vector of parameters.

Fall 2020 TH1190 1190 Singing for the Actor II TH Theatre 1 Private singing lessons for acting, theatre studies and dance majors only.

Fall 2020 ENG0610 5610 Technical Writing ENG English 3 Concepts and skills used in scientific and technical writing.

Fall 2020 ME4520 4520 Hydroprocessing ME Mechanical and Materials Eng 3 Hydrocracking of paraffinates for power generation, hydrologic analysis for hydropower development for run-of-the-river systems and reservoir systems, dams and environmental impacts, environmental impact assessment, operations of reservoir systems, and economics of hydrogenerator projects. Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D.)

Fall 2020 TH3380 3380 Acting Mus Theatre II TH Theatre 3 Musical theatre acting skills using texts from the nineteenth and early to mid-twentieth centuries. Emphasis on mastering a range of performance styles.

Fall 2020 EES1160 3160 Stratigraphy & Sediment EES Earth & Environmental Sciences 4 Clastic and carbonate sedimentary rocks, their mineralogy, texture, provenance, and classification. Principles, rules, and geologic and geophysical correlation techniques. Fluid flow sediment transport and deposition, sedimentary structure, and depositional environments.

Fall 2020 MKT4900 4900 Marketing Strategy MKT Marketing 3 Develops abilities to recognize opportunities and solve problems related to marketing strategy and improve decision making skills applied to the planning of marketing programs. Integrated Writing course.

Fall 2020 PHY3990 5990 Spec Problem in Physics PHY Physics 1 Special topics, problems or research designed for specific needs, talents, or interest of the student.

Fall 2020 BME8950 8950 Dissertation Reseach BME Biomedical Engineering 1 Ph.D. Dissertation Research in Biomedical Engineering

Fall 2020 UVC1010 1010 First Year Seminar UVC University College 1 Students experience opportunities to build their collegiate identity by clarifying their values while engaging the campus community and experiencing diversity. Students also explore learning strategies to set goals, plan their courses, develop their communication skills, and explore careers while learning to achieve overall health and wellness.

Fall 2020 EC3700 3700 Environ & Ecol Economics EC Economics 3 Analyzes environmental quality from both microeconomic and systems frameworks. Emphasizes effectiveness of alternative approaches to environmental problems, including specific solutions to particular problems and general approaches to broad problems.

Fall 2020 KNH1450B 1450B Rape Def Strat Basic KNH Kinesiology & Health 1 Fundamental skills and knowledge of Rape Defense Strategies: Basic. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020 AES3320 3320 ICL Lab AES Aerospace Studies 0 Application of leadership/management concepts learned in Field Training and in previous aerospace studies courses and labs to assist in training the GAC cadre. Requires participation in two weekly physical training sessions.

Fall 2020 NUR3460 3460 Nursing Care of Children NUR Nursing 1 Focuses on critical reasoning and care of children, adolescents, and families. Delivery of holistic, family-centered care that incorporates understanding of growth and development, culture, pathophysiological changes, and family transitions. (2 cr didactic; 2 cr total clinical lab)

Fall 2020 ANTE890 8990 Anatomy Research ANT Anatomy 1 Supervised thesis research.

Fall 2020 EGR2980IL 2980L Special Topics in EGR Lab EGR Engineering 0 Required laboratory for EGR 2980.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES6350</td>
<td>Field Mapping</td>
<td>6</td>
<td>Geologic phenomena studied and mapped in the field. Mapping techniques are utilized in a series of areas of increasing complexity. Standard methods are utilized for observing, describing, interpreting and mapping rock units and their structure.</td>
</tr>
<tr>
<td>BIOL6400</td>
<td>Engr Econ</td>
<td>6</td>
<td>Introduction to analytical methods and techniques for optimizing the economic outcome of technical and managerial decisions. Includes time value of money, annual costs, present worth, future value, capitalized cost break-even analysis, and valuation and depreciation. &lt;br&gt;<strong>Department Managed Prerequisite:</strong> BIOL 4120 Minimum Grade of D or Undergraduate level MTH 2300 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>PTX5500</td>
<td>Good Laboratory Practice</td>
<td>8</td>
<td>GILP regulations are a set of international standards developed to ensure quality and reliability of safety data submitted to regulatory authorities. Overview of standards and principles governing the conduct of pharma/tox studies.</td>
</tr>
<tr>
<td>NUR7520</td>
<td>Practicum for ACPNP</td>
<td>6</td>
<td>Focus is on models of practice in providing health care to infants, children and adolescents within the full scope of advanced practice (wellness, common minor health problems, and high acute and complex chronic illness). Factors influencing role development and delegation/supervision, quality improvements, accreditation standards, professional standards, and prescriptive authority will be addressed.</td>
</tr>
<tr>
<td>WGS6000</td>
<td>Women, Gender, and Sexuality</td>
<td>6</td>
<td>Issues, approaches, and topics in women's studies. Topics vary.</td>
</tr>
<tr>
<td>STT7960</td>
<td>Topics in Stat and Prob</td>
<td>960</td>
<td>Topics in statistics and probability.</td>
</tr>
<tr>
<td>PSY9750</td>
<td>Forensic Psychology</td>
<td>957</td>
<td>Introduction to the legal system including an overview of legal and political systems and processes, criminal and civil law in forensic psychology, and the relevance of legal issues for practitioners and clients. Topics range from correctional psychology to competency issues.</td>
</tr>
<tr>
<td>EDSE6200</td>
<td>Social Behavioral Science</td>
<td>620</td>
<td>Candidates, under the direct supervision of an experienced intervention specialist, are assigned for intensive teaching experience in grades pre-K-3rd special education. 7 weeks in pre-K and 7-8 weeks in 1-3rd grades.</td>
</tr>
<tr>
<td>BMB4010</td>
<td>Topics in BMB</td>
<td>4010</td>
<td>Review of current literature or current research techniques in Biochemistry and Molecular Biology.</td>
</tr>
<tr>
<td>BMS3830</td>
<td>Human Microanatomy</td>
<td>8380</td>
<td>Detailed microanatomy of human cells, tissues, and organ systems.</td>
</tr>
<tr>
<td>ANT7130</td>
<td>Human Neurobiology</td>
<td>7110</td>
<td>(Also listed as BMS 903.) Detailed survey of the anatomy and physiology of the major fiber tracts and cell groups of the human central nervous system.</td>
</tr>
<tr>
<td>PSY2910</td>
<td>Drugs and Behavior</td>
<td>2910</td>
<td>Introduce the major classes of psychoactive drugs, their behavioral effects and mechanisms of action. The societal impact of some popular drugs is examined in terms of their effects on the brain, body and behavior.</td>
</tr>
<tr>
<td>ASM7472</td>
<td>Social Behavioral Science</td>
<td>7472</td>
<td>This course takes a look at some major public health issues dealing with lifestyle and behavioral health issues. It is structured mainly in a seminar and project style of instruction.</td>
</tr>
<tr>
<td>PSY9030</td>
<td>Comp Cognitive Modeling</td>
<td>9030</td>
<td>In this course, we will learn how to develop computational cognitive models within a unified theory of the human mind referred to as a cognitive architecture. We will briefly review a number of existing cognitive architectures and discuss their main applications. Then, we will study one of the most popular cognitive architectures, ACT-R, and will learn to develop a few simple models that account for human behavior in a number of classic paradigms from experimental psychology. &lt;br&gt;<strong>Department Managed Prerequisite:</strong> PSY 7010 Minimum Grade of D and Graduate level PSY 7020 Minimum Grade of D and Graduate level PSY 7050 Minimum Grade of D or better.</td>
</tr>
<tr>
<td>ATH2550</td>
<td>Cultural Art Hlth Care</td>
<td>2550</td>
<td>Basic concepts, ideas, issues and debates in cultural anthropology, using examples from Asia, Africa, Latin America, Native North America and the Middle East. Explores diverse ways humans relate to one another and reveals cultural milieus, political configurations, ways of speaking and environments people have used to shape their world. For students who intend to become health care professionals. Credit for ATH 2550 will not be given to students who have completed CST 2410.</td>
</tr>
<tr>
<td>HST4840</td>
<td>Religious History</td>
<td>4840</td>
<td>Examines topics in the history of religion. May cover any historical period or region of the world or may be comparative. Topics vary. Integrated Writing course.</td>
</tr>
<tr>
<td>THS340</td>
<td>Costume Construction</td>
<td>3340</td>
<td>Advanced stitching techniques necessary for costume construction.</td>
</tr>
<tr>
<td>FAS22110</td>
<td>Food Processing Unit Op</td>
<td>2210</td>
<td>A study of selected food processes and the underlying principles behind their operation.</td>
</tr>
<tr>
<td>KNH4300</td>
<td>Coaching Theory</td>
<td>4300</td>
<td>Theory, methods, skills, strategies, organization, psychology, ethics, conditioning, and general aspects of teaching and coaching a particular sport. Typical sports covered include baseball, basketball, and soccer.</td>
</tr>
<tr>
<td>DAN4020</td>
<td>Ballet JV</td>
<td>4020</td>
<td>Advanced work in classical ballet technique stressing the development of musicality and virtuosity.</td>
</tr>
<tr>
<td>EE7330</td>
<td>Modern Radar Theory</td>
<td>7330</td>
<td>Application of probability and random process to the performance characterization of range-gated radar. Development of the concepts of resolution, S/N, ambiguity function, and pulse compression, and their applications to radar systems design. Consideration is also given to coherent imaging radar. &lt;br&gt;<strong>Department Managed Prerequisite:</strong> Undergraduate level EE 4750 Minimum Grade of C or Graduate level EE 6750 Minimum Grade of C or better.</td>
</tr>
<tr>
<td>ABS7120</td>
<td>Applied Methodology</td>
<td>7120</td>
<td>Addresses issues pertaining to contemporary research writing in the terms of integration of problem statements, literature review, presentation of methodology, data summary, conclusions, and ethical issues.</td>
</tr>
<tr>
<td>ME4990</td>
<td>Independent Study in ME</td>
<td>4990</td>
<td>Independent study in Mechanical Engineering or Materials Science and Engineering. Topics vary.</td>
</tr>
<tr>
<td>PSY3090</td>
<td>Pay of Health Behavior</td>
<td>3090</td>
<td>Survey of the psychology of health care. The focus is both theoretical and practical, emphasizing the integration of physiological and psychological knowledge.</td>
</tr>
<tr>
<td>FAS4300</td>
<td>Lean Six Sigma Proc Food</td>
<td>4300</td>
<td>Lean Six Sigma principles and practices and implementation of Lean Six Sigma initiatives in a food manufacturing environment.</td>
</tr>
</tbody>
</table>
Fall 2020  IT3400  3400  3D Digital Modeling  IT  Information Technology 3  Fundamental topics of 3D digital modeling will be explored in both a virtual and 3D printing environment. Will learn how to texture, animate, and edit to build an animated model that will be exported into an online 3D hosting and loaded into a 3D virtual environment and augmented reality app.  UG  LL  Lecture/Lab Combination

Fall 2020  CHM1210  1210  General Chemistry I  CHM  Chemistry 3  Structure and properties of atoms and molecules and their chemical behavior and reactivity.  UG  LE  Lecture

Fall 2020  LDR09990  9990  Thesis  LDR  Leadership 1  This course guides implementation of individual Masters Thesis projects from inquiry and data gathering, through analysis and solution identification, to formal presentation.  GR  IS  Independent Study

Fall 2020  BMS7412  7412  Rehab Eng Design II  BMS  Biomedical Sciences 3  Continuation of BMS 7411. Application of knowledge and experience in the rehabilitation engineering design, research and development process. Includes navigating funding issues.  GR  LE  Lecture

Fall 2020  EC37310  7310  Economics Public Finance  EC  Economics 3  Develops a theoretical framework and working knowledge of the economic basis for government activities, government expenditures, programs, and policies, and the financing of government expenditures through taxation.  GR  LE  Lecture

Fall 2020  PSY2640  2640  Evolution and Psychology  PSY  Psychology 3  Scientific movements that paved the way for the science of evolutionary psychology. Methods of testing evolutionary hypotheses, problems of survival and group living, and the challenges of sex and mating, and of parenting and kinship.  UG  LE  Lecture

Fall 2020  GER3310  3310  Survey of German Lit  GER  German 3  Historical survey of German literature from its beginning to the present. 331: Literature of the Middle Ages, Renaissance, Reformation, Enlightenment, and Storm and Stress. 332: Classicism, Romanticism, Poetic Rationalism, and Modern Period.  UG  LE  Lecture

Fall 2020  ART3110  3110  Ancient/Classical Art  ART  Art 3  General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course.  UG  LE  Lecture

Fall 2020  CHI1010  1010  Beginning Chinese I  CHI  Chinese 3  Communicative introduction to Chinese. Study of the vocabulary and structure of the Chinese language; practice in speaking, listening, reading, and writing.  UG  LE  Lecture

Fall 2020  LE1040  1040  Crime Investigation  LE  Law Enforcement 3  Techniques used by police and police specialists to gather evidence at crime scenes and procedures used to interview witnesses, victims and crime suspects.  UG  LL  Lecture/Lab Combination

Fall 2020  MTH4400  4400  History of Mathematics  MTH  Mathematics 3  Mathematics as an on-going human activity. Historical development and contributions from diverse cultures of number systems, measurement, algebra, Euclidean and non-Euclidean geometries, calculus, discrete mathematics, probability and statistics. Integrated Writing course.  UG  LE  Lecture

Fall 2020  MUS4800  4800  Classic & Romantic Music  MUS  Music 3  Study of music and critical analysis of representative works from major composers of Classical and Romantic music.  GR  LE  Lecture

Fall 2020  CHM1510  1510  Scuba: Advanced Diver  CHM  Kinesiology & Health 2  Intermediate level of skills and knowledge in Scuba: Advanced Diver. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.  UG  LB  Lab

Fall 2020  CHM2600  2600  First Aid and CPR  CHM  Kinesiology & Health 2  Standard Red Cross first aid course. Comprehensive study of first aid techniques and procedures in emergency treatment.  UG  LE  Lecture

Fall 2020  ME7390  7390  Fund of Plasma Sci  ME  Mechanical and Materials Eng 3  Properties, characteristics, and use of ionized gases. Fundamental topics of gaseous electronics including kinetic theory, excitation, ionization, equilibrium, non-equilibrium, and local thermodynamic equilibrium. Plasma generation, glow discharge, rf-discharges, plasma torches, and free-burning arcs.  GR  LE  Lecture

Fall 2020  FR3510  3510  French Civilization  FR  French 3  Study of the main currents of French civilization with emphasis on historical aspects. Conducted in French.  UG  LE  Lecture

Fall 2020  MTH8500  8500  Topics in Algebra  MTH  Mathematics 1  Selected advanced topic or topics in algebra.  GR  IS  Independent Study

Fall 2020  EE6120L  6120L  Industrial Controls Lab  EE  Electrical Engineering 1  Laboratory supporting EE 6120. Students will experience hands-on learning in lab environment.  GR  LB  Lab

Fall 2020  EGR3980  3980  Special Topics in EGR  EGR  Engineering 1  Special topics in Engineering and Computer Science.  GR  LE  Lecture

Fall 2020  ES7010  7010  Set Topics in Env Sci  ES  Environmental Sciences 1  New or existing courses for which a formal ES course designation does not yet exist, but for which an ES course designation may be warranted on a case by case basis.  GR  LR  Lecture/Racitation Combination

Fall 2020  DOO9070  9070  Multivariate Statistics  DOS  Doctor Or Studies 3  This course will develop most commonly used multivariate statistical techniques. The course includes the purpose, logic, benefits and limitations of applications of a multivariate technique to a data set.  GR  LL  Lecture/Lab Combination

Fall 2020  PSB9150  9150  Child Assessment  PSI  Professional Psychology 3  Overview of child assessment theory, techniques, and strategies to prepare students for further practical work in the assessment of child functioning.  GR  LE  Lecture

Fall 2020  PL5470  5470  Public Policy  PL5  Political Science 3  Examines models of public policy making and analyzes contemporary policy debates on the economy, energy and environment, immigration, and education.  GR  LE  Lecture

Fall 2020  HST3700  3700  US-Am History, 1619-Pres  HST  History 3  Survey of black people in American society from colonial slave trade to the present.  UG  LE  Lecture

Fall 2020  M&I7270  7270  Pathogenic Microbiology  M&I  Microbiology & Immunology 4  (Also listed as BMS 8030) Microorganisms pathogenic for humans and animals using the organism specific approach. Emphasis on mechanisms of pathogenesis and host resistance. Includes a project segment devoted to the independent study of the mechanisms of pathogenesis in the host-parasite interactions of the infectious agents used.  GR  LR  Lecture/Racitation Combination

Fall 2020  EE7630  7630  Stochastic Signal Proc  EE  Electrical Engineering 3  Processing techniques for stochastic signals. Parametric and nonparametric spectral estimation. Introduction to adaptive systems, to adaptation with stationary signals, and to adaptive algorithms and structures.  GR  LE  Lecture

Fall 2020  RHB7270  7270  International Counseling  RHB  Rehabilitation 3  Introduction to counseling and mental health services around the globe. Overview of the historical treatment, societal perceptions, services, and outcomes of people with severe mental illnesses internationally.  UG  LE  Lecture
Fall 2020  ME6220  6220  Mech Sys Model & Design  ME  Mechanical and Materials Eng  3  Modeling of complex mechanical systems as a set of simple, linear or nonlinear components for the purpose of design. Introduces modern computational tools. (GR) Department Managed Prerequisite(s): Graduate level ME 5210 Minimum Grade of D=0

Fall 2020  MUS7710  7710  Pedagogical Research Music Ed  MUS  Music  3  Pedagogical Research in Music Education is designed to offer graduate students pursuing the Masters in Music Education degree a course that will allow them to choose pedagogical research which supports their career directions in music education.

Fall 2020  PSY8110  8110  Appl. of Visual Science  PSY  Psychology  3  Study of visual systems including psychophysical measurement, temporal and spatial properties, display criteria, colorimetry, and visual system modeling.

Fall 2020  ATH020  3020  Peoples/Cultures So Asia  ATH  Anthropology  3  An introduction to the variety of people living in Southeast Asia, particularly India, Pakistan, Bangladesh and Sri Lanka. The course will investigate various cultural, environmental, religious, ethnic and national groupings, while attempting to uncover unity behind the great diversity of the subcontinent.

Fall 2020  PLS6400  6400  Constitutional Law  PLS  Political Science  3  Cases in which provisions of the Constitution have been judicially interpreted, federal systems, separation of powers, and limits on government.

Fall 2020  MTH4070  4070  Optimization Techniques  MTH  Mathematics  3  Algorithms for optimizing real functions of several variables subject to equality and inequality constraints. Convexity properties of functions and sets, linear programming, simplex and interior point methods, integer programming, branch and bound algorithm, transportation problem, necessary and sufficient conditions for nonlinear function optimization. Newton and quasi-Newton methods, Lagrange multiplier conditions, Kuhn-Tucker conditions, dynamic programming.

Fall 2020  STT4310  4310  Stat Meth Clinical Trial  STT  Statistics  3  Basic clinical design methodology, types of clinical trials, analysis of trial data, and statistical issues that commonly arise in clinical trials.

Fall 2020  PHL3130  3130  Metaphysics  PHL  Philosophy  3  Examines such topics as the problem of universals, free will and determinism, the nature of abstract entities like numbers, the problem of identity and individuation, the nature of time and cause and effect, and the realism and anti-realism debate. Integrated Writing course.

Fall 2020  ED2100  2100  Education in a Democracy  ED  Education  3  Explores role of education in a democracy and concepts of social justice, diversity and privilege, historical and current oppression, equitable access to knowledge, and development of respect between/among individuals and groups in a global society.

Fall 2020  HST4220  4220  Russian/Soviet History  HST  History  3  Examines particular periods of Russian and Soviet history (e.g., the Soviet Union under Stalin) or topics (e.g., the Russian Revolution). Topics vary. Integrated Writing course.

Fall 2020  EES1070L  1070L  Sustainable Earth Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 1070.

Fall 2020  PPH7710  7710  Global Health  PPH  Population & Public Health  3  This course offers an introduction to the institutional, economic, epidemiological, ideological, and political forces in the field of global health. Social constructs of health will be reviewed, as well as how environmental factors and political decisions affect global and international health. Students will also explore best practices approaches to health systems both at national and global levels.

Fall 2020  ED4620  6420  Professional Seminar MCE  ED  Education  3  Prepares candidates for their first year of teaching. Topics include classroom management, collaboration with others, school policies and procedures, resident educator program resume building, licensure information, interviewing techniques, and creating a portfolio.

Fall 2020  MGTS310  3120  Human Resource Mgt  MGT  Management  3  Overview of human resource (HR) functions and policies, including environment of HR (including legal), recruiting and selection of employees, training and development, compensation and benefits, labor and employee relationship.

Fall 2020  PSY8000  8000  Graduate HE/IO Seminar  PSY  Psychology  0  Weekly discussions of topics in Human Factors or Industrial/Organizational Psychology.

Fall 2020  CS4370  4370  Par Prog Many-Core GPUs  CS  Computer Science  3  This course will introduce an important trend in high-performance computing, the use of many-core graphics processing units (GPUs) to solve computation-intensive problems. Students will learn about new many-core GPU architecture, CUDA programming model, memory hierarchy design, parallel programming concepts, and compiling techniques to improve parallelism.

Fall 2020  CHM5210  5210  Inorganic Chemistry  CHM  Chemistry  2  A thorough examination of the chemistry of the metals stressing the transition elements, ligand field theory and mechanisms of inorganic reactions.

Fall 2020  REL1010  1010  Intro to World Religions  REL  Religion  3  Introduction to the beliefs and practices of the major religions of the world, including, but not limited to, Judaism, Christianity, Islam, Hinduism, Buddhism, and East Asian religions.

Fall 2020  CHM4210  4210  Inorganic Chemistry II  CHM  Chemistry  2  Principles and concepts of inorganic chemistry including coordination chemistry, reactions of coordination compounds and organometallic chemistry.

Fall 2020  HST7650  7650  Museum Admin Collections  HST  History  3  Introduction to museums and their management and to collections theory and practice. Includes collections policies; acquisition, deaccessioning and loans; management, integrated lecture and lab. (UG) Department Managed Prerequisite(s): Undergraduate level CS 1150 Minimum Grade of D or Undergraduate level CS 1160 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D=0.

Fall 2020  ENG2400  2400  Intro to PC Networking  CEG  Computer Engineering  3  Introduces networking technologies including infrastructure and architectures, standards, protocols and directory services, administration, security and management. Integrated lecture and lab. (UG) Department Managed Prerequisite(s): Undergraduate level CS 3150 Minimum Grade of D or Undergraduate level CS 3160 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D=0.

Fall 2020  SOC6200  6200  Elite Crime  SOC  Sociology  3  Theoretical and critical examination of the extent, cost, and control of elite crime and deviance.

Fall 2020  HEA9210  9210  Curriculum in Higher Ed  HEA  Higher Education Admin  3  Introduction to patterns of curricular organization in the four-year college and university with attention to historical development and current models. Study of the issues governing curriculum planning, including the social, economic, political, historical, and philosophical contexts in which curricula is formed and developed.

Fall 2020  ED6570  6570  AYA Int Pt II: Std T WL  ED  Education  8  Candidiates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades p-12 in Multi-Age World Languages.
Fall 2020

**MI6750** 6750 Pathogenic Mechanisms MI Microbiology & Immunology 4 (Also listed as BMS 7750) This advanced level course will expand the knowledge of basic microbiology by focusing on human-microbial pathogen interactions. The molecular basis of the pathogenic mechanisms will be emphasized. In addition, the student will gain a better appreciation and understanding of the complexities of interactions between microbes and their human hosts. 

**UG** LE Lecture

Fall 2020

**ART4030** 4030 Studies in Drawing ART Art 3 Explores problems and approaches to drawing and includes cross-media and interdisciplinary studies. Topics vary. Prerequisites: Undergraduate level ART 3280 Minimum Grade of D-.

**UG** LB Lab

Fall 2020

**ENG6930** 6930 Internship in Teaching ENG English 3 Supervised college-level teaching or tutoring.

**GR** IN Internship

**GER5900** 5900 Foreign Lang Institute GER German 1 For transfered German. Intensive experience designed, through total immersion, to improve language skills (conversation and composition) and awareness of German civilization and contemporary culture.

**UG** LB Lecture

**EDS3320** 3320 Teaching Strategies EDS Education - Special Education 3 Interpreting information for identification/placement of individuals with exceptional learning needs within the middle school curriculum. Organizing strategies/interventions based on student assessment. Field experiences required.

**UG** LE Lecture

Fall 2020

**CLSL3600** 3600 Ancient Mythology CLS Classics 3 Greek and Roman mythology; aspects of and approaches to the study of myths. Integrated Writing course.

**UG** LE Lecture

**MTH2110** 2110 Calculus II MTH Mathematics 4 Integration techniques, applications of the definite integral, first-order differential equations, vectors and vector operations, parametric equations and polar coordinates, infinite series.

**UG** LB Lab

**CEG4440** 4440 Android Int & Security CEG Computer Engineering 3 Study the internals of the Android mobile OS such as Messaging, Graphics, Audio, Video, Camera, GPS, Networking, File System, Touch Sensors, and other subsystems. Study the combined impact of these on the architecture, design, and security of mobile computing, in the context of Android. Prerequisites: Undergraduate level CS 3100 Minimum Grade of C or Graduate level CS 5100 Minimum Grade of C-.

**GR** LE Lecture

Fall 2020

**ENG3650** 3650 Writing Nonfiction ENG English 3 Advanced strategies for writing nonfiction for non-academic purposes and audiences in various styles, genres, and media.

**UG** LE Lecture

**HEA7290** 7290 Athl High Ed HEA Higher Education Admin 3 Explores the role and impact of athletic programs at the intercollegiate level. Students study administrative and organizational structure, specialized functions, and professional career opportunities within the field of intercollegiate athletics. Planning, financing, programming, and management are studied, as well as the role of athletics within the educational experience.

**GR** LE Lecture

Fall 2020

**PSY5910** 5910 Behavioral Neurosci I PSY Psychology 3 Physiological mechanisms of behavior. Basic neuroanatomy and neurophysiology, neuronal development and function, psychopathology, reproduction, learning, sleep, and stress.

**GR** LE Lecture

**PSY9100** 9100 Hist of Psychology PSY Psychology 3 Major trends in the development of psychology from its beginning to the present.

**GR** LE Lecture

**UH1010** 1010 Honors First Year Sem UH University Honors 1 Information and activities designed to enhance the success of new students in the University Honors Program. Introduces students to interdisciplinary studies, the hallmark of honors education.

**UG** LE Lecture

**ATH6700** 6700 Dev Ethnological Thought ATH Anthropology 3 An introduction to the many approaches used in anthropology.

**GR** LE Lecture

**APS4020** 4020 Project Evaluation APS Applied Studies 3 A course to provide opportunities for students to gain knowledge, practice, and study in evaluation and needs assessment. Focus on fundamentals such as the logic model in evaluation, needs assessment techniques, instrument development, information analysis and decision making as they apply to business and organizational settings. Integrated Writing course.

**UG** LE Lecture

Fall 2020

**MUSI1020** 1020 Theory of Music II MUS Music 3 Theoretical study of music through written exercises including melody, harmony, rhythm, form and analysis.

**UG** LE Lecture

**KCHI1120B** 1120B Canoeing KHI Kinesiology & Health 1 Fundamental skills and knowledge of Canoeing. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.

**UG** LB Lab

**FAS1010** 1010 Agricultural Society FAS Food and Agricultural Systems 3 Introductory analysis of rural community capital, rural change, and current issues relevant to rural agricultural society.

**UG** LE Lecture/Lab Combination

**EE4210** 4210 Digital Communication EE Electrical Engineering 3 Introduction to digital communications: analog communication vs digital communication, source coding, pulse shaping, digital modulation/demodulation, signal detection and optimal receiver.

**UG** LE Lecture

**ME4300** 4300 Aeronautics ME Mechanical and Materials Engr 3 Aviation history, Standard atmosphere, basic aerodynamics, theory of lift, airplane performance, principles of stability and control, and aeronautics and propulsion concepts. Prerequisites: Undergraduate level ME 3350 Minimum Grade of D-.

**UG** LB Lab

**KCHI1290** 1290 H2O Zumba KHI Kinesiology & Health 1 Fundamental skills and knowledge of H2O Zumba. Competency-based approach. Course may accommodate disabled students when appropriate.

**UG** LB Lab

**EGR3980** 3980 Special Topics in EGR EGR Engineering 1 Special topics in Engineering and Computer Science.

**UG** LE Lecture

**ACC7430** 7430 Tax-Adv Topic/Research ACC Accountancy 3 Introduction to the methodology of tax research and the authoritative tax sources. Applications of research techniques in the analysis of special tax topics related to individuals, corporations, partnerships, estates and trusts.

**GR** LE Lecture

**PSI8140** 8140 Rorschach PSI Professional Psychology 3 Introduction to the Rorschach; how and when to administer; how to score, interpret, and convey results meaningfully.

**GR** LE Lecture

**MUSI7340** 7340 Analytical Techniques II MUS Music 3 Analytical study of representative compositions of the Classical and Romantic periods.

**GR** LE Lecture

**KCHI7302B** 7302B Aerobic Conditioning KHI Kinesiology & Health 1 Fundamental skills and knowledge of Aerobic Conditioning. Competency-based approach. Course may accommodate disabled students when appropriate.

**UG** LB Lab

**BIO3050** 3050 Animal Physiology BIO Biology 5 Basic adaptive mechanisms and their coordination in the activities of the metazoa. Interdependence of form and function, of plasticity and homeostasis, and control mechanisms in animal physiology.

**UG** LE Lecture

**KCHI5150B** 5150B GRACIE Self Def: Basic KHI Kinesiology & Health 1 Fundamental skills and knowledge of GRACIE Self Defense. Basic Competency-based approach. Course may accommodate disabled students when appropriate.

**UG** LB Lab

**CEG6870L** 6870L Intro Intel Cont Sys Lab CEG Computer Engineering 1 Laboratory supporting EE 6190. Students will experience hands on learning in lab environment.

**GR** LB Lab
Fall 2020  
EE4420  4420  
Microwave Eng I  EE  Electrical Engineering  
3  Transmission line theory and application, wave propagation in rectangular waveguides, microwave network analysis, matching network, design of microwave filter and resonator, and introduction of electromagnetic compatibility.  
UG  LE  Lecture  

Fall 2020  
SOC5710  5710  
Comparative CJ  SOC  Sociology  
3  A cross-cultural approach examining select criminal justice systems in Europe, Asia, the Middle East, Latin America and Africa as compared to the U.S. involving such transnational crimes as terrorism, hijacking, drug smuggling and organized crime networks.  
GR  LE  Lecture  

Fall 2020  
EDT9990  8900  
Internship  EDT  Educational Technology  
1  Students are assigned for a maximum of 100 hours to a library, learning center, computer facility, or video operation to gain practical experience under supervised conditions.  
GR  IN  Internship  

Fall 2020  
EDD975  6975  
Cont Sem: MACIS  ED  Education  
3  Seminar accompanying Mid-Age Internship focusing on pedagogical content knowledge in Computer Information Science, assessment of the International Society for Technology in Education standards and the completion of the professional portfolio.  
GR  SI  Seminar  

Fall 2020  
EDD4700  4700  
Workshop Ed Tech  EDT  Educational Technology  
1  Study of selected areas in educational technology. Titles vary.  
UG  LE  Lecture  

Fall 2020  
ME4680  4680  
Experimental Nanoscience  ME  Mechanical and Materials Eng  
1  Laboratory experiments 1) fabrication of nanomaterials; 2) characterization of physical and chemical properties; and 3) computational modeling of nanoscale physical phenomena. <b>Department Managed Prerequisite(s): Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level CHM 1210L Minimum Grade of D and Undergraduate level PHY 1120 Minimum Grade of D and Undergraduate level PHY 1120L Minimum Grade of D or (Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level CHM 1210L Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D and Undergraduate level PHY 2410L Minimum Grade of D).</b>  
UG  PKG  Combination  

Fall 2020  
PSY2040  3040  
Industrial and Org Psy  PSY  Psychology  
3  Scientific psychological principles, procedures, and methods applied to human behavior in organizations.  
UG  LE  Lecture  

Fall 2020  
EE3520  3520  
Dig & Feedback Contr Sys  EE  Electrical Engineering  
3  Develop analog and digital models of physical systems, perform transform domain analysis of signals and systems, analyze system stability, apply Bode plots and root locus method, and to analyze and design PIP controllers.  
UG  LE  Lecture  

Fall 2020  
CS1030  1030  
Survey of CS and CEG  CS  Computer Science  
1  Provides broad introduction to the fields of computer science and engineering. Explores resources designed to enhance new student success.  
UG  LE  Lecture  

Fall 2020  
BME6310  6310  
Ergonomics  BME  Biomedical Engineering  
3  Introduction to the application of ergonomic principles to the industrial environment. Includes ergonomic planning and implementation, the work environment, NIOSH work factors, work measurement, and work organization and equipment design. <b>Department Managed Prerequisite(s): Graduate level HHE 6120 Minimum Grade of D or Undergraduate level HHE 2211 Minimum Grade of D.</b>  
GR  LE  Lecture  

Fall 2020  
STT5600  5600  
Applied Statistics I  STT  Statistics  
3  Introduces probability, random variables and their expectations, some commonly used discrete and continuous distributions, concept of random sampling and sampling distributions. Uses computer software packages for simulating, summarizing, and displaying data. <b>Department Managed Prerequisite(s): Undergraduate level MTH 2310 Minimum Grade of D or Undergraduate level MTH 2310L Minimum Grade of D.</b>  
GR  LE  Lecture  

Fall 2020  
BIO3700  7000  
Prin Instruction Biology  BIO  Biology  
1  Survey of available instructional materials and discussion of educational theory and techniques leading to more effective instruction.  
GR  LE  Lecture  

Fall 2020  
EDL7700  7700  
Ed Lead Schl Counselors  EDL  Educational Leadership  
3  Provides foundational understandings of education in the United States from the historical, national, state, and local perspectives covering a variety of educational topics necessary for counselor leadership in today's schools.  
GR  SE  Seminar  

Fall 2020  
BIO33520  3520  
Human Biomechanics  BIO  Biology  
4  Analysis of muscular interrelationships in basic body movements; analysis of principles of mechanics as they relate to fundamental and complex motor skills.  
UG  LE  Lecture  

Fall 2020  
ED4520  4520  
AYA Science Methods  ED  Education  
3  Methods, curriculum, and materials for teaching adolescent to young adult (secondary) school science: emphasis on philosophy, planning and implementation, evaluation, resources and facilities, and historical and contemporary curricular trends in science education.  
UG  LE  Lecture  

Fall 2020  
LDR8011  8011  
Prog Eval Implementation  LDR  Leadership  
3  Study of evaluation design and practical implementation guidelines. Students will develop an understanding of the role of the program evaluator within multiple settings. Students will design a plan for existing proposals.  
GR  LE  Lecture  

Fall 2020  
BIO2460  4660  
Intern Appl Physiology  BIO  Biology  
1  A capstone practicum experience involving work site training or a research project.  
UG  IN  Internship  

Fall 2020  
PSY8590  8590  
Topics in Indus/Organiz Psych  PSY  Psychology  
2  Seminars with in-depth coverage of special topics in industrial or organizational psychology. Topics vary.  
UG  SE  Seminar  

Fall 2020  
TH3200  2020  
Sound Design  TH  Theatre  
3  Introduction to the craft and art of sound design. Emphasis on physics of sound, signal flow, basic equipment usage and maintenance. Includes theory and practices for both reinforced sound and sound scores for the theatre.  
UG  LL  Lecture/Lab  Combination  

Fall 2020  
CS6810  6810  
Bioinformatic Algorithms  CS  Computer Science  
3  Theory-oriented approach to the application of contemporary algorithms to bioinformatics. Graph theory, complexity theory, dynamic programming and optimization techniques are introduced in the context of application toward solving specific computational problems in molecular genetics.  
GR  LE  Lecture  

Fall 2020  
OHS1030  1030  
Professional Devel III  OIS  Office Information Systems  
1  Professional development in office procedures, dress, personality, leadership, and other aspects of business development.  
UG  LE  Lecture  

Fall 2020  
KHE2840  2840  
Practicum in HPR  KHN  Kinesiology & Health  
1  Supervised field work for sophomore students who are seeking certification or a concentration in a specific area. Titles vary. Contact hours vary according to subject. May be taken for a letter grade or pass/unsatisfactory.  
UG  PL  Practicum  

Fall 2020  
OL3030  3030  
Interpersonal Leadership  OL  Organizational Leadership  
3  Focus on developing and using emotional intelligence (EI) competencies for effectively leading others.  
UG  LE  Lecture  

Fall 2020  
SL4800  4800  
Advanced Interpreting II  SLI  Sign Language Interpreting  
4  Continues enhancement of ability to produce an equivalent message, working between ASL and English. Interpreting culturally rich language will be investigated, and expanded to idiomatic expressions, higher registers, and working lengthy segments of discourse.  
UG  LE  Lecture  

Fall 2020  
PSY4370  4370  
Psychology of Aging Cap  PSY  Psychology  
3  Communication-intensive seminar integrating knowledge on theories, methods, and research related to human aging. Focus on both current research and applications from psychology. Integrated Writing course.  
UG  SE  Seminar
<p>| Fall 2020 | HST6840 | 6840 | Religious History | HST | History | 3 | Examines topics in the history of religion. May cover any historical period or region of the world or may be comparative. Topics vary. | GR | LE | Lecture |
| Fall 2020 | BIE6711L | 6711L | Optimize Meth Lab | BIE | Industrial &amp; Human Facs Engr | 0 | Required laboratory for BIE 6711. | GR | LB | Lab |
| Fall 2020 | MUS1510 | 1510 | Music | MUS | Music | 1 | The study of sight singing and techniques for hearing and notating melody and harmony. | UG | LE | Lecture |
| Fall 2020 | CS5300 | 5300 | Comp Sys &amp; Structures | CS | Computer Science | 0 | This is an Online/Distance Education course primarily designed for working professional/non-traditional students’ entry into university for advanced studies in Computer Science. | GR | LL | Lecture/Lab Combination |
| Fall 2020 | TH1240 | 1240 | Theatre Graphics I: Fund | TH | Theatre | 3 | Drawing for the theatrical designer with emphasis on fundamentals. | UG | ST | Studio |
| Fall 2020 | ART4000 | 4000 | Art Seminar | ART | Art | 2 | Group discussions of contemporary writings in art and critiques of student work in a peer setting with faculty and visiting artists participating on an informal basis. | UG | SE | Seminar |
| Fall 2020 | KNB1180 | 1180 | Dance: Swing | KNH | Kinesiology &amp; Health | 1 | Fundamental skills and knowledge of Dance: Swing. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | BBO3130L | 3130L | Plant Biology Lab | BIO | Biology | 0 | Required laboratory for BIO 3130. | UG | LB | Lab |
| Fall 2020 | BBM3670 | 7670 | Mol Basis Inherited Dis | BMB | Biochem &amp; Molecular Biology | 3 | An intensive course on human diseases at all levels; replication, transcriptional, translational, protein expression, protein folding and processing, protein structure and function, cellular metabolic changes, nuclear and cellular phenotypic changes, symptoms, and putative therapies. | GR | SE | Seminar |
| Fall 2020 | BBO3810 | 3810 | Intro to Bioinformatics | BIO | Biology | 3 | Tools-oriented approach to bioinformatics emphasizing DNA data structure, string representation in PERL, data searches, pairwise alignments, substitution patterns, protein structure prediction and modeling, proteomics, and use of web-based bioinformatic tools. | UG | LE | Lecture |
| Fall 2020 | PL6180 | 6180 | Politics and Ethics | PL5 | Political Science | 3 | Philosophical and legal foundations for regulating ethics among public officials. | GR | LE | Lecture |
| Fall 2020 | PTX8210 | 8210 | Med. Bio. Defense | PTX | Pharmacology/Toxicology | 3 | This course will provide an in depth understanding of biological surfact threat agent pathogenesis, toxicology, and medical intervention. The course will also introduce requirements for Government and Contract Research standards for working with highly pathogenic microorganisms, study design, development, and execution to include issues with regard to Good Laboratory Practices, Institutional Animal Care and Use Committee, Quality Assurance, and safety pharmacology. | GR | LE | Lecture |
| Fall 2020 | BME4550 | 4550 | Bioinstrumentation | BME | Biomedical Engineering | 4 | Various electrodes, transducers, chemical sensors, special circuits, devices and methods for measuring biological signals and variables; therapeutic and prosthetic devices; electrical safety. | UG | LE | Lecture |
| Fall 2020 | KNH1755 | 1755 | Marathon Training | KNH | Kinesiology &amp; Health | 2 | Fundamental skills and knowledge of marathon training. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | KNH1660B | 1660B | Swimming: Beginning | KNH | Kinesiology &amp; Health | 1 | Fundamental skills and knowledge of Swimming: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | WGS5050 | 5050 | Topics Sexuality Studies | WGS | Women, Gender, and Sexuality | 3 | Issues, approaches, and topics in the field of sexuality studies. Titles and topics vary. | GR | LE | Lecture |
| Fall 2020 | CEG1210 | 2170 | Intro to C Programm SR &amp; E | CEG | Computer Engineering | 4 | Basic engineering problem solving using the C programming language. Topics include loops, selection, input/output, files, functions, arrays, complex variables, pointers, structures, and dynamic memory. Students will learn how to approach solving problems in engineering and science; how to develop algorithms, using advanced techniques such as recursion, searching, sorting and linked lists, to solve those problems, and how to implement those algorithms in the C language. Department Managed Prerequisite(s): Undergraduate level MTH 1280 Minimum Grade of D or WSU Math Placement 40&lt;&gt;/b&gt; | GR | LE | Lecture |
| Fall 2020 | PPH7130 | 7130 | Geospatial Tech in P H | PPH | Population &amp; Public Health | 3 | This course prepares students to use geospatial technologies within the framework of Public Health issues. Topics covered include geographic information systems (GIS), global positioning system (GPS), remote sensing, spatial analysis, project design, data management, basic cartographic principles, case studies and a project. At completion, students have a baseline understanding of how to incorporate geospatial technologies into real-world Public Health matters. | GR | LL | Lecture/Lab Combination |
| Fall 2020 | EC4090 | 4090 | Intro. to Econometrics | EC | Economics | 3 | How to use statistical techniques to manage and analyze data, formulation and estimation of econometric models, including single variable and multiple variable regression techniques, and issues relating to inference. STATA software is used throughout the semester. | UG | LE | Lecture |
| Fall 2020 | HST4860 | 4860 | History and New Media | HST | History | 3 | Examines the impact of new media on access to primary sources, public programs, history education, scholarship, and the ways in which historians engage with each other. Presents productions in a variety of media. Integrated Writing course. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | ME6140 | 6140 | Mechanical Design I | ME | Mechanical and Materials Engr | 3 | Fundamental concepts in design for both static and fatigue loading, with application to selected mechanical components and systems. Department Managed Prerequisite(s): Graduate level ME 5120 Minimum Grade of D&lt;&gt;/b&gt; | GR | LE | Lecture |
| Fall 2020 | ATH5600 | 5600 | Special Topics/Archaeolo | ATH | Anthropology | 3 | Intensive graduate-level study of selected topics in archaeology. Topics vary. | GR | LE | Lecture |
| Fall 2020 | ART4090 | 4090 | Studies in Art | ART | Art | 3 | Problems and approaches to art. Includes cross-media and interdisciplinary studies. | UG | LB | Lab |
| Fall 2020 | SOC3810 | 3810 | Medical Sociology | SOC | Sociology | 3 | Introduction to the social dimensions of health and illness; consideration of patterns of disease, along with the organization, provision, and delivery of medical services. | UG | LE | Lecture |
| Fall 2020 | SOC4400 | 4400 | Qualitative Methods | SOC | Sociology | 3 | Qualitative research methods, including interviews, focus groups, case studies, and observational research. Integrated Writing course. Department Managed Prerequisite(s): Undergraduate level SOC 2000 Minimum Grade of D&lt;&gt;/b&gt; | UG | LE | Lecture |
| Fall 2020 | BME6850 | 6850 | Six Sigma for Engineers | BME | Biomedical Engineering | 3 | Practical application of Six Sigma tools in production and service contexts. Includes videos and case studies of real-world applications. Six Sigma Green Belt Certificate awarded to students upon successful completion of the course and in-class project. Department Managed Prerequisite(s): Graduate level BME 6150 Minimum Grade of C or Undergraduate level BIE 2211 Minimum Grade of C or MS 2040 or SST 1600 or SST 2640 or SST 3420 or SST 3600&lt;&gt;/b&gt; | GR | LE | Lecture |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Type</th>
<th>Credits</th>
<th>Description</th>
<th>Department</th>
<th>Designations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES6570</td>
<td>Site Remed &amp; Management</td>
<td>Lecture</td>
<td>3</td>
<td>This course addresses the physical, chemical, and biological methods used to remediate contamination in soils and groundwater. Emphasis is on practical applications. Strategies and technologies to address contamination, including the natural attenuation, containment techniques, pump-and-treat, and in situ technologies, will be reviewed in sufficient technical detail so the student can apply basic engineering design equations.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EES200</td>
<td>Engineering 2280</td>
<td>Lab</td>
<td>3</td>
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<tr>
<td>MUA2110</td>
<td>Art</td>
<td>Lecture</td>
<td>3</td>
<td>Introduction concepts and techniques of drawing. May include studies from the human figure and other natural forms. This course has a fee that is non-refundable once the term begins.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEN3720</td>
<td>Civil Life-Span Develop</td>
<td>Lecture</td>
<td>3</td>
<td>Developmental factors influencing the behavior of individuals across the life-span and the unique counseling strategies that are employed.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ART4060</td>
<td>Studies in Painting</td>
<td>Lecture</td>
<td>3</td>
<td>Explores problems and approaches to painting and includes cross-media and interdisciplinary studies.</td>
<td>GR</td>
<td>LE</td>
<td>Lab</td>
</tr>
<tr>
<td>EDE0100</td>
<td>Teaching Profession</td>
<td>Lecture</td>
<td>1</td>
<td>Overview of the teaching profession.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>HST7815</td>
<td>Records and Info Management</td>
<td>Lecture</td>
<td>3</td>
<td>Examines traditional and emerging concepts, practices, and methodologies related to the management of records and information in a variety of institutional settings.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MUA4700</td>
<td>Applied Music</td>
<td>Lab</td>
<td>4</td>
<td>Open only to Graduate Students. All students must have auditioned for and have received departmental approval before registering for applied music.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>SCM1360</td>
<td>Strategic Sourcing</td>
<td>Lab</td>
<td>3</td>
<td>Strategic sourcing, including the tactical and functional operations of purchasing as well as proactive establishment, management, and optimization of the firm's supply base of goods and services and to improve supply chain performance. This course has a fee that is non-refundable once the term begins.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ARA3210</td>
<td>Intro to Media Arabic</td>
<td>Lab</td>
<td>3</td>
<td>A course designed to give students a foundation in the language and style of modern Arabic media through the study of newspapers, magazines, TV and radio.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EGR1900</td>
<td>Explore Gr Internships</td>
<td>Lab</td>
<td>1</td>
<td>Prepares individuals for the engineering internship and job search process through the enhancement of job seeking skills and increased awareness of career development resources.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>FR1010</td>
<td>Beginning French I</td>
<td>Lab</td>
<td>3</td>
<td>Communicative introduction to French structures and vocabulary and to French and Francophone cultures.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>APS3040</td>
<td>APS Management</td>
<td>Lab</td>
<td>3</td>
<td>A course to provide opportunities for students to gain knowledge, practice, and study in technical management. Focus on management fundamentals such as organizational structure, planning, control, change, etc. as they apply to business and organizational settings. Integrated Writing course.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>SOM705</td>
<td>Year 1 Medical Study</td>
<td>Lab</td>
<td>3</td>
<td></td>
<td>MD</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG4740</td>
<td>Seminar, Comp Pedagogy</td>
<td>Lab</td>
<td>3</td>
<td>Reading, research, and discussion on topics dealing with theories and practices of teaching composition, such as historical contexts of composition programs, design of assignments, and teaching materials.</td>
<td>GR</td>
<td>SEM</td>
<td>Seminar</td>
</tr>
<tr>
<td>REL3320</td>
<td>Islam in Modern World</td>
<td>Lab</td>
<td>3</td>
<td>Study of how Muslim thinkers and theologians have responded to the challenges of the modern era.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>RST2810</td>
<td>Regional Studies I</td>
<td>Lab</td>
<td>3</td>
<td>Survey of non-Western societies including India, Tibet, China, and the Central Asian states, from pre-Islamic to Islamic periods.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG1100</td>
<td>Acad. Writing &amp; Reading</td>
<td>Lab</td>
<td>3</td>
<td>Introduces students to principles of effective written communication and critical reading. Stress on writing, drafting, revising, editing, and self-assessment, along with effective critiquing and collaborating. Students may use any of the following courses to satisfy the requirements of the Core, but only one may count:</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ANTH4000</td>
<td>Anthropology Seminar</td>
<td>Lab</td>
<td>1</td>
<td>Two seminars (Anthropology Seminar I and II) run concurrent with the Department of Neuroscience, Cell Biology and Physiology Seminar Series.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>ART6010</td>
<td>Ind Study in Art History</td>
<td>Lab</td>
<td>1</td>
<td>Intensive individually directed work in art history with faculty consultation and supervision.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>THS2400</td>
<td>Speech I</td>
<td>Lab</td>
<td>2</td>
<td>Techniques in voice and speech to strengthen and expand the student's instrument and skills.</td>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>SPN3110</td>
<td>Spanish Conversation I</td>
<td>Lab</td>
<td>3</td>
<td>Practice in oral use of Spanish emphasizing the culture of the Hispanic world.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG2360</td>
<td>Writing Workshop</td>
<td>Lab</td>
<td>3</td>
<td>Advanced strategies for teaching writing to adolescent and middle school students with an emphasis on genres and workshop pedagogy.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PHY3460</td>
<td>Concepts Appl Physics II</td>
<td>Lab</td>
<td>4</td>
<td>Basic concepts and applications in physics including electricity, magnetism, optics, waves, simple machines. Inquiry learning environment emphasizing science process and mathematical reasoning, problem-solving, technology and societal connections.</td>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>ED4420</td>
<td>Professional Seminar-MICE</td>
<td>Lab</td>
<td>3</td>
<td>Prepares candidates for their first year of teaching. Topics include: classroom management, collaboration with others, school policies and procedures, resident educator program, resume building, licensure information, interviewing techniques, and creating a portfolio.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PLS6720</td>
<td>Terrorism &amp; Counterterrorism</td>
<td>Lab</td>
<td>3</td>
<td>Surveys the phenomenon of terrorism: who employs it, how and why it occurs in international politics, and examines how states respond to terrorism.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>MUA2110</td>
<td>Applied Music</td>
<td>Lab</td>
<td>1</td>
<td>Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>EE5560</td>
<td>Intro Robotics</td>
<td>Lab</td>
<td>3</td>
<td>An introduction to the mathematics of robots. Topics covered include coordinate systems and transformations, manipulator kinematics and inverse kinematics. Jacobians, dynamic and trajectory planning.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PHY7990</td>
<td>Minor Problems</td>
<td>Lab</td>
<td>1</td>
<td>Students pursue a narrow topic on a tutorial basis or be trained in a specific laboratory or computational technique. Cannot be used for thesis credit. A maximum of 6 credits may be counted toward the MS degree.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>KNH1100B</td>
<td>Bowling</td>
<td>Lab</td>
<td>1</td>
<td>Fundamental skills and knowledge of Bowling. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
</tr>
</tbody>
</table>
Fall 2020  PHY6000  6000  Semiconductor Physics  PHY  Physics  3  Study of crystal structure; electronic band structure; charge carriers in semiconductors; generation, recombination, and motion of charge carriers; electrical and optical properties. Covers structure and characteristics of p-n junctions; bipolar transistors; field effect transistors; and other selected devices. Design and computer modeling of devices.  GR  LE  Lecture  

Fall 2020  EDL8700  8700  Practicum I: Principal  EDL  Educational Leadership  1  Provides experience in school administration. Candidates perform administrative tasks under the supervision of a licensed school administrator.  GR  IN  Internship  

Fall 2020  PSY9590  9590  Lab Rotation  PSY  Psychology  1  This course will introduce students to the use of MATLAB in psychological research. We will cover the basics of the MATLAB environment, including the interface, data types, control flow, and plotting.  GR  IS  Independent Study  

Fall 2020  PSY925  925  Intro to MATLAB  PSY  Psychology  2  This course will introduce students to the use of MATLAB in psychological research. We will cover the basics of the MATLAB environment, including the interface, data types, control flow, and plotting.  GR  LE  Lecture  

Fall 2020  EES3460  3460  Concepts EES II MCE  EES  Earth & Environmental Sciences  4  Processes that impact the Earth system such as volcanic eruptions, global climate change and ice ages, and the resulting interactions between air, land, water and life in the Earth system.  UG  LL  Lecture/Lab Combination  

Fall 2020  AR4410  4410  Intro to Arabic Fiction  AR  Arabic  3  A text-based course introducing students to the history and development of Arabic fiction through the study of classical and modern texts. <br> Department Managed Prerequisite(s): Undergraduate level ARA 3210 Minimum Grade of D-.<br>  UG  LL  Lecture/Lab Combination  

Fall 2020  PSY7330  3330  Methods in Clinical Psych  PSY  Psychology  4  This course provides students with a critical knowledge of qualitative research methods in psychology and with competencies necessary to carry out this kind of research in conjunction with quantitative methods and independently in their own right. The course includes a focus on the history of use, the philosophical foundations, and the scientific status of qualitative research methods in psychology. Integrated Writing course.  UG  LL  Lecture/Lab Combination  

Fall 2020  NUR3300  3300  Found of Research & EBP  NUR  Nursing  3  Introduction to the research process and evidence-based practice. Emphasizes the critical appraisal of current evidence that guides professional nursing practice. Integrated Writing course.  UG  LE  Lecture  

Fall 2020  DS7960  7960  MDS5 Capstone Project  DS  Data Science  1  In DS 7960 students will apply the concepts from their formal graduate coursework to current, practical problems relevant to the field. Unlike a Master’s thesis, the capstone project does not necessarily require an original, unique contribution to the state of the art. However, the project should require demonstration of graduate level mastery over a substantial body of concepts in the field. Projects may include (but are not limited to) implementation and/or robust testing of software or hardware artifacts relevant to the field, replication of previous research results or conduct of novel research, collection, curation and analysis of real-world or simulation data of value to the research community, or authoring a comprehensive review of the state of the art in a specific research area.  GR  IS  Independent Study  

Fall 2020  BIO6240  6240  Disease Ecology and Evolution  BIO  Biology  3  The class will cover topics such as mathematical theory on host-pathogen interactions; empirical studies of human, wildlife, insect and plant host interactions; emerging infectious diseases; effects on host behavior; host-parasite co-evolution; multi-host and multi-pathogen systems; and anthropogenic effects on disease. The greatest depth of understanding has been achieved at the level of population interactions, specifically interactions between a host and a pathogen. The broader goal of the class is to provide a comprehensive and up-to-date understanding of the causes and consequences of infectious diseases at levels from individual organisms to the global.  GR  LE  Lecture  

Fall 2020  ENG9950  9950  TEFL Workshop  ENG  English  3  Intensive study of selected special topics or problems to meet the particular needs of participating students. Titles vary.  GR  LE  Lecture  

Fall 2020  ED56030  6030  Asmt Lrn Needs Aut  EDS  Education - Special Education  3  Explore how autism impacts classroom routines and learners. Examines educational environments and materials/strategies impacting regulatory needs of students including sensory and functional behavior assessments. Targets self-regulation, executive function, functional communication and emotional awareness strategies.  UG  LL  Lecture/Lab Combination  

Fall 2020  EES2550  2550  Earth History  EES  Earth & Environmental Sciences  4  Comprehensive treatment of the earth's past as interpreted through the study of rocks and fossils. Basic concepts include geologic time and age dating, and the physical, chemical, and organic evolution during geologic time periods. The history of plate movements and mountain building events, especially in North America. Three hours lecture, two hours lab.<br> Department Managed Prerequisite(s): Undergraduate level EES 2510 Minimum Grade of D-.<br>  UG  LE  Lecture  

Fall 2020  PL5250  5250  African Am Politics  PLS  Political Science  3  Explores what makes African American politics distinctive from American politics and the prerequisites for effective political and economic leadership in the black community. Major theme is notion of black power.  GR  LE  Lecture  

Fall 2020  PN4990  4990  Spec Prob in Physiology  PN  Physiology & Neuroscience  1  Exploration of potential careers in physiology. Studies may vary from working with instructor on an ongoing physiological research project to analysis of data obtained from completed research project.  UG  IS  Independent Study  

Fall 2020  MUS6010  6010  Intro Grad Studies-Music  MUS  Music  3  Methods of scholarly investigation in music history, theory, and education; music bibliography; emphasis on individual projects and reports.  GR  LE  Lecture  

Fall 2020  PHL5990  5990  Studies in Selected Subjects  PHL  Philosophy  3  Problems, approaches, and topics in the field of philosophy.  GR  LE  Lecture  

Fall 2020  ATR7100  7100  Essentials Athletic Training  ATR  Athletic Training  3  Fundamental acquisition of knowledge regarding the practice of athletic training. Foundations of conceptual overview will include promotion of professional responsibility and introductory skills required for clinical practice.  GR  LE  Lecture  

Fall 2020  ED5990  5990  Lang/Plan for Ltrns w/Dys  EDS  Education - Special Education  1  This course involves an in-depth understanding of how structural language and phonics impacts learners with dyslexia, phonics knowledge, and the use of research-supported instructional procedures and strategies in working with learners with dyslexia.  GR  LE  Lecture  

Fall 2020  STT7620  7620  Adv Topics Linear Models  STT  Statistics  3  The generalized linear model. Logistic and Poisson regression, multinomial responses, log-linear models and results or conduct of novel research, collection, curation and analysis of real-world or simulation data of value to the research community, or authoring a comprehensive review of the state of the art in a specific research area.  GR  IS  Independent Study  

Fall 2020  MUA1100  1100  Applied Music  MUA  Music: Applied Music  1  Applied music instruction is available to the general student, regardless of major. Section number designates applied area. Audition required. Half-hour lesson only. Enrollment limited. Department permission required.  UG  IS  Independent Study
Laboratory exercises related to the fundamental concepts of high-frequency power magnetic components will be covered in this course. Computer simulations of magnetic field, current density, and power loss density distributions due to skin and proximity effects in inductor and transformer winding conductors at high frequencies will be performed. Simulations of hysteresis and eddy current issues in magnetic cores will done. Evaluations of performance of integrated inductors will be performed.

The statistical methods suitable for analysis of data arising in biological and related studies. Estimation and hypothesis testing are reviewed. Methods include one and two sample tests, simple and multiple regression, and analysis of variance.

Prerequisite(s): Undergraduate level ART 3140 Minimum Grade of D

Fall 2020
EDR9020
8020
Strat Planning in Orgs
LDR Leadership
3
Study of organizational strategic planning theory and practices. Includes development of strategic plans for organizations.

Lecture
GR
Lab

Fall 2020
ENG2120
2120
Research and Argument
ENG English
3
Adapts principles introduced in ENG 1100 and equivalents to writing for professional audiences in the health sciences and lay readers. Stresses argument, research, and effective use of source materials. Students may use any of the following courses to satisfy the requirements of the Core, but only one may count: ENG 2100, ENG 2110, ENG 2120, ENG 2130, or 2140.

UG
LE
Lecture

Fall 2020
PSY9035
9035
Math Models of Cognition
PSY Psychology
2
1) Math & stats tools for models of cognition: random vars, prob density & dist funct’s & cond’d prob 2) Methods for comparing models. This will include BIC, AIC, & chi-square tests 3) Models of response selection inc. Ease choice & Gen 1 Context Model and Gen RT. Response Theory - Models of RT: Time series analysis & stochastic processes. Choice + RT models: Linear Ballistic Accumulator & various diffusion models. Systems Factorial Technology for modeling cog w/mult sources of info 4) Department Managed Prerequisite(s): Graduate level PSY 7010 Minimum Grade of D and Graduate level PSY 7050 Minimum Grade of D

GR
LE
Lecture

Fall 2020
MTH6130
6130
Modern Algebra II
MTH Mathematics
3
Examples and elementary properties of abstract algebraic structures: these include groups, rings, integral domains, and fields. Department Managed Prerequisite(s): Undergraduate level MTH 4510 Minimum Grade of D or Graduate level MTH 6510 Minimum Grade of D

GR
LE
Lecture

Fall 2020
EE7430L
Intensive studies of the period, major movements, and artists of the time. Department Managed Prerequisite(s): Undergraduate level ART 3140 Minimum Grade of D or Graduate level ART 3140 Minimum Grade of D

UG
LE
Seminar
Fall 2020  NUR2124C  2124C  Nur for Unlicensed HC Clinical  NUR  Nursing  0  Required clinical for NUR 2124. Integrated Writing course.

UG  CL  Clinical

Fall 2020  PHYS7540  7540  Geophysics  PHYS  Physics  3  The physics of the earth crust, and atmosphere. Applications of physical principles to such processes as fluid flow in the crust, friction with in the crust, measurements of crust structure, fluid flow in the atmosphere, interaction of the atmosphere with radiation, and weather.

GR  SE  Seminar

Fall 2020  URS6340  6340  Fundraising/Grant Write  URS  Urban Affairs  3  Examines the concepts and processes fundamental to fundraising and grant writing. Explores tools, techniques and skills needed to raise funds and write grant proposals.

GR  LE  Lecture

Fall 2020  PLS6770  6770  International Organizational  PLS  Political Science  3  Examines the competing theoretical perspectives on international organization and analyzes the structure, functions, and the evolving role of key international organizations—IOs & NGOs—in global governance; also explores their pathologies and prospects for reform.

GR  LE  Lecture

Fall 2020  AFS6990  6990  Special Topics  AFS  Afr./Afri Amst Studies  3  Selected topics relevant to historical and current issues in African and African American Studies.

GR  LE  Lecture

Fall 2020  EPS4570  4570  Job & Behav Management IS  EPS  Education - Special Education  3  Prepares intervention specialists and other professionals to meet the instructional and behavioral management demands particular to working with individuals with exceptionalities, including those with severe emotional disturbance. Fifteen hours field experience required.

UG  LE  Lecture

Fall 2020  ECE3700  3700  Writing Methods & Mat  ECE  Education - Early Childhood  4  Study of emerging writing in early childhood and the methods and materials needed to facilitate oral and written communication.

UG  LE  Lecture

Fall 2020  DAN3010  3010  Ballet III  DAN  Dance  3  Vocabulary, techniques, and theory of advanced ballet. Emphasis on body alignment and flexibility.

UG  ST  Studio

Fall 2020  MUS3290  3290  Choral Music Ed Math I  MUS  Music  1  This course is designed to enable the choral music education student to be successful as a teacher/conductor at all levels, with a primary focus on the elementary and middle school choral music setting.

UG  LE  Lecture

Fall 2020  MTH7520  7520  Algebra II  MTH  Mathematics  4  Rings and modules: Noetherian rings and modules, Artinian rings and modules, and Wedderburn-Artin structure theory. Field theory—simple extensions, Galois theory, solvability by radicals, cyclotomy, finite fields, and Wedderburn's theorem.<b> Department Managed Prerequisite(s): Graduate level MTH 7510 Minimum Grade of D or higher.</b>

GR  LE  Lecture

Fall 2020  UHD2010  2010  Studies in Humanities  UH  University Honors  3  Explores the humanities comparatively, stressing similarities and differences in themes, methods, materials, theoretical constructs, and problems. Focuses on such topics as humanity and freedom or the city and the individual. Integrated Writing course.

UG  SE  Seminar

Fall 2020  MUE2700  2700  Univ Symphony Orchestra  MUE  Music: Ensembles  1  Performs orchestral music of all styles and periods.

UG  LL  Lecture/Lab Combination

Fall 2020  FAS3110  3110  Agriculture Marketing  FAS  Food and Agricultural Systems  3  Marketing of grain and livestock along with the products derived from them. Fundamentals and practical applications on marketing agricultural commodities. Topics include future, basis, commodity trading, and marketing strategies.

UG  LL  Lecture/Lab Combination

Fall 2020  FR5810  5810  Applied Elem Fr Instr  FR  French  1  Graduate students assist FR 1010 or FR 1020 course instructors in conducting French classes. Taught in French.<b> Department Managed Prerequisite(s): Graduate level FR 5100 Minimum Grade of D or higher.</b>

GR  IN  Internship

Fall 2020  SPN6320  6320  Sem in Spanish-Amer Lit  SPN  Spanish  3  Readings and reports in the novel, poetry, and drama of selected Spanish-American authors. Representative works of Borges, Garcia Marquez, Rulfo, Paz, Vargas Llosa, Sanchez, and others.

GR  SE  Seminar

Fall 2020  PHY7200  7200  Many-Body Physics  PHY  Physics  3  Consideration of many body theory in Physics including phase space evolution, Liouville's theorem, Galois theory, solvability by radicals, cyclotomy, finite fields, and Wedderburn's theorem.<b> Department Managed Prerequisite(s): Graduate level MTH 7510 Minimum Grade of D or higher.</b>

GR  LE  Lecture

Fall 2020  BMB4990  4990  Spec Problems in Biochem  BMB  Biochem & Molecular Biology  1  Current problems in Biochemistry and Molecular Biology as assigned by BMB faculty members with approval of the Chair.

GR  IS  Independent Study

Fall 2020  BIO3350L  3350L  Basic Cell Culture Tech Lab  BIO  Biology  0  Required laboratory for BIO 3350.

UG  LB  Lab

Fall 2020  LEP0220  0220  Writing Workshop Level 2  LEP  LEAP  0  Writing workshop (revision, editing and lab) for low-intermediate/intermediate ESL students. This course has a fee that is non-refundable once the term begins.

UG  LL  Lecture/Lab Combination

Fall 2020  KHE1670A  1670A  Swimming: Intermediate  KHE  Kinesiology & Health  1  Intermediate level of skills and knowledge in Swimming: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.

UG  LB  Lab

Fall 2020  PLS4390  4390  Bioethics and Law  PLS  Political Science  3  Legal implications of new biological technologies, particularly mind and behavior control, genetic engineering, birth and death control, and organ transplantation.

UG  LE  Lecture

Fall 2020  EGR2940  2940  Internship I  EGR  Engineering  1  First internship course. Students are supervised via weekly seminars and regular feedback from employers.<b> Department Managed Prerequisite(s): Undergraduate level EGR 1900 Minimum Grade of D or higher.</b>

UG  IN  Internship

Fall 2020  EDL7300  7300  Research Design Methods  EDL  Educational Leadership  3  Research method design for personal or professional goals; culminates in the analysis of existing research data.

GR  LE  Lecture

Fall 2020  PTX8200  8200  Communications in Science  PTX  Pharmacology/Toxicology  3  A crash course in bringing clarity, plain language and fun to scientific communications.

GR  LE  Lecture

Fall 2020  CNL6200  6200  Clin Pathology in Counsel  CNL  Counseling  3  Introduces students in human services to basic psychopathology, factors influencing the behavior of individuals and methods a counselor may use in observing, analyzing and improving attitudes and behavior.

GR  LE  Lecture

Fall 2020  SLI2990  2990  Skill Development in SLI  SLI  Sign Language Interpreting  1  Reinforcement of basic interpreting skills, either expressively or receptively. Enables students to acquire the skills and confidence necessary for success in upper level Sign Language Interpreting courses. Credits are not applicable as SLI program electives.

UG  IS  Independent Study

Fall 2020  ECE4400  4400  Acous Methods in ECE  ECE  Education - Early Childhood  3  Varying assessment techniques and strategies, both formal and informal, utilized in early childhood education. Various forms of assessments used to assess young students' learning in order to plan and implement effective lessons.

UG  LE  Lecture

Fall 2020  EE4000  4000  Linear Systems II  EE  Electrical Engineering  3  Discrete time signals and systems theory, the z-transform theory, input/output relationships, discrete Fourier transform, IIR and FIR filter design, and sampling.

UG  LE  Lecture

Fall 2020  MUS4840  4840  Medieval & Renaissance  MUS  Music  3  Study of music and critical analysis of representative works from major composers of Medieval and Renaissance music.

UG  LE  Lecture
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<th>Course Code</th>
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<td>PLS4310</td>
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<td>BME4440</td>
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</table>
Fall 2020 4800L  Special Topics in EE Lab  Electrical Engineering  Special topics in electrical engineering lab.  UG  LB  Lab
Fall 2020 204840  Biogeography  Biology  Introduction to the factors affecting the distribution of plants and animals.  UG  LE  Lecture
Fall 2020 TH1060  Music Theory for Actors  Theatre  Introduce basics of rhythm, melody, sight-reading, and musical theatre piano in a group class.  UG  LL  Lecture/Lab
Fall 2020 7315 Ergonomic Engineering  Biomedical Sciences  Advanced applications from a variety of bioengineering subfields are identified and defined with respect to their importance in the practice of human factors engineering.  GR  LE  Lecture
Fall 2020 KCH700A  Tai Chi  Kinesiology & Health  1 Fundamental skills and knowledge of Tai Chi. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020 BIO6450  Amazon Expedition  BIO  Biology  This course has two stages. In the first stage, we meet weekly in a classroom setting. Class will consist of mini-lectures, discussion of assigned readings, and field activities. In the second stage, we travel to the Peruvian Amazon, where you will see primary and secondary rainforest, tropical rivers, and wildlife.  GR  LL  Lecture/Lab
Fall 2020 FIN2210  Financial Management I  FIN  Finance  Introduce basic concepts, principles, and analytical techniques of financial management. Topics include financial planning and analysis, risk and return, time value of money, cost of capital, capital budgeting, and capital structure.  UG  LE  Lecture
Fall 2020 NUR4420  Cri Care Across Lifespan  NUR  Nursing  1 Focuses on critical reasoning in the care of individuals across the lifespan experiencing acute physiological crisis. Integrates concepts from previous courses with concepts of critical care nursing in a variety of clinical settings.  UG  LE  Lecture
Fall 2020 CS3260  CS Numerical Methods  Computer Science  3 Numerical methods for the sciences using modern programming languages. Solution of linear and nonlinear equations, symmetric matrix eigenvalue problems, interpolation, and least squares. Initial value and boundary value problems for representative systems governed by ordinary and partial differential equations are also solved numerically. Department Managed Prerequisite(s): Undergraduate level CS 1140 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D and Undergraduate level CEG 2170 Minimum Grade of D or Undergraduate level ME 1020 Minimum Grade of D and (Undergraduate level MTH 2350 Minimum Grade of D or Undergraduate level MTH 2350 Minimum Grade of D or Undergraduate level MTH 2530 Minimum Grade of D)  UG  LE  Lecture
Fall 2020 ISG7500  Spec Studies in Gifted Ed  Intervention Specialist  1 Independent Study in a selected area of intervention specialist gifted education  GR  IN  Internship
Fall 2020 CHM4020L  Environmental Chemistry Lab  CHM  Chemistry  0 Required laboratory for CHM 4020.  UG  LB  Lab
Fall 2020 MTH2530  Elementary Linear Alg  Mathematics  3 Matrices and their operations, linear systems of equations, Gaussian elimination, determinants, geometry of Euclidean space, vector spaces and subspaces, linear independence, basis, dimension and rank, orthogonality and the Gram-Schmidt process, linear transformations, eigenvalues and eigenvectors, and diagonalization.  UG  LE  Lecture
Fall 2020 ISE4711L  Optimization Methods Lab  Industrial & Systems Engr  0 Required laboratory for ISE 4711.  UG  LB  Lab
Fall 2020 ENG6770  ESL: Pre-K-12  English  3 Focuses on ESL education in the U.S. and Ohio. Examines historical and legal precedents. Emphasizes components necessary for successful programs, including curricula, assessment, classroom dynamics, and parental involvement. Department Managed Prerequisite(s): Undergraduate level ENG 3400 Minimum Grade of D or Undergraduate level ENG 4710 Minimum Grade of D or Graduate level ENG 4710 Minimum Grade of D  UG  LE  Lecture
Fall 2020 TH3280  Decorative Style: Ages  Theatre  3 Development of dominant characteristics of the history of architecture, furniture, and ornamental design and how they relate to abstract elements of taste, design, composition, and color.  UG  LE  Lecture
Fall 2020 CEG7380  Cloud Computing  Computer Engineering  3 Students will learn the major concepts in cloud computing and large-scale data intensive parallel processing. They will learn to use existing cloud computing platforms (e.g., Amazon EC2) to solve large-scale data intensive problems. They will also learn to program with large-scale parallel processing methods (e.g., mapreduce). Department Managed Prerequisite(s): Undergraduate level CS 5100 Minimum Grade of D or Undergraduate level CEG 6530 Minimum Grade of D or Undergraduate level CEG 7380 Minimum Grade of D or Undergraduate level CEG 7380 Minimum Grade of D  GR  LE  Lecture
Fall 2020 CHM4680  Experimental Nanoscience  Chemistry  3 Laboratory experiments include fabrication of nanoparticles such as metal nanoparticles and graphene nanoplatelets; characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses and computational modeling of nanoscale physical phenomena.  UG  PKG  Combination
Fall 2020 MUE2900  University Chorus  Music: Ensembles  1 Development of choral and vocal skills. Choral literature from a wide range of historical and compositional styles. No audition required.  UG  LL  Lecture/Lab
Fall 2020 DAN4040  Dance  Dance  3 Advanced group classes applying Ballet, Jazz and Modern Dance techniques to Musical Theatre Dance.  UG  ST  Studio
Fall 2020 CRT1030  Corr Management  Corrections  3 Trends and developments in modern correctional management.  UG  LE  Lecture
Fall 2020 HST7800  Adv Probs Archival Work  History  3 Theories and concepts associated with appraisal and acquisition, arrangement and description, reference, and preservation of archival materials. Includes practical experience in processing and preserving an archival collection.  GR  LE  Lecture
Fall 2020 URS3540  Public Administration  Urban Affairs  1 Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. PBR provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.  UG  LE  Lecture
Fall 2020 BMS6630  Prin Biomedical Research  Biomedical Sciences  3 Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. PBR provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.  UG  LE  Lecture
Fall 2020 URS9840  Urban Affairs  3 Nature and scope of public administration, administrative law, and public interest in the administrative process.  UG  LE  Lecture
Fall 2020 BMS9560  Laboratory Rotation I  Biomedical Sciences  1 Independent study designed to develop proficiency in technology, instrumentation, research design, and data analysis in an area of concentration (advanced curriculum) different from a student's area of specialization.  GR  LB  Lab
Fall 2020 HPR2120  Adapted Phys Education  Health Phy Educ & Recreation  3 Introduction to sport, leisure and physical education for persons with special needs across school, community or clinical based programs.  UG  LL  Lecture/Lab
Fall 2020 EES3250  Climate Change  Earth & Environmental Sciences  3 Temperature and precipitation patterns over tens to millions of years. Factors studied include air pollution, orbital and solar variation, and plate tectonics. Nature of evidence for previous climatic conditions and the bases for predictions of future climate change.  UG  LE  Lecture
Fall 2020
MI4310  4310  Virology  MI  Microbiology & Immunology  3  Intrinsic properties of viruses that cause human disease and their interaction with cells, multiplication, genetics, and tumor induction.  UG  LE  Lecture
Fall 2020  LEP5950  0590  English for EMBA  LEP  LEAP  0  English for EMBA is designed especially for students in the College of Business Executive MBA Program. The course is intended to improve students four core competencies (reading, writing, speaking, listening), as well as broaden their knowledge of American culture and skills for daily life, business practices, and etiquette.  UG  LE  Lecture
Fall 2020  MLB4010  4010  Topics in Med Lab Sci  MLB  Medical Laboratory Science  0.5  Advanced topics in medical laboratory science of current interest. Topics vary.  UG  LL  Lecture/Lab Combination
Fall 2020  ECO5700  5700  Personal Finance Ed Teach  ECO  Center for Economic Educ.  2  This course is designed to help teachers with little economic and financial literacy education discover resources and techniques available to teach children in grades 6-12. Topics include security, decision making, budgeting, banking, credit, investing, and insurance. This course has a fee that is non-refundable once the term begins.  GR  LL  Lecture/Lab Combination
Fall 2020  MGT4260  4260  Staffing  MGT  Management  3  Coverage of the staffing process. Topics include human resource planning, recruitment, selection, measurement in selection, legal issues in staffing, job analysis, decision making, and retention management.  UG  LE  Lecture
Fall 2020  ED7903  7903  Instruct Practicis in Literacy  ED  Education  1  Centers on the effective implementation of various literacy instructional practices, the evidence behind the practices and their practical application in PK-12 classrooms.  GR  SE  Seminar
Fall 2020  NUR7122  7122  Pathphys-Child-Adol  NUR  Nursing  3  This course presents focuses on the advanced study of the physiologic body systems of children/adolescents and pathologic conditions common in children/adolescents. Emphasis is on knowledge for the provision of advanced nursing care for acute and chronic conditions of childhood as well as care related to disease prevention and health promotion.  GR  LE  Lecture
Fall 2020  STT1680  6660  Ind Read Stat and Prob  STT  Statistics  1  Independent reading in statistics and probability.  GR  IS  Independent Study
Fall 2020  URS4240  4240  Public Labor Relations  URS  Urban Affairs  3  Examines collective bargaining, the negotiation process, impasse resolution, and contract and grievance administration in local government.  UG  LE  Lecture
Fall 2020  SOC5220  5220  Juvenile Delinquency  SOC  Sociology  3  Problems of definition and treatment of delinquency; preparation for further study and work with delinquents.  GR  LE  Lecture
Fall 2020  EE6560L  6560L  Intro Robotics Lab  EE  Electrical Engineering  1  Laboratory supporting EE 6560. Students will experience hands on learning in lab environment.  GR  LE  Lab
Fall 2020  EES4610  4610  Near-Surface Geophysics  EES  Earth & Environmental Sciences  3  Electrical and geophysical methods most used for near-surface studies, including ground penetrating radar, resistivity, and electromagnetics. Focus on data acquisition methods, data processing and analysis, as well as report preparation.  UG  LL  Lecture/Lab Combination
Fall 2020  ED7070  7070  Math Inst Grades 4-6  ED  Education  3  Curriculum and materials for teaching middle level mathematics pertinent to the Ohio's New Learning Standards with emphasis on content, developmentally appropriate pedagogy, curriculum and materials suitable for teaching fourth, fifth and sixth grade mathematics education.  GR  LE  Lecture
Fall 2020  ART4730  4730  Landscape Sculpture  ART  Art  3  Development of personal concepts and aesthetic expression in landscape sculpture. Emphasis on individualized approach to sculptural problems in nature. This course has a fee that is non-refundable once the term begins.  GR  LB  Lab
Fall 2020  DAN3990  3990  Studies Selected Subject Comb  DAN  Dance  1  Problems, approaches, and topics in the field of dance. Topics vary.  UG  LL  Lecture/Lab Combination
Fall 2020  SPN6310  6310  Sem in Spanish Lit  SPN  Spanish  3  Intensive study of selected topics in peninsular literature. Background lectures, oral reports, and discussions. Title(s) vary.  GR  SE  Seminar
Fall 2020  MLB4111  4111  Orientation MLS Lab  MLB  Medical Laboratory Science  0.5  Application of lab safety, universal precautions, specimen collection, quality assurance, phlebotomy, and other techniques fundamental to medical laboratory.  GR  LE  Lab
Fall 2020  DAN3220  3220  Jazz/Theatre Dance III  DAN  Dance  2  Diversified styles and techniques of jazz/musical theatre dancing. Emphasis on continued development of intricate rhythms, sophisticated syncopation, complex coordination, musicality, and variation of style. Focus on increasing body strength, flexibility, and kinesthetic awareness in the jazz idiom.  GR  LL  Lecture/Lab Combination
Fall 2020  EDL8740  8740  Sch Finance & Bus Mgt  EDL  Educational Leadership  3  Guiding principles for developing adequate financial programs; detailed studies of sources of local, state, and federal revenue, and procedures for management of school funds with reference to budgeting, accounting, and auditing.  GR  LE  Lecture
Fall 2020  PSY5920  5920  Behavioral Neurosci II  PSY  Psychology  3  Learning and memory, reinforcement systems, ingestive behavior, sensory and motor systems, psychopharmacology, and addictive processes.  GR  LE  Lecture
Fall 2020  SW4870  4870  SW Field Seminar I  SW  Social Work  3  Faculty-field liaison utilizes individual and group feedback to assist students in applying generalist social work practice knowledge while planning, implementing, and processing activities at their practicum sites. Integrated Writing course.  GR  SE  Seminar
Fall 2020  LA1010  1010  Intro to Liberal Arts  LA  Liberal Arts  1  Overview of program and career opportunities. Includes strategies for achieving academic success through time management, communication skills, note taking, test study, test taking, and enrichment opportunities.  GR  LE  Lecture
Fall 2020  CS1181  1181  Computer Science II  CS  Computer Science  4  Advanced concepts of computer programming. Use of data structures and tools that facilitate programming. Integrated Writing course.  GR  LE  Lecture
Fall 2020  PLS4080  4080  Radically Black Thought  PLS  Political Science  3  Examines radical black thought and philosophy from a Pan-Africanist perspective, focusing primarily on the 20th century. Integrated Writing course.  GR  LE  Lecture
Fall 2020  MKT7500  7500  Marketing Res & Analysis  MKT  Marketing  3  Course is aimed at the manager who is ultimate user of research and who is responsible for determining the scope and direction of research activities. The course will focus on both qualitative and quantitative aspects of marketing research and how managers use the results to address marketing problems.  GR  LE  Lecture
Fall 2020  ART4070  4070  Studies in Printmaking  ART  Art  3  Provides opportunities to explore problems and approaches to printmaking and may include cross-media and interdisciplinary studies. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture
Fall 2020  CS7600  7600  Trust Networks  CS  Computer Science  3  This course will introduce the fundamental concepts relevant to trust and security, and explore trust management issues in the context of interpersonal, sensor, and social networks.  GR  LE  Lecture
Fall 2020  IB4820  4820  Int'l Business Abroad  IB  International Business  3  Short or long term study abroad course led by a Wright State professor. Pre-departure orientation sessions, on-site lectures, and cultural connections. Target language development. Post-travel project.  UG  IS  Independent Study

Fall 2020  CS3970  3970  Independent Study  CS  Computer Science  1  Independent study in computer science.  UG  IS  Independent Study

Fall 2020  ENG2050  2050  African-American Lit  ENG  English  3  Focuses on the oral and written African-American literary tradition in a variety of genres from the 18th century to the present. Integrated Writing course.  UG  LE  Lecture

Fall 2020  ED7500  7500  Literacy Assess and Eval  ED  Education  3  Explore various literacy assessments to administer, analyze, and interpret the results of the assessment tools to enhance specific and targeted reading and writing instruction for K-12 learners.  GR  LE  Lecture

Fall 2020  ED3611  6110  SS Content Stands IS  EDS  Education - Special Education  3  Introduction to Ohio Department of Education K through 12th grade social studies content standards. Addresses social studies knowledge, pedagogy, and PRAXIS exam expectations.  GR  LE  Lecture

Fall 2020  ME4620  4620  Mech and Mat Test Lab  ME  Mechanical and Materials Engineering  2  Introduces experimental methods needed to perform mechanical testing and the impact of microstructure on the mechanical properties of materials. Formal lab reports. (GR) Department Managed Prerequisite(s): Undergraduate level ME 2500 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of D and Undergraduate level ME 3600 Minimum Grade of D/>30

Fall 2020  SPN3550  3550  SPN Serv Learning Abroad  SPN  Spanish  3  Students engage in an international service learning project in teaching, translation or interpreting in a Hispanic country. Prerequisite: must be enrolled in a Wright State sponsored Ambassador Program to a Spanish-speaking country, such as Mexico, Puerto Rico, Spain. (GR) Department Managed Prerequisite(s): Undergraduate level SPN 2020 Minimum Grade of D/>30

Fall 2020  FR3500  3500  French Ambassador Prog  FR  French  3  Professor-led study abroad program in a French speaking country, such as France, Canada (Québec or Acadia), a Francophone Caribbean or African country. Taught in French. (GR) Department Managed Prerequisite(s): Undergraduate level FR 2020 Minimum Grade of D/>30

Fall 2020  TH3190  3190  Stage Lighting II  TH  Theatre  3  Theory and practice of lighting the stage for various styles of productions. Emphasis on concept development, collaboration and script interpretation. Includes projects in stage electrics.  UG  LL  Lecture/Lab Combination

Fall 2020  EES6300  6300  Environ Apps of GIS  EES  Earth & Environmental Sciences  4  Study of the concepts, terminology, data models, and analytical functions of Geographic Information System; availability and processing of digital data; application of GIS as a mapping tool; spatial analysis of environmental and geologic problems. ESRI/ArcGIS is used for hands-on exercises and an independent mapping project with comprehensive coverage. Three hours lecture and two hours lab are combined.  GR  LL  Lecture/Lab Combination

Fall 2020  ED6630  6630  Intro Asst Tech Aug Comm  EDS  Education - Special Education  3  Assessment, use, and application of adaptive technology for persons with exceptionalities in all educational settings. Etiology, problems and needs of non-speaking individuals. Hands-on experiences required with adaptive/augmentive aids/devices.  GR  LE  Lecture

Fall 2020  PN4100  4100  Human Physiology  PN  Physiology & Neuroscience  4  An overview of human/mammalian organ physiology. Fundamental mechanisms and the experimental basis for current understanding is emphasized. Prerequisite: Introductory biology, chemistry, physics, or permission of instructor.  GR  LE  Lecture

Fall 2020  FR3250  3250  Business French  FR  French  3  An introduction to the language and practices of business French with insight into France's place in the global economy. Taught in French. (GR) Department Managed Prerequisite(s): Undergraduate level FR 2020 Minimum Grade of D or AP French Language 4/>30

Fall 2020  IB4770  4770  Indep Study/Int'l Bus  IB  International Business  1  Individualized program of study, agreed to between sponsoring faculty member and student and approved by the department chair. Minimum of 10 hours per week for each credit hour registered. A minimum total of 450 hours of work is required for 3 credits of technical elective credit.  UG  IS  Independent Study

Fall 2020  SL3000  3000  Ethics & Laws in Interp  SLI  Sign Language Interpreting  3  Ethical standards of practice, legal rights and federal legislation impacting deaf and interpreters. Critical thinking, self-awareness, emotional intelligence, and application of the Code of Professional Conduct will be emphasized.  UG  LE  Lecture

Fall 2020  DAI1120  1120  Modern Dance I  DAN  Dance  3  Modern dance technique class for pre-professional dancers. Emphasis on helping students become strong, versatile dancers by expanding their body's range of motion while emphasizing alignment, coordination, strength and flexibility of the torso.  UG  LL  Lecture/Lab Combination

Fall 2020  PSY6610  6610  Human-Comp Interface Cap  PSY  Psychology  3  Communication intensive seminar integrating knowledge on human-computer interface issues.  GR  SE  Seminar

Fall 2020  ISE3940  3940  Indus & Sys Eng Intrm I  ISE  Industrial & Systems Engineering  1  Industrial and systems engineering internship course. Students are supervised via weekly seminars and regular feedback from employer. Must have completed all of the 2nd year courses as listed in the program guide. Minimum of 10 hours per week for each credit hour registered. A minimum total of 450 hours of work is required for 3 credits of technical elective credit.  UG  IN  Internship

Fall 2020  EES3620  3620  General Environ Health  EES  Earth & Environmental Sciences  3  Relationship of physical/chemical/biotic environments to design and operation of systems and procedures employed to maintain and promote healthful human environments. Emphasizes food sanitation, solid waste, institutional housing/recreational sanitation, and vector control.  UG  LE  Lecture

Fall 2020  PSY4270  4270  Cop Neuro Capstone  PSY  Psychology  3  Current topics and controversies in cognitive neuroscience. How different research traditions are integrated to inform and advance present-day understanding of the relationship between brain and behavior. Integrated Writing course.  UG  LE  Lecture

Fall 2020  ED6990  6990  AYA/MA Capstone Project  ED  Education  1  Report on, dissemination of, or application of new learning based on completion of reflective investigation and progressive problem-solving effort to improve the quality of education in 7-12th grade educational environment. (GR) Department Managed Prerequisite(s): Undergraduate level ED 2500 Minimum Grade of D or Undergraduate level ED 3550 Minimum Grade of D/>30

Fall 2020  IT2550  2550  Emerging Software Tech  IT  Information Technology  3  Core functionality of ArcGIS Desktop software: how to make maps, carry out spatial analysis, and build and edit spatial databases in the context of realistic projects. Some of the tasks covered include: symbolizing and labeling maps, classifying data, querying maps, analyzing spatial relationships, setting map projections, building spatial databases, editing data, geocoding addresses and making map layouts.  UG  LL  Lecture/Lab Combination

Fall 2020  CHI4030  4030  Multimedia Chinese  CHI  Chinese  3  Advanced Chinese language learning by exploration of cultural products in a variety of media and authentic online materials. Taught in Chinese. (GR) Department Managed Prerequisite(s): Undergraduate level CHI 3020 Minimum Grade of D or Undergraduate level CHI 3110 Minimum Grade of D or Undergraduate level CHI 3210 Minimum Grade of D/>30  UG  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Type</th>
<th>Description</th>
<th>Grade</th>
<th>Effort</th>
<th>Credits</th>
<th>Hours</th>
<th>Notes</th>
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<tbody>
<tr>
<td>EE5000</td>
<td>5000</td>
<td>Solid State EE Materials</td>
<td>EE</td>
<td>EE Electrical Engineering 3 Focuses on the essential physical parameters of solids that make devices so important: elastic and thin-film properties (i.e. MEMS devices); electromechanical, piezoelectric and ferroelectric properties, paramagnetism and ferromagnetism; electron transport properties (metals and semiconductors); electronic bandgap and bandgap-engineering; and the essential role of crystallinity in enhancing desired parameters (i.e. dielectric function in ferroelectrics or electron mobility in semiconductors).</td>
<td>LE</td>
<td>Lecture</td>
<td>Lecture</td>
<td>Lab</td>
<td>Combination</td>
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<tr>
<td>EE4500</td>
<td>4500</td>
<td>Carbonate Sediment-Petrology</td>
<td>EES</td>
<td>EES Earth &amp; Environmental Sciences 4 Origin, composition, and diagenesis of ancient and modern carbonate rocks. Macroscopic and microscopic identification of rock constituents. Survey of depositional models for modern carbonate environments, emphasizing Floridian and Bahamian carbonate faunas.</td>
<td>UL</td>
<td>Lecture</td>
<td>Lecture</td>
<td>Lab</td>
<td>Combination</td>
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<tr>
<td>ED7230</td>
<td>7230</td>
<td>SLM Resources for VA</td>
<td>EDT</td>
<td>EDT Educational Technology 3 Developing school library collections for your adults. Introduction to young adult literature including major authors and illustrators. Selecting materials in different formats such as multimedia, e-books, and reference databases.</td>
<td>UL</td>
<td>Lecture</td>
<td>Lecture</td>
<td>Lab</td>
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<tr>
<td>PLs6900</td>
<td>6900</td>
<td>Independent Reading</td>
<td>PLs</td>
<td>Political Science 1 Supervised individual readings on select topics.</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>ML3330</td>
<td>3330</td>
<td>Russian Lit in Translation</td>
<td>ML</td>
<td>Modern Languages 3 Selected works of foreign literature studied in English translation. Russian literature.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>PSY2410</td>
<td>2410</td>
<td>Childhood &amp; Adolescence</td>
<td>PSY</td>
<td>Psychology 3 Child and adolescent development, based on theories and research in developmental psychology. Emotional, cognitive, and social development, as well as the development of the self, identity, and relationships.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>PHY110L</td>
<td>110L</td>
<td>Physics Lab II</td>
<td>PHY</td>
<td>Physics 1 Introductory-level laboratory problems.</td>
<td>UL</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>ED7240</td>
<td>7240</td>
<td>Teach 21st Century Skill</td>
<td>EDT</td>
<td>Educational Technology 4 Teaching 21st century skills, collaborating with classroom teachers, standards alignment, and evidence-based practice. Includes field experience.</td>
<td>UL</td>
<td>LL</td>
<td>Lecture</td>
<td>Lab</td>
<td>Combination</td>
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<tr>
<td>EED3400</td>
<td>3400</td>
<td>Classroom Management P-5</td>
<td>EED</td>
<td>Elementary Education P-5 3 Classroom management strategies with an emphasis on PBIS to facilitate learning and promote social well-being in P-5 grade classrooms. Integrated Writing course.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>PLs4450</td>
<td>4450</td>
<td>Adv-Criminal Investg</td>
<td>PLs</td>
<td>Political Science 3 Criminal investigative techniques including forensics, evidence, interviews, and interrogation as applied to specific types of crimes. Integrated Writing course.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ED7820</td>
<td>7820</td>
<td>Literacy Inquiry Project</td>
<td>ED</td>
<td>Education 1 Continuation of the literacy research from ED 7800. Candidates will complete the following components: data collection, transcription, analysis, dissemination, limitations, and implications for the Master’s Research Project. This course involves supervision.</td>
<td>LE</td>
<td>LE</td>
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<tr>
<td>URS4340</td>
<td>4340</td>
<td>Fundraising/Grantwriting</td>
<td>URS</td>
<td>Urban Affairs 3 Examines the concepts and processes fundamental to fundraising and grant writing. Exploration of tools, techniques and skills needed to raise funds and write grant proposals.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>CS1180</td>
<td>3180</td>
<td>Comparative Languages</td>
<td>CS</td>
<td>Computer Science 3 Fundamental concepts and paradigms underlying modern programming languages to enable better appreciation, comparison and evaluation of languages. Covers an object-oriented language, a functional language, a logic language, and a multi-paradigm scripting language. Basics of interpreters and compilers are explored through programming assignments.</td>
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<td>LE</td>
<td>Lecture</td>
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<tr>
<td>WS4740</td>
<td>4740</td>
<td>Child Welfare II</td>
<td>WS</td>
<td>Social Work 3 Addresses the developmental and permanence needs of children in the child welfare system.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>WGS3050</td>
<td>3050</td>
<td>Topics Sexuality Studies</td>
<td>WGS</td>
<td>Women, Gender, and Sexuality 3 Issues, approaches, and topics in the field of sexuality studies. Titles and topics vary.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>CNL1650</td>
<td>8650</td>
<td>Practicum</td>
<td>CNL</td>
<td>Counseling 3 Provides supervised experience for counselor trainees providing psychotherapy, counseling, guidance, instruction, and assessment to individuals and groups to resolve behavioral, substance, educational/vocational/career, marital/family/relational, and personal/social problems and diagnose and treat mental and emotional/behavioral disorders.</td>
<td>PR</td>
<td>PR</td>
<td>Practicum</td>
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<tr>
<td>EDL9970</td>
<td>9970</td>
<td>Dist Lvl Lic Prog Exit</td>
<td>EDL</td>
<td>Educational Leadership 1 Focusing on understanding current district-level leadership concepts, topics, and issues within the context of the school organization.</td>
<td>SE</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>IT2180</td>
<td>2180</td>
<td>Found of Electronic Prod</td>
<td>IT</td>
<td>Information Technology 3 Streamlined processes for delivering electronic content. Topics include Macros vs PCs, color depth, advantages and disadvantages of types of printers, magnetic and optical storage systems.</td>
<td>UL</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>SOC620</td>
<td>6320</td>
<td>Neighborhoods &amp; Comms</td>
<td>SOC</td>
<td>Sociology 3 Theoretical, methodological, and substantive issues related to neighborhoods and communities in social life. Emphasis on residential differentiation, segregation, neighborhood change, and neighborhood effects.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ME6330</td>
<td>6330</td>
<td>Compressible Fluid Flow</td>
<td>ME</td>
<td>Mechanical and Materials Eng 3 Fundamentals of gas flow in the subsonic to supersonic flow regimes. Wave propagation in compressible medium, one-dimensional isentropic flow with area change, frictional effects, heat transfer effects and two-dimensional waves.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TH3540</td>
<td>3540</td>
<td>Speech II</td>
<td>TH</td>
<td>Theatre 2 Techniques in voice and speech to strengthen and expand the student's instrument and skills. Applications made to specified acting texts.</td>
<td>UL</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM3460</td>
<td>3460</td>
<td>Concepts Chem II MCE</td>
<td>CHM</td>
<td>Chemistry 4 Periodic table, chemical reactions, thermochemistry, organic and nuclear chemistry with everyday examples. Inquiry-based activities including historical and societal perspectives. For Middle Childhood Majors pursuing science concentration. Based on National Science Education Standards. Integrated lecture/lab.</td>
<td>UL</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPN3110</td>
<td>1110</td>
<td>Spanish Conversation I</td>
<td>SPN</td>
<td>Spanish 3 Practice in the oral use of Spanish emphasizing the culture of the Hispanic world.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATH4000</td>
<td>4000</td>
<td>Political Anthropology</td>
<td>ATH</td>
<td>Anthropology 3 Focuses on the anthropological study of political life cross-culturally. Presents evolutionary and historical approaches to political institutions, and classic anthropological analyses of political institutions. Investigates recent developments in the study of politics as a contemporary problem. Integrated Writing course.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GER5820</td>
<td>5820</td>
<td>Applied Elem Ger Instr</td>
<td>GER</td>
<td>German 1 Observe elementary classes and practice teaching mini-lessons.</td>
<td>IS</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY6300</td>
<td>6300</td>
<td>Abnormal Psych Cap</td>
<td>PSY</td>
<td>Psychology 3 Writing and oral communication intensive seminar integrating knowledge on select topics within Abnormal Psychology. Topic will vary.</td>
<td>SE</td>
<td>SE</td>
<td>Seminar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020  URS4210  4210  Pubic Leadership Change  URS  Urban Affairs  3  Examines leadership role of the public and nonprofit administrators in formulating programs, policies, and service delivery options. Explores topics such as managing internal and external environments, improving productivity and effectiveness, policy/program creation, and the dynamics of change.  UG  LE  Lecture

Fall 2020  BHE6510  6510  Comp Appl in BHE  BHE  Industrial & Hum Fac Engr  3  Provides students with an overview for designing and implementing ISE-focused solutions using R. Of interest are applications of operations research, specifically of probabilities, inventory models, simulation and optimization, forecasting, data analytics, and decision support system (GUI/HTML interface).<br/>b) Department Managed Prerequisite(s): Undergraduate level ISE 3540 Minimum Grade of D and (Undergraduate level ISE 4711 Minimum Grade of D or Graduate level ISE 6711 Minimum Grade of C)<br/>GR  LE  Lecture

Fall 2020  BIO3450  3450  Concepts Bio I ECE/MCE  BIO  Biology  4  Introduction to biological concepts for Elementary and Middle School Education Majors. Structured around the National and Ohio State Science Standards and taught from an inquiry perspective. Examines approaches that attempt to teach science as a knowledge building practice, i.e. by engaging in scientific investigations and participating in scientific practices such as designing an investigation, explanation, and working with scientific models.  UG  LE  Lecture

Fall 2020  AES4330  4330  Prep for Active Duty II  AES  Aerospace Studies  3  Overview of the complex social and political issues facing the military profession.  UG  LE  Lecture

Fall 2020  PSY4210  4210  Info Processing Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on information processing skills such as selective attention, pattern recognition, reading, problem solving, and human performance. Integrated Writing course.  UG  SE  Seminar

Fall 2020  MUS2420  2420  Comp NW Culture: Music  MUS  Music  3  Introduction to the music and cultural diversity and uniqueness of selected areas of the globe. Study of indigenous folk music and instruments of Asia, India, Africa, North America, Central and Southeast Europe. Credit will not be given for MUS 2420 Comparative Nonwestern Cultures: Music for students who have already successfully completed CST 2420 Comparative Nonwestern Cultures: Music. Integrated Writing course.  UG  LE  Lecture

Fall 2020  PTX8010  8010  Clinical Research: Roles & Res  PTX  Pharmacology/Toxicology  3  This required course offers a solid foundation in clinical research with the goal to protect the welfare of research participants, improve global health and provide foundational knowledge and skills the student will need to become leaders in the field, whether working in academia, government, industry or other areas. Specifically, this course will prepare the student to pass the standardized ACRP CRA Certification Exam to become a Certified Clinical Research Associate with an emphasis on clinical trials related to drug protocol development, drug approval process, phases of clinical research investigation, FDA rules and regulations, as well as business management, budgeting and marketing for clinical trials.  GR  LE  Lecture

Fall 2020  NUR7802  7802  Prim Care Adults  NUR  Nursing  5  Provides the nurse practitioner with knowledge and skills needed to deliver primary health care to young adults, adults, and older adults through adolescence in multiple settings. Emphasizes the application of problem identification and management, health promotion, and client & family counseling. Supervised lab and clinical experiences provide the opportunity to apply classroom and core content.  GR  LE  Lecture

Fall 2020  PPH4990  4990  Undergraduate Research  PPH  Population & Public Health  1  Undergraduate biomedical research seminar. Students will participate in hands-on research as well as reading primary literature, presenting scientific talks, and exploring the social and ethical implications of scientific research.  UG  LL  Lecture/Lab Combination

Fall 2020  ART2430  2430  Non-Western Art  ART  Art  3  Geographical and chronological survey of the art of non-western cultures. Develops and deepens skills of looking and visual thinking. Credit will not be given for ART 2430 to students who have already successfully completed CST 2430, Integrated Writing course.  UG  LE  Lecture

Fall 2020  TH4130  4130  Acting Professionally  TH  Theatre  3  Students assemble audition pieces, interview skills, financial plans, resumes, headshots, web-sites, and information about various markets, unions, and employment opportunities, in preparation for a professional career in acting.  UG  LL  Lecture/Lab Combination

Fall 2020  M&I8990  8990  Microbiology Research  M&I  Microbiology & Immunology  2  Supervised thesis research.  GR  LB  Lab

Fall 2020  WGS4800  4800  Selected Subjects  WGS  Women, Gender, and Sexuality  3  Issues, approaches, and topics in women's studies. Topics vary. Integrated Writing course.<br/>b) Department Managed Prerequisite(s): Undergraduate level WGS 3600 Minimum Grade of C<br/>GR  LE  Lecture

Fall 2020  M&I6990  6990  Special Problems in MI  M&I  Microbiology & Immunology  2  Study of the physiological and biochemical processes unique to microorganisms and the host response to microbes.  GR  IS  Independent Study

Fall 2020  ECE3650  3650  ECE Phonics & Word Study  ECE  Education - Early Childhood  3  An in-depth analysis of how children learn phonics and word study, and use this knowledge while reading and writing.  UG  LE  Lecture

Fall 2020  EES4270  4270  Process Geomorphology  EES  Earth & Environmental Sciences  3  Study of the processes that create and modify landforms. Classifications of landforms and what they reveal of past geologic processes and climates. Integrated Writing course. <br/>b) Department Managed Prerequisite(s): Undergraduate level EES 1050 Minimum Grade of D or Undergraduate level EES 2510 Minimum Grade of D or Undergraduate level EES 2550 Minimum Grade of D  <br/>GR  LE  Lecture

Fall 2020  MTH7320  7320  Real Analysis II  MTH  Mathematics  4  Hilbert spaces, Riesz representation theorem, orthonormal bases. Banach spaces, dual spaces, weak convergence. Bounded linear operators, adjoint operators, compact operators. Applications.<br/>b) Department Managed Prerequisite(s): Graduate level MTH 7310 Minimum Grade of D<br/>GR  LE  Lecture

Fall 2020  HED8580  8580  Foundation Teach Health  HED  Health Education  3  Prepares the pre-service teacher for the classroom by presenting concepts and skills of health education. Explore Coordinated School Health Programs, the national Health Education Standards, the Centers for Disease Control's Risk Behaviors for Teens, health literacy, and basics of lesson planning and unit planning. Students will examine a plethora of health education resources.  UG  LE  Lecture

Fall 2020  EES4200L  4200L  Micropalaeontology Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 4200. Integrated Writing course.  UG  LB  Lab

Fall 2020  BHE7320  7320  HF in Virtual Env  BHE  Industrial & Hum Fac Engr  3  Techniques for effectively incorporating human factors considerations in the design and development of virtual environments. Includes coverage of input devices, head-mounted displays, health-related issues and measurement of human performance.<br/>b) Department Managed Prerequisite(s): Undergraduate level CEG 2170 Minimum Grade of D or Undergraduate level ISE 3540 Minimum Grade of D  <br/>GR  LE  Lecture
Fall 2020  
AFS2000  
2000  
African American Experience  
AFS  
Afr / Afr Amer Studies  
3  
A historical and methodological analysis of both African histories and cultures and the history of the diaspora struggles of persons of African descent to create a life and distinct culture among world civilizations. Integrated Writing course.  
UG  
LE  
Lecture  

Fall 2020  
CS1161  
1161  
Intro to Comp Prog II  
CS  
Computer Science  
4  
Introduction to advanced programming concepts and techniques. Emphasis is on object-oriented programming and graphical user interfaces. <br> Course Manager Prereq(s): (Undergraduate level CS 1160 Minimum Grade of C or Undergraduate level CEG 2170 Minimum Grade of C or Undergraduate level CS 1180 Minimum Grade of C) and (Undergraduate level DEV 0970 Minimum Grade of P or Undergraduate level CS 1200 Minimum Grade of D or WSU Math Placement 04.StartsWith”),  
UG  
LL  
Lecture/Lab Combination  

Fall 2020  
EP4000  
6000  
Semiconductor Physics  
EP  
Engineering Physics  
3  
Study of crystal structure, electronic band structure, charge carriers in semiconductors, generation, recombination, and motion of charge carriers, electrical and optical properties. Covers structure and characteristics of p-n junctions, bipolar transistors, field effect transistors, and other selected devices. Design and computer modeling of devices.  
GR  
GE  
Lecture  

Fall 2020  
MUS4480  
4480  
Music Since 1900  
MUS  
Music  
3  
Study of music and critical analysis of representative works from major composers of music written after 1900.  
UG  
LE  
Lecture  

Fall 2020  
CS5970  
5970  
Independent Study in CS  
CS  
Computer Science  
1  
Independent study in computer science  
GR  
IS  
Independent Study  

Fall 2020  
CS7850  
7850  
Privacy Assurance Computing  
CS  
Computer Science  
3  
This course will introduce the fundamental problems with data privacy and security in large scale data intensive distributed computing, and the existing techniques used to protect data privacy and security. Students will be exposed to the latest research problems in this area.  
GR  
LE  
Lecture  

Fall 2020  
PSY2620  
2620  
Animal Intelligence  
PSY  
Psychology  
3  
Introduces the adaptive function of animal behavior, from the simple to the complex. Associative learning, discrimination learning, category formation, short-term and long-term memory, navigation, social learning, and communication and language.  
UG  
LE  
Lecture  

Fall 2020  
PSC7950  
7950  
Sac Sys & App S/W D&D  
PSC  
Prof Psychology Cyber Security  
3  
Introduces implementing software security with software engineering best practices, fundamental tenets of security doctrine, and the incorporation of security throughout the software development lifecycle. Provides guidance for thorough and objective risk analyses and testing.  
GR  
LE  
Lecture  

Fall 2020  
EES1070  
1070  
Sustainable Earth  
EES  
Earth & Environmental Sciences  
4  
Earth and environmental process focusing on issues related to the mutual interaction of human society and the planet. Both human and environmental sustainability will be emphasized by exploring current topics.  
UG  
LE  
Lecture  

Fall 2020  
ISE212  
3212  
Human Biomechanics II  
ISE  
Industrial & Systems Engr  
3  
Linear and angular kinematics and kinetics applied to human performance. Other topics include human systems analysis with work-energy methods and injury biomechanics utilizing impulse-momentum methods.  
UG  
LE  
Lecture  

Fall 2020  
PSY8710  
8710  
Psychology of Leadership  
PSY  
Psychology  
2  
Designed to explore the theories, research, and practice of leadership in work organizations from a psychological perspective. <br> Course Manager Prereq(s): Graduate level PSY 8620 Minimum Grade of D.StartsWith”),  
GR  
SE  
Seminar  

Fall 2020  
ART5670  
5670  
Printmaking: Intaglio  
ART  
Art  
3  
Development of personalized concepts and individual aesthetic expression in printmaking with an emphasis in the area of intaglio. This course has a fee that is non-refundable once the term begins.  
GR  
LB  
Lab  

Fall 2020  
REL5110  
5110  
Judaism: Faith & People  
REL  
Religion  
3  
Examination of Judaism as a religious faith, and people, with special reference to formative historical, social, ethnic, and cultural factors.  
GR  
LE  
Lecture  

Fall 2020  
EES410  
4110  
Phys Geol Nat Hist Ohio  
EES  
Earth & Environmental Sciences  
2  
This is a field trip course examining the landforms, processes, and deposits associated with Pleistocene continental glaciation, as well as subsequent post-glacial terrain modification. The course involves 1 day of lecture/lab and 1 day of thematic field trips.  
GR  
LE  
Lecture/Lab Combination  

Fall 2020  
SOC670  
6670  
Disability, Power, Politics, Priv  
SOC  
Sociology  
3  
Examines disability from a sociological perspective and provides critical engagement with contemporary issues and debates in disability politics.  
GR  
LE  
Lecture  

Fall 2020  
DMV1010  
1010  
DMV Registration  
DMV  
DMV Consortium  
0.5  
  
UG  
LE  
Lecture  

Fall 2020  
REL1370  
3740  
Prophets and History  
REL  
Religion  
3  
Historical context of Biblical prophecies.  
GR  
LE  
Lecture  

Fall 2020  
PHY4560  
4560  
Int. Phy Sci & Math II  
PHY  
Physics  
4  
Integration of physics and mathematics, fulfilling science and math standards, physics education issues, inquiry teaching practices, and assessment. Applications of these to electricity, magnetism, waves, and optics.  
UG  
LL  
Lecture/Lab Combination  

Fall 2020  
AP5030  
3030  
Services Marketing  
APS  
Applied Studies  
3  
This course is designed for students who may be interested in service industries and will address the distinct needs and problems of service firms and help students gain an understanding of service marketing issues.  
GR  
LE  
Lecture  

Fall 2020  
JPN1020  
1020  
Beginning Japanese II  
JPN  
Japanese  
3  
Communicative introduction to Japanese language and culture. Study of the vocabulary and structure of the Japanese language; practice in speaking, listening, reading, and writing. Taught in Japanese. <br> Course Manager Prereq(s): Department Managed Prereq(s): Undergraduate level JPN 1010 Minimum Grade of C.StartsWith”),  
UG  
LE  
Lecture  

Fall 2020  
IMM8750  
8750  
Neuroscience & Physiology  
BMS  
Biomedical Sciences  
3  
In-depth coverage of cellular neuroscience with an emphasis on physiological concepts. Subjects include nervous system development, generation of ion gradients, ionic basis of the action potential, synaptic transmission and ion channels.  
GR  
LE  
Lecture  

Fall 2020  
ES7990  
7990  
Indep Topics & Research  
ES  
Environmental Sciences  
1  
Research and problems designed for specific needs and talents of the students.  
GR  
IS  
Independent Study  

Fall 2020  
ENG4440  
4440  
Studies Ethnic/Reg Lit  
ENG  
English  
3  
Intensive study of literature in English from different regions of the Americas or reflecting the experiences of different ethnic groups. Intended to develop an understanding of race, region, and ethnicity as important both to literature and to its critical appreciation. Integrated Writing course.  
UG  
LE  
Lecture  

Fall 2020  
CTE4000  
4000  
Pre-Serv Wksp for CTE  
CTE  
Career and Technical Education  
6  
For beginning CTE teachers with occupational experience and limited or no formal training in an education setting. Explores pedagogy, knowledge and skills required for CTE educators.  
UG  
LE  
Lecture  

Fall 2020  
EDS6550  
6550  
Sp Ed Res & Anluy  
EDS  
Education - Special Education  
6  
Familiarizes intervention specialist graduate students with WSU and Internet research resources, APA writing style, professional standards and quantitative and qualitative research methods and analysis.  
GR  
LE  
Lecture  

Fall 2020  
BIO6090  
6090  
Intro to R w/App in Bio  
BIO  
Biology  
3  
The goal of this class is to learn programming biostatistics in the statistical software package R.  
GR  
LE  
Lecture  

Fall 2020  
MITG3110  
3110  
Bus Ethics & Ldr Dev  
MITG  
Management  
3  
Development of competencies in business ethics and leadership. Integrated Writing course.  
UG  
LE  
Lecture  

Fall 2020  
STT4160  
4160  
Short Term Actuarial Math I  
STT  
Statistics  
3  
Introduction to a frequency, severity, and aggregate models that are useful for short-term actuarial applications. The course will teach the steps involved in the statistical modeling process and how to apply these steps in an actuarial context. Tools will be introduced for the calibration and evaluation of the models. Topics covered include Severity, Frequency and Aggregate models, Coverage Modifications, Risk Measures and Parametric models. This course covers the SOA syllabus for exam STAM when combined with STT 4170.  
UG  
LE  
Lecture
Fall 2020  
CHM6980  
9890  
Chemistry for Educators  
CHM  
Chemistry  
1 
Selected topics in chemical education. Directed readings or one-time offerings of topics related to the teaching of chemistry at various levels using different pedagogical approaches. May include summer workshops or institutes. 
GR  
IS  
Independent Study  

Fall 2020  
NUR6805  
8005  
Project Seminar  
NUR  
Nursing  
3 
This course provides the knowledge and skills to plan the DNP project proposal for systematic implementation and evaluation of outcomes built on a synthesis of the literature. An analytical approach to implementing a practice change at multiple organizational systems will be explored. The seminar will include a variety of activities related to role of the DNP as leader and innovator for practice change. 
GR  
LE  
Lecture  

Fall 2020  
EE4170L  
4170L  
Digital Cont Sys Lab  
EE  
Electrical Engineering  
1 
Application and testing of control systems theory with electromechanical systems. ( prereq: Undergraduate level EE 4130 Minimum Grade of D and Undergraduate level EE 4330L Minimum Grade of D+ or -)  
UG  
LB  
Lab  

Fall 2020  
BME6460  
6460  
Nanomed Fundamentals  
BME  
Biomedical Engineering  
3 
The purpose of this introductory course is to provide an overview of the distinctive features of nanotechnology and their application to bio-medical problems. The course contrasts nano-medicine to bring out the unique properties of nanotechnology in nanomedicine. Cutting-edge nanotechnological technologies for sensing and imaging, drug delivery, and therapeutic applications will be addressed. ( prereq: Undergraduate level BME 4440 Minimum Grade of C or Graduate level BME 6440 Minimum Grade of C) and ( Undergraduate level ANT 2120 Minimum Grade of D or Graduate level ANT 3120 Minimum Grade of D or Graduate level ANT 3120 Minimum Grade of D+ or -)  
GR  
LE  
Lecture  

Fall 2020  
CNL7250  
7250  
Col Mental Hlth Pract/Sur  
CNL  
Counseling  
3 
Acquaints students with preventive mental health, advocacy roles, legal and ethical issues, and interdisciplinary approaches to community mental health. 
GR  
LE  
Lecture  

Fall 2020  
EDS170  
5070  
MCE Gen Math Instruction  
ED  
Education  
3 
Methods for teaching middle level mathematics pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula and materials suitable for teaching fourth through sixth grade mathematics education. 
GR  
LE  
Lecture  

Fall 2020  
PSN950  
9550  
Directed Study  
PSI  
Professional Psychology  
1 
Individualized course of readings completed under faculty supervision. 
GR  
IS  
Independent Study  

Fall 2020  
EDL9910  
9910  
Dist Lec/Lic Pr: Entry  
EDL  
Educational Leadership  
1 
Candidates investigate various contemporary educational leadership topics and issues: content knowledge, pedagogical content knowledge, diversity, technology, professionalism, emotional intelligence, and/or others. 
GR  
LE  
Seminar  

Fall 2020  
SW6220  
6220  
SW Practicum II  
SW  
Social Work  
0 
Approaches social work macro practice from an advanced generalist perspective as a way to engage organizations and communities in the larger society. Includes application, purposes and objectives of social work practice with organizations and communities with diverse populations and at-risk groups. Teaches skills to advance social and economic justice with clients in communities and organizations. ( prereq: Undergraduate level SW 6210 Minimum Grade of D+ or -)  
GR  
LE  
Lecture  

Fall 2020  
ATH6030  
6030  
Urban Anthropology  
ATH  
Anthropology  
3 
Explores the nature of cities, confronting basic questions, such as, to what extent does the urbane experience a different kind of culture from his/her rural counterpart?and what factors have contributed to the growth and expansion of urbanism over the last few centuries? 
GR  
LE  
Lecture  

Fall 2020  
PLS4580  
4580  
Latin American Politics  
PLS  
Political Science  
3 
Politics in Central America, South America and the Caribbean, focusing on political and economic development. Considers major debates in comparative politics on a variety of issues, including democracy and democratization. Integrated Writing course. 
UG  
LE  
Lecture  

Fall 2020  
MBA5400  
5400  
Survey of Law  
MBA  
MBA  
1.5 
Course offers MBA students without prior course work in business law a survey of topics related to domestic and international business law with the focus on practical applications of basic legal principles. The course offers direct experience with the tools of legal analysis in order to provide students with the fundamentals for making well-grounded business decisions. Subject areas include contracts, torts, constitutional, employment law, corporations, LLCs and other aspects of commercial law. 
GR  
LE  
Lecture  

Fall 2020  
COM4251  
4251  
Race, Gender, and Health  
COM  
Communication  
3 
Students will learn about the integral nature of communication in health including: the role communication plays in shaping individuals' social and cultural expectations and beliefs about health and illness, and the ways in which this information may influence how it is we understand and communicate about race, gender, and health. 
UG  
LE  
Lecture  

Fall 2020  
IB05450  
5450  
Concepts in Bio 1 for ED  
BIO  
Biology  
3.5 
Introduction to biological concepts for Elementary and Middle School education majors. Structured around the National and Ohio State Science Standards and taught from an inquiry perspective. We examine approaches that attempt to teach science as a knowledge-building practice, i.e., by engaging in scientific investigations and participating in scientific practices such as designing an investigation, explanation, and working with scientific models. 
UG  
LL  
Lecture/Lab Combination  

Fall 2020  
ED6730  
6730  
AYA: Int Soc St C&M II  
ED  
Education  
3 
Provides developing professional educators instruction in current trends and issues in adolescence and young adult social studies. 
GR  
LE  
Lecture  

Fall 2020  
ED66530  
6530  
Learnw w/Exception  
EDS  
Education - Special Education  
3 
Cultural, social, emotional, and learning needs of students with exceptionalities. Teaching strategies, typical development and atypical development. Causes and effects of mild to intensive exceptionalities. Ten hours of field experience required. 
GR  
LE  
Lecture  

Fall 2020  
EDL9720  
9720  
Ideas in Education  
EDL  
Educational Leadership  
3 
Draws on original sources and examines the impact of both professional and non-professional educational thinkers on American education. The impact of social trends on education will also be examined. 
GR  
LE  
Lecture  

Fall 2020  
SW4620  
4620  
Social Gerontology I  
SW  
Social Work  
3 
Study of the social aspects of aging, the needs of the aging population, and society's response to those needs. A life course perspective that incorporates cultural, economic, historical, and structural contexts provides the framework for examining aging-related issues, particularly in regards to the impact on quality of life for older adults. 
UG  
LE  
Lecture  

Fall 2020  
ATH3800  
3800  
Special Topics/ Methods  
ATH  
Anthropology  
1 
Selected topics concerning the training of undergraduate majors in current methodologies used in cultural, biological or archaeological anthropology. Topics vary. 
UG  
LE  
Lecture  

Fall 2020  
SPN1010  
1010  
Beginning Spanish I  
SPN  
Spanish  
3 
Communicative introduction to Spanish language and Hispanic cultures. Study of the vocabulary and structure of the Spanish language; practice in speaking, listening, reading, and writing. Taught in Spanish. 
UG  
LE  
Lecture  

Fall 2020  
ASL320  
3200  
Deaf History in America  
ASL  
American Sign Language  
3 
The multi-faceted history of the American Deaf community, exploring the deaf experience through time. 
UG  
LE  
Lecture  

Fall 2020  
KHN340  
1340  
Judo  
KHN  
Kinesiology & Health  
1 
Fundamental skills and knowledge of Judo. Competency-based approach. Course may accommodate disabled students when appropriate. 
UG  
LB  
Lab
Fall 2020  LEP0250  0250  List & Speak - Level 2  LEP  LEAP  0  Listening, speaking and pronunciation for low-intermediate/intermediate ESL students. This course has a fee that is non-refundable once the term begins.

Fall 2020  EES1990  1990  Directed Studies  EES  Earth & Environmental Sciences  0.5  Course topics designed for undergraduate students at the freshman or sophomore level. May be taken for a letter grade or pass/unsatisfactory.

Fall 2020  SWG735  6735  Child Welfare II  SW  Social Work  3  Addresses the developmental and permanence needs of children in the child welfare system.

Fall 2020  PSSY310  5130  Methods in Clinical Psych  PSY  Psychology  4  This course provides students with a critical knowledge of qualitative research methods in psychology and with competencies necessary to carry out this kind of research in conjunction with quantitative methods and independently in its own right. The course includes a focus on the history of use, the philosophical foundations, and the statistical and qualitative research methods in psychology.

Fall 2020  HST4100  4100  Early Modern Europe  HST  History  3  Examines selected problems in European history from the late Middle Ages through the Counter-Reformation. Topics may include the Renaissance and Reformation. Topics vary. Integrated Writing course.

Fall 2020  CHM6350  6350  Instrumental Analysis  CHM  Chemistry  3  Introduction to the theory and practice of modern chemical instrumentation. Topics include elementary electronics, spectrophotometry, atomic absorption, electrochemical techniques, chromatography, and other instrumental techniques.

Fall 2020  CEG1900  1900  Internship  CEG  Computer Engineering  1  Students earn general elective credit for a future internship experience by working in a major related job that provides meaningful work experience to enhance technical skills and promote professional development. Students must complete all of the 2nd year courses as listed in the program model. Minimum of 10 hours per week for each credit hour registered.


Fall 2020  CEG4230  4230  intro Robotics  CEG  Computer Engineering  3  (Also listed as CEG 6540 and ME 6560)  An introduction to the mathematics of robots. Topics covered include coordinate systems and transformations, manipulator kinematics and inverse kinematics, Jacobians, dynamic and trajectory planning.

Fall 2020  ASM7072  7072  Epidemiology  ASM  Aerospace Medicine  4  An introduction to epidemiological studies, descriptive and clinical epidemiology, experimental and observational investigations, prospective and retrospective studies, mortality and morbidity measurements, life tables, chronic and infectious diseases, with emphasis on preventive medicine and public health.


Fall 2020  ARA2010  2010  Intermediate Arabic I  ARA  Arabic  3  Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Department Managed Prerequisite(s): Undergraduate level ARA 1020 Minimum Grade of C or Pass.

Fall 2020  EC3280  3280  Socialist & Radical Econ  EC  Economics  3  Examines the economic theories of Karl Marx, including the labor theory of value, capital and surplus value, production under capitalism, the falling rate of profit, capitalist crisis and socialism. Marx's views are contrasted with neoclassical theory and the neo-Keynesian synthesis.

Fall 2020  KNIE2420  2420  Princ of Emergency Mgmt  KNH  Kinesiology & Health  3  Focuses on the philosophical and theoretical underpinnings of emergency management and the principles that define effective practice.

Fall 2020  PSY4070  4070  Honors Research Project  PSY  Psychology  1  Original problems for investigation leading to a psychology department honors thesis. Department Managed Prerequisite(s): Undergraduate level PSY 2100 Minimum Grade of C or Pass.

Fall 2020  EDS6990  6990  Teach Indiv with Exempt.  EDS  Education - Special Education  3  Historical and current legal, philosophical and education issues surrounding the definition, identification, causation/prevalence of specific exceptionalities, service delivery/placement options and multidisciplinary team process across education and community settings.


Fall 2020  MKT2500  2500  Principles of Marketing  MKT  Marketing  3  Studies promotion activities that direct the flow of goods and services from the producer to the consumer with consideration of the social, ethical, economic, legal, and international environments.

Fall 2020  ME2120  2120  Statics  ME  Mechanical and Materials Eng  3  Forces, resultants, components, equilibrium of particles, equilibrium of rigid bodies, centroids and centers of gravity, analysis of structures, friction, and moments of inertia. Department Managed Prerequisite(s): Undergraduate level EGR 1010 Minimum Grade of D and Undergraduate level PHY 2400 Minimum Grade of D and Undergraduate level ME 1040 Minimum Grade of D or Pass/unsatisfactory.

Fall 2020  RST2920  2920  Regional Studies: India  RST  Regional Studies  3  India's role in regional and global affairs and the impact of history, culture and politics in the development of India and South Asia. Integrated Writing course.

Fall 2020  PHY6450  6450  Integ Phy Sci & Math I  PHY  Physics  4  Integration of physics and mathematics, fulfilling science and math standards, physics education issues, inquiry teaching practices, and assessment. Application of these to science and math process skills, measurement, and properties of matter, kinematics, forces and energy transfers.

Fall 2020  PHL3120  3120  History of Ethics  PHL  Philosophy  3  Study of the development of ethical philosophy through a detailed investigation of such figures as Plato, Aristotle, Hobs, Butler, Hume, Kant, Mill, and Nietzsche. Integrated Writing course.

Fall 2020  ENG4950  4950  TEFL Workshop  ENG  English  3  Intensive study of selected special topics or problems to meet the particular needs of participating students. Titles vary. Department Managed Prerequisite(s): Undergraduate level ENG 2100 Minimum Grade of D or Pass/unsatisfactory.

Fall 2020  BIO4020  4020  Senior Seminar  BIO  Biology  1  Literature survey, discussion, and oral presentations of selected topics in the biological sciences. Minimum GPA of 2.25.

Fall 2020  BME4720  4720  Biomedical Optics  BME  Biomedical Engineering  3  Quantitative biomedical optics, principles and applications of light propagation in biological tissues, optical imaging contrasts, light transport models including photon diffusion in living tissue, optical devices for light-based diagnostics for cancer detection, brain function monitoring, light-based therapies as alternative treatment for cancer and brain diseases. Application of concepts in lab experiments. Presentation of translational research of optical methods and clinical applications.

Fall 2020  EDL7675  7675  Tchlr Ldr Capstone Exit  EDL  Educational Leadership  3  Focus on understanding current teacher leadership within the context of the school organization.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Instructor</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS6490</td>
<td>Isr Pol Gender Violence</td>
<td>4</td>
<td>Cross cultural examination of gender violence. Considers the range of violence, its sources, and solutions. Topics include domestic abuse, rape, female genital surgeries, prostitution, and reproductive rights.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>EDS6670</td>
<td>Collab for Inclusion</td>
<td>6</td>
<td>Co-teaching techniques with an emphasis on differentiation, as well as collaborative consultation and communication strategies to enhance instruction for diverse learners.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PLS6380</td>
<td>Environ Law &amp; Policy</td>
<td>3</td>
<td>Examines environmental law and policy and reviews the statutory framework pertaining to environmental impact statements, the regulation of air and water pollution, the disposal and cleanup of toxic wastes, and workplace safety.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PLS4910</td>
<td>Independent Research</td>
<td>4</td>
<td>Supervised individual research on selected topics. Minimum 3.0 grade point average. Integrated Writing course.</td>
<td>UG</td>
<td>IS</td>
</tr>
<tr>
<td>KHN1600B</td>
<td>Step Aerobics</td>
<td>1</td>
<td>Fundamental skills and knowledge of Step Aerobics. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>URS6490</td>
<td>Issues in Metro Dev.</td>
<td>3</td>
<td>Explores issues that impact metropolitan development as well as the impact of development. Topics include pollution, international development, housing and transportation.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>TH3200</td>
<td>Applied Theatre Tech I</td>
<td>3</td>
<td>Practical study in technical execution. Emphasis on daily operation of theatre production facilities and shops. Participation in all major department productions required.</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>ENG7990</td>
<td>Continuing Registration</td>
<td>1</td>
<td>Limited to students who have completed coursework toward the degree but who must maintain registered status, e.g. in any quarter prior to graduation in which the department is affording some service, such as advising toward and evaluating the graduate portfolio, reading a thesis, or giving advice on the thesis after completion of all other requirements of course work and research.</td>
<td>GR</td>
<td>IS</td>
</tr>
<tr>
<td>BBM3030</td>
<td>Research Ethics</td>
<td>3</td>
<td>Ethical dilemmas present in scientific research including discussion of various real-life scenarios.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>ETD7000</td>
<td>Workshop Ed Tech</td>
<td>0.5</td>
<td>Intensive, practical study in a selected area of educational or applied technology and library media. Titles vary.</td>
<td>GR</td>
<td>LL</td>
</tr>
<tr>
<td>HST3300</td>
<td>Survey African History</td>
<td>3</td>
<td>Survey of a sub-field or a specific topic in African history. Topics vary.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>PHY4830</td>
<td>Statistical Mechanics</td>
<td>3</td>
<td>Introduction to microscopic and macroscopic physical systems developed from concepts of statistical physics. Applications to classical and quantum systems. Theories of phase transitions, critical phenomena and fluctuations.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>AES3340</td>
<td>ICL Lab</td>
<td>1</td>
<td>Application of leadership/management concepts learned in Field Training and in previous Aerospace Studies courses and labs to assist in training the GMC cadets. Requires participation in two weekly physical training sessions.</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>ED6630</td>
<td>AYA: Soc Studies: C&amp;M I</td>
<td>3</td>
<td>Course focuses on principles, resources, technology, critical thinking skills, historiography, and social science research for adolescence social studies. This course will also focus on teaching in the multicultural classroom.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>FR4420</td>
<td>17th &amp; 20th Cent Theatre</td>
<td>3</td>
<td>Themes of destiny and divinity in 17th- and 20th-century French drama. Analysis of plays and their socio-historical context. Playswrites such as Corneille, Racine, Moliere, Giraudoux, Sartre, Beckett, and Ionesco. Taught in French. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>TH4450</td>
<td>Acting IV</td>
<td>3</td>
<td>Student actors are trained in approaches to a range of twentieth and twenty-first century texts, doing scenes and/or monologues from such playwrights as Albee, Shepard, Mamet, Ruhl, Beckett, LaBute, etc. Emphasis on contemporary acting texts and styles.</td>
<td>UG</td>
<td>LI</td>
</tr>
<tr>
<td>HST4210</td>
<td>British History</td>
<td>3</td>
<td>Examination particular periods of British history (e.g., modern Britain) or topics (e.g., British constitutional history). Topics vary. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>DAN3130</td>
<td>Intermediate Jazz I</td>
<td>1</td>
<td>First-year intermediate jazz dance technique. Emphasis on technical proficiency and versatility and the development of intricate rhythms, synchronization, coordination, musicianship, and variation of style. Focuses on increasing body strength, flexibility, and kinesthetic awareness.</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>HST4870</td>
<td>Special Topics in Hist</td>
<td>3</td>
<td>Examines special topics in the advanced study of history. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>PSY7040</td>
<td>Social Psychology</td>
<td>4</td>
<td>Theories and data on social behavior will be revisited. Topics will include attitude and attitude change, social perception, prejudice, and group decision-making. Additional applications will be discussed.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>SPN4710</td>
<td>Spanish As a World Lang</td>
<td>3</td>
<td>Linguistic and social history of the Spanish language. Language variation in Spanish, Latin America, United States, and other areas of the world where Spanish is spoken. Department Managed Prerequisite(s): (Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D) and (Undergraduate level SPN 3310 Minimum Grade of D or Undergraduate level SPN 3320 Minimum Grade of D or Undergraduate level SPN 3430 Minimum Grade of D or Undergraduate level SPN 3440 Minimum Grade of D).</td>
<td>UG</td>
<td>SE</td>
</tr>
<tr>
<td>DAN3110</td>
<td>Modern Dance III</td>
<td>3</td>
<td>Advanced modern technique class for pre-professional dancers. Principles and concepts of Horton technique with continued emphasis on flexibility, strength and coordination.</td>
<td>UG</td>
<td>ST</td>
</tr>
<tr>
<td>EDS4720</td>
<td>IS Internship Part I</td>
<td>1</td>
<td>Internship in the Intervention Specialist program for supervised field experience in inclusive setting while focusing on professionalism, student assessment, teaming, and collaboration.</td>
<td>GR</td>
<td>IN</td>
</tr>
<tr>
<td>EE4440L</td>
<td>Electronic Integ Lab</td>
<td>1</td>
<td>Hands-on experience with Electronic Integrated components, subsystems and systems. Department Managed Prerequisite(s): (Undergraduate level EE 3210 Minimum Grade of D and Undergraduate level EE 3310 Minimum Grade of D and Undergraduate level EE 3310L Minimum Grade of D).</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>EES2010</td>
<td>Hydrology Water Resource</td>
<td>3</td>
<td>Hydrology and the distribution and availability of water resources; natural and anthropogenic processes that influence water quantity and quality; water quality and contamination issues; water resources and water rights conflicts.</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>EDL7711</td>
<td>Ldsrch Schl Improvnt STEM</td>
<td>1</td>
<td>Develops strong base of understanding in organizational structure for skill building in leadership, communication, decision-making, and problem-solving. Educational renewal, sustainability leadership, political considerations, ethical behavior, professional development, and change processes included.</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>ENG4190</td>
<td>Internship in Literature</td>
<td>3</td>
<td>Supervised professional application of Literary Study skills in a workplace setting.</td>
<td>UG</td>
<td>IN</td>
</tr>
</tbody>
</table>
Fall 2020  
MIS3150  3150  Data and Info Mgmt  
MIS  Management Information Systems  3  Concepts, principles and data models of managing organizational data. Extensive experience in developing data models, applying relational database software, creating and using complex queries using Structured Query Language (SQL). Build custom multi-tier database applications using a web application language and a commercial database system.  
UG  LE  Lecture

Fall 2020  
EES2550L  2550L  Earth History Lab  
EES  Earth & Environmental Sciences  0  Required laboratory for EES 2550.  
UG  LB  Lab

Fall 2020  
TH3800  3800  History and Lit I  
TH  Theatre  3  Explores a variety of theatrical texts and pertinent history from early historical eras. Integrated Writing course.

UG  LE  Lecture

Fall 2020  
GEO2100  2100  Physical Geography  
GEO  Geography  3  Human natural environment at regional and global scales including the intersections of climate, soils, vegetation, landscapes, and people.

UG  LE  Lecture

Fall 2020  
FIN4120  4120  Fixed Income Securities  
FIN  Finance  3  Introduction to the valuation of fixed income securities and the management of fixed income investment portfolios.

UG  LE  Lecture

Fall 2020  
CS3250  3250  Comp Data Analysis  
CS  Computer Science  3  Introduction to the representation, manipulation, and analysis of large datasets from a user's perspective. Topics include data filtering, clustering, classification, and data mining. The basic principles behind such technique are first introduced and then numerical experiments demonstrate their applicability. Standard software and programming languages are used.</b> (Department Managed Prerequisite(s)): (Undergraduate level MTH 2240 Minimum Grade of D or Undergraduate level MTH 2280 Minimum Grade of D or Undergraduate level MTH 2360 Minimum Grade of D or Undergraduate level MTH 1160 Minimum Grade of D or Undergraduate level MTH 1180 Minimum Grade of D or Undergraduate level MTH 2170 Minimum Grade of D) and (Undergraduate level STT 1600 Minimum Grade of D or Undergraduate level STT 3600 Minimum Grade of D or Undergraduate level BSE 2211 Minimum Grade of D or Undergraduate level EE 3260 Minimum Grade of D)

UG  LE  Lecture

Fall 2020  
MTH5330  5330  Partial Differential Eq  
MTH  Mathematics  3  Linear first order equations, method of characteristics. Classification of second order equations. Solution techniques for the heat equation, wave equation and Laplace's equation. Maximum principles. Green's functions and fundamental solutions. (Department Managed Prerequisite(s)): Undergraduate level MTH 2320 Minimum Grade of D and (Undergraduate level MTH 2330 Minimum Grade of D or Undergraduate level MTH 2350 Minimum Grade of D)

GR  LE  Lecture

Fall 2020  
DMV1020  5020  DMV Registration  
DMV  DMV Consortium  0.5  Focuses on adaptation to social, political, and educational change in the future of education. Strategic planning, systems theory, change theory and processes are explored in connection to forecasting potential economic, environmental, and demographic futures.

GR  LE  Lecture

Fall 2020  
EDL9410  9410  Planning Educ Futures  
EDL  Educational Leadership  3  Focuses on adaptation to social, political, and educational change in the future of education. Strategic planning, systems theory, change theory and processes are explored in connection to forecasting potential economic, environmental, and demographic futures.

GR  LE  Lecture

Fall 2020  
BMB4990  4990  Undergraduate Research  
BMB  Biochem & Molecular Biology  1  Biochemical and/or molecular biological research in a faculty member's laboratory.

UG  IS  Independent Study

Fall 2020  
CEG6422  6422  Secure Computing Pract  
CEG  Computer Engineering  3  This course describes computing practices that one should adopt to improve security in all computer work. It describes the use of cryptography, without getting into crypto algorithms, such as MD5, SHA1. Topics include secure deltion of files, secure wireless connections, covert channels, Steganography, Sandboxes, Zombie Machines, DDoS and Man-in-the-Middle Attacks. Lab work uses tools such as ssh, TrueCrypt, GnuPG, virtual box.<b> (Department Managed Prerequisite(s)): Undergraduate level CEG 6550 Minimum Grade of D or Graduate level CEG 6550 Minimum Grade of D)

GR  LE  Lecture

Fall 2020  
ME4220  4220  Mech Sys Md & Dgn  
ME  Mechanical and Materials Engineering  3  This course will teach students how to model complex mechanical systems as a set of simple, linear or nonlinear component models for the purpose of design. Students will be introduced to modern computational tools.<b> (Department Managed Prerequisite(s)): Undergraduate level ME 3210 Minimum Grade of D)

GR  LE  Lecture

Fall 2020  
EDL9300  9300  Practicum I: CIPD  
EDL  Educational Leadership  1  The practicum provides significant opportunities for candidates to synthesize and apply the knowledge and skills identified in the district-level standards-based, sustained, standards-based work in real settings.

GR  IN  Internship

Fall 2020  
MUS1210  1210  Music Listening  
MUS  Music  3  Listening skills and oral analysis through musical examples from a variety of periods and cultures. Principal styles, genres, and composers of Western music from the Middle Ages to the present.

UG  LE  Lecture

Fall 2020  
BOD4530  4530  Respiratory Physiology  
BIO  Biology  4  An in-depth exploration of oxygen transport for cellular respiration.

UG  LE  Lecture

Fall 2020  
ED1030  1030  Dev Peer Ment & Dbly  
ED  Education  2  Assist students with disabilities in becoming a peer mentor for incoming first-year students with disabilities.

UG  LE  Lecture

Fall 2020  
EDL7400  7400  Legal & Prof Issues  
EDL  Educational Leadership  1  The legal framework of compulsion in education, the civil liberties of teachers curriculum content, and academic freedom. Teachers rights, duties, and responsibilities to the education profession.

GR  LE  Lecture

Fall 2020  
EDT7210  7210  Org Data & Collections  
EDT  Educational Technology  3  Students learn to establish standards bibliographic description, access points, classification, subject description and MARC format for automated library systems. Develop strategies to efficiently locate online information.

GR  LL  Lecture/Lab

Fall 2020  
BIO1070L  1070L  Health and Disease Laboratory  
BIO  Biology  0  Required laboratory for BIO 1070.

UG  LB  Lab

Fall 2020  
ACC4230  4230  Auditing  
ACC  Accountability  3  Overview of financial, operational and compliance audits. Introduces key auditing concepts: materiality, risk assessment, audit objectives, evidence, internal control considerations, and computer assisted audit techniques. Integrated Writing course.

UG  LE  Lecture

Fall 2020  
PHL2500  2500  Professional Ethics  
PHL  Philosophy  3  Introduction to the theory and practice of professional ethics in its global, economic, environmental, and social context.

UG  LE  Lecture

Fall 2020  
ART4040  4040  Studies in Art History  
ART  Art  3  Problems and approaches to art and art history. Includes cross-period and interdisciplinary studies.

UG  LE  Lecture

Fall 2020  
CHM3120L  3120L  Quant Analysis Lab  
CHM  Chemistry  3  Experimental methods of analysis. Practical applications of lecture material presented in CHM 3120.

UG  LB  Lab

Fall 2020  
DOS9010  9010  History & Theory of Org  
DOS  Doctor Org Studies  3  Survey of the field of organizational studies for understanding of patterns in theoretical arguments and research approaches across multiple perspectives that continue to frame scholarship. Emphasize flexible forms of coordinated action taking place within, around, and among formal organizations.

GR  SE  Seminar

Fall 2020  
CHM6370L  6370L  Electrometallurgical Chem Lab  
CHM  Chemistry  0  Required laboratory for CHM 6370.

GR  LB  Lab

Fall 2020  
MUE2930  2930  University Men's Chord  
MUE  Music Ensembles  1  Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

UG  LL  Lecture/Lab Combination
Fall 2020  HST7110  7110  Seminar US since 1865  HST  History  3  Examines United States history since the Civil War. Topics vary and may include Reconstruction, the Progressive Era, and the rise of the United States as a world power.  GR  SE  Seminar

Fall 2020  PHY6500  6500  Electricity and Magnet  PHY  Physics  3  Fundamental laws of electricity and magnetism presented from the viewpoint of field theory. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation.  GR  LE  Lecture

Fall 2020  ED6475  6475  MA Intern Pl.I: Mhb CIS  ED  Education  1  Candidates, mentored by a Computer Information Science educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a K-12th grade setting applying pedagogical content knowledge from CIS methods courses.  GR  IN  Internship

Fall 2020  REL4100  4100  Seminar on Judaism  REL  Religion  3  Topics Vary. Integrated Writing course.  UG  SE  Seminar

Fall 2020  EE6190L  6190L  Intelligent Control Lab  EE  Electrical Engineering  1  Laboratory supporting EE 6190. Students will experience hands on learning in lab environment.  GR  LB  Lab

Fall 2020  RUS1010  1010  Beginning Russian I  RUS  Russian  3  Communicative introduction into Russian language and culture. Study of vocabulary and structure of the Russian language, practice in speaking, listening, reading, and writing. Taught in Russian.  GR  LE  Lecture

Fall 2020  FR2010  2010  Intermediate French I  FR  French  3  Grammar review, reading, and discussion of selected texts and film shorts, with practice in speaking and writing the language. Taught in French.  GR  LE  Lecture

Fall 2020  EES3170  3170  Coastal Processes  EES  Earth & Environmental Sciences  2  Introduction to the seashore and ocean system intended for educators. Topics include the origin of ocean basins, sediment, the chemistry and physics of water, tides, the biology of selected sub-environments and oceans, and the Earth system. The course is organized around a four day field trip and a pre and post trip class meeting.  GR  LL  Lecture/Lab Combination

Fall 2020  ED5050  5050  MCE Gen Science Instr  ED  Education  3  Methods for teaching middle level science pertinent to the Ohio Learning Standards with emphasis on content, developmentally appropriate pedagogy, curricula, and materials suitable for teaching through sixth grade science education.  GR  LE  Lecture

Fall 2020  CNL6260  6620  Prob Sta Behavior & Dev  CNL  Counseling  3  Considers physical, psychological, and personality development of students. The interrelationship of these factors and their effects on student functioning are also explored. The course also explores the impact of social learning on student behavior.  GR  LE  Lecture

Fall 2020  NUR7001  7001  Role Dev & Ldsip  NUR  Nursing  3  This course focuses on understanding and synthesizing concepts and theories that will facilitate professional role development and leadership in advanced nursing roles.  GR  LE  Lecture

Fall 2020  PSY4620  4620  Ergonomics Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on ergonomics. Integrated Writing course.  UG  SE  Seminar

Fall 2020  COM4710  4710  Topics in Comm  COM  Communication  3  Special topics in the various areas of speech communication.  UG  LE  Lecture

Fall 2020  PLSL4710  4710  International Law  PLSL  Political Science  3  Study of rules governing the conduct of international politics with emphasis on their relevance to current world problems.  GR  LE  Lecture

Fall 2020  MTH6240  6240  Coding Theory  MTH  Mathematics  3  An introduction to the essentials of error-correcting codes, including methods for efficient and accurate transfer of information. Perfect and related codes, linear and cyclic codes, BCH codes, Reed-Muller codes, Reed-Solomon codes, Self-dual codes, weight enumerators and bounds.  GR  LE  Lecture

Fall 2020  AES2220  2220  FTP Leadership Lab  AES  Aerospace Studies  0  Preparation for Field Training summer program. Training is cadet-led. Requires participation in two weekly physical training sessions.  GR  LB  Lab

Fall 2020  MBML4110  4110  Orientation Med Lab Sci  MBML  Medical Laboratory Science  1  Theory and application of lab safety, universal precautions, specimen collection, quality assurance, phlebotomy, and other techniques fundamental to medical laboratory.  GR  LE  Lecture

Fall 2020  CEG2900  2900  Spec Topics in Comp Egr  CEG  Computer Engineering  1  Special topics in Computer Engineering.  GR  LE  Lecture

Fall 2020  EE3450L  3450L  Electromagnetics Lab  EE  Electrical Engineering  1  Hands-on experience with electromagnetic devices, field measurements, and device characterization in a laboratory environment.  GR  LB  Lab

Fall 2020  GER5110  5110  German Conversation I  GER  German  3  Emphasis on the culture of the German-speaking world.  GR  LE  Lecture

Fall 2020  MTH7370  7370  Complex Analysis  MTH  Mathematics  4  Analytic functions, Cauchy-Riemman equations, Cauchy integral formula, Calculus of residues, Harmonic Functions. Taylor series, Laurent series, Riemann Mapping Theorems.  GR  LE  Lecture

Fall 2020  IID4360  4360  Sem Pub Health Ed  IID  Health Education  2  Students will share experiences while in their Practicum II, discuss skills needed in professional climates, prepare their resumes, practice interviewing, and review competencies in preparation for the Certified Health Education Specialist (CHES) exam.  GR  SE  Seminar

Fall 2020  EC4250  4250  Development of Ec Thought  EC  Economics  3  Historical development of economic thought and philosophies.  UG  LE  Lecture

Fall 2020  MTH3990  3990  Selected Topics in Math  MTH  Mathematics  1  Selected topics in mathematics.  UG  IS  Independent Study

Fall 2020  MUA1110  1110  Applied Music  MUA  Music: Applied Music  1  Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.  UG  IS  Independent Study

Fall 2020  KINH500  500  Scuba & Skin: Open Water  KINH  Kinesiology & Health  2  Fundamental skills and knowledge of Scuba & Skin: Open Water. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.  UG  LB  Lab

Fall 2020  PLS3750  3750  Human Rights in USA  PLS  Political Science  3  Examines controversies over human rights in the U.S. Considers contending definitions of human rights and debates over policy by focusing on a range of issues including immigration, pornography, gay rights, race relations, and poverty.  GR  LE  Lecture

Fall 2020  HST1200  1200  West & World since 1500  HST  History  3  Examination of the modern Western world emphasizing the resolutions in economics, politics, religion and other phenomena that have shaped the Western world in our time.  GR  LE  Lecture

Fall 2020  IBE7310  7310  Adv Ergon  IBE  Industrial & Hum Fac Engr  3  Design of workstations and hand-tools using physiology and biomechanics approach. Ergonomic analysis of assembly, machining and manual material handling operations. Practical solutions and real world case studies to improve productivity and reduce workers compensation costs.  GR  LE  Lecture
Fall 2020  PSI 8110  Cognitive Assessment  PSI  Professional Psychology  3  Presents basic intelligence, aptitude, and related assessment devices with clinical utility and theoretical underpinnings with adults, adolescents, and children.  GR  LE  Lecture

Fall 2020  PLS 6940  Special Topics  PLS  Political Science  3  Advanced study of a selected topic of contemporary political significance.  GR  LE  Lecture

Fall 2020  ECE 3210  ECE Field Experience I  ECE  Education - Early Childhood  1  Candidates, mentored by an early childhood educator, assist in the planning, organizing, delivering, and assessing of instruction in a 4-6 grad setting applying pedagogical content knowledge from early childhood methods courses.

Fall 2020  SOC 5750  Courts, Law, & Justice  SOC  Sociology  3  Critical examination of the processes, structure, and effects of the U.S. court system. Special attention will be given to issues of race, class, and other social factors that affect justice in society.  GR  LE  Lecture


Fall 2020  EE3540  Intro Electromagnetics  EE  Electrical Engineering  3  Electrostatics and magnetism; induced electro-motive force; Maxwell's equations and their physical interpretation and applications to transmission lines and antennas.  GR  LE  Lecture

Fall 2020  HST 3900  3900  Global Encounters  HST  History  3  Examination of the social, cultural, economic, religious, and/or political interactions between Western Europe and the non-Western world since 1500. Topics vary.  GR  LE  Lecture

Fall 2020  CHM 3730  Analytical Chemistry  CHM  Chemistry  1  A selected topic in the field of analytical chemistry such as chromatography, electroanalytical chemistry such as trace analysis, bioanalytical chemistry, advanced instrumental analysis, analytical spectroscopy, or separation methodology.  GR  LE  Lecture

Fall 2020  CTE 6350  Global Engagement  CTE  Career and Technical Education  3  Strengthening partnerships, coordinating efforts and increasing interaction within and outside the CTE community versus learning and working in isolation. Enhancing students abilities to engage in job-related problem-solving and decision-making in diverse cultures and environments.  GR  LE  Lecture

Fall 2020  CHM 4210R  4210R  Adv Inorganic Syn Rec  CHM  Chemistry  0  Required recitation for CHM 4210.  GR  LE  Recitation

Fall 2020  MKT 4780  Honors-Ind Study Market  MKT  Marketing  3  The course will consist of research or some other form of marketing project. The course is offered with the prior approval of the department chair and the supervising marketing faculty member.  GR  IS  Independent Study

Fall 2020  GEO 4990  4990  Applied Research Project  GEO  Geography  3  Involves students in the process of researching and writing a senior seminar paper. Integrated Writing course.  GR  SE  Seminar

Fall 2020  EGR 2980R  2980R  Special Topics in EGR Rec  EGR  Engineering  0  Required recitation for EGR 2980.  GR  RE  Recitation

Fall 2020  FR 4940  4940  Cuisine et Film  FR  French  3  Study of traditional French gastronomy, from the way it is portrayed in film to the way it is prepared, served and enjoyed. Hands on cooking classes complement film and cultural analysis.  GR  LE  Lecture

Fall 2020  PSY 8640  8640  Res Methods I/O Psy  PSY  Psychology  4  The course focuses on the unique methodological challenges faced by I/O researchers. Theory, causation, and experimental validity are reviewed. Various research designs (e.g., experiments, quasi-experiments, correlation and regression analysis, ethnographic study) are discussed. Methods of data collection (e.g., unobtrusive measurement, survey, qualitative) are reviewed. Methods of data analysis (e.g., structural equation modeling, multilevel modeling, meta-analysis) are reviewed.  GR  SE  Seminar

Fall 2020  MTH 4150  4150  Scientific Computation  MTH  Mathematics  3  Modern computational techniques for simulating scientific phenomena.  GR  LE  Lecture

Fall 2020  RBH 6700  6700  Rehab Workshop  RBH  Rehabilitation  1  Workshop courses to meet the needs of rehabilitation professionals as well as providing courses on as needed basis to meet special interest needs. Titles vary.  GR  SE  Seminar

Fall 2020  SW 4700  4700  Soc and Econ Justice  SW  Social Work  3  Examination of how social welfare policy affects service delivery and active engagement in policy practice to promote social and economic justice. Integrated Writing course.  GR  LE  Lecture

Fall 2020  SE 4700  4700  Introduction to MEMS  EE  Electrical Engineering  3  Overview of basic sensor technology including operating principles, electronics and measurement principles.  GR  LE  Lecture

Fall 2020  SLI 4200  4200  Educational Interpreting  SLI  Sign Language Interpreting  3  Theoretical foundations related to best practices and educational interpreter performance. National, state, and local standards/requirements will be covered, including the EIPA. Educational settings and communication methods for Deaf and Hard of Hearing students will be discussed along with social, cognitive, and language development and the interpreter’s role in facilitating student independence and self-advocacy.  GR  LE  Lecture

Fall 2020  KNSI 1200  1200  Fencing: Beginning  KNSI  Kinesiology & Health  1  Fundamental skills and knowledge of Fencing: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate.  GR  LB  Lab

Fall 2020  FR 6650  6650  Topics in FR Lit & Film  FR  French  3  Examination of selected topics in French literature and film. Investigation of various themes, myth, genres, literary movements or characters. Titles vary. Taught in French.  GR  LE  Lecture

Fall 2020  KNSI 7500  7500  Scientific Foundns-Cond  KNSI  Kinesiology & Health  3  A study of scientific foundations for conditioning. Topics will include: exercise training techniques, heart rate, blood pressure, ventilation, strength, flexibility, and body composition. Laboratory methods will also be a part of this course.  GR  LE  Lecture

Fall 2020  ED 6890  6890  AYA/MA Capstone Research  ED  Education  3  Initiation of a research project as a reflective investigation and progressive problem solving effort by individuals or groups to improve the quality of education in an AYA/MA educational environment.  GR  IS  Independent Study

Fall 2020  EGR 4980R  4980R  Special Topics in EGR Rec  EGR  Engineering  0  Required recitation for EGR 4980.  GR  RE  Recitation

Fall 2020  SLI 3800  3800  Advanced Interpreting I  SLI  Sign Language Interpreting  4  Enhancement of the ability to interpret between the source and target languages of ASL and English. Interpreting models, consecutive and team interpreting will be explored. Students will increase interpreting analysis and mental visualization skills.  GR  LE  Lecture

Fall 2020  HST 6750  6750  21st Century History  HST  History  3  Examines particular stages of the 21st century American experience or selected topics (e.g., the Iraq war). Topics vary.  GR  LE  Lecture

Fall 2020  HED 7700  7700  Social Behavior Health  HED  Health Education  3  This course addresses the social-psychological and behavioral determinants of health status and the role of theory-based interventions in altering health behavior and status.  GR  LE  Lecture

Fall 2020  DMV 3010  3010  DMV Registration  DMV  DMV Consortium  0.5  Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area.  GR  LE  Lecture
Fall 2020  PL6823  6823  Campaign Internship  PLS  Political Science  3  Volunteer for the candidate of one choice in a local, state, or federal election. Work 170 hours over the semester, adjusting hours to account for the campaign calendar.  GR  IN  Internship

Fall 2020  CEG4324L  4324L  Dig Integ Ckt Design Lab  CEG  Computer Engineering  1  Realizations, testing and evaluation of digital integrated circuits with particular emphasis on programmable logic devices. <b>Department Managed Prerequisite(s): (Undergraduate level EE 2000 Minimum Grade of C and Undergraduate level EE 2000L, Minimum Grade of C and Undergraduate level EE 3218 Minimum Grade of C) or Undergraduate level CEG 3320 Minimum Grade of D/CR.</b>  UG  LB  Lab

Fall 2020  BIO6840  6840  Biogpraphy  BIO  Biology  3  Introduction to the factors affecting the distribution of plants and animals.  GR  LE  Lecture

Fall 2020  M&I7890  7890  Research in M&I  M&I  Microbiology & Immunology  1  Students will complete their research and/or thesis under the guidance of a faculty member.  GR  LB  Lab

Fall 2020  BIO3100  3100  Clinical Microbiology  BIO  Biology  3  The study of biological processes of microorganisms, with emphasis on microorganisms that cause human diseases.  UG  LE  Lecture

Fall 2020  REL3300  3300  Topics in Islam  REL  Religion  3  Problems, approaches, and topics in the field of Islam. Topics vary.  UG  LE  Lecture

Fall 2020  FR4640  4640  FR Canadian Lit & Film  FR  French  3  French Canadian literature and film in its socio-historical context, with focus on works of Acadia and Quebecois poets, novelists and playwrights (such as Maillet, Tremblay, Thériault) and filmmakers (such as Forest, Chaisson, Bélanger, Mifram, Sua, and Filatrault). Taught in French. <b>Department Managed Prerequisite(s): (Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D).</b>  UG  LE  Lecture

Fall 2020  SW2720  2720  Multicultural Competence  SW  Social Work  3  This course provides an introduction to the methods of inquiry in the social sciences used to develop the knowledge and skills required to work and relate in a multicultural world. Content covers the historical development of discrimination in the U.S. and the need for multicultural competency to be an engaged and informed citizen in a democratic society. Integrated Writing course.  GR  LE  Lecture

Fall 2020  EDL7710  7710  Ldrshp Scll Improvement  EDL  Educational Leadership  3  The course focuses on a deep understanding of organizational structure, leadership theory, and skill development in leadership, communication, decision making, and problem solving. A continuous improvement mindset and the change process are the foundation for strategies that are discussed regarding distributed leadership, team development, motivation, and school culture.  GR  LE  Lecture

Fall 2020  ME4180  4180  Additive Manufacturing  ME  Mechanical and Materials Engineering  3  An introduction to additive manufacturing process. The course will address various additive manufacturing (AM) principles and concepts; Materials science for AM; Design for AM; Scope of additive manufacturing with application areas; bio-manufacturing. <b>Department Managed Prerequisite(s): Undergraduate level ME 3700 Minimum Grade of D/CR.</b>  UG  LE  Lecture

Fall 2020  PHY4730  4730  Mathematical Physics  PHY  Physics  3  Survey of mathematical physics, including vector analysis, analytical mechanics, electromagnetism, and thermodynamics.  UG  LE  Lecture

Fall 2020  ENG3220  3220  British Texts to 1870  ENG  English  3  Representative works of major British writers of the later 17th to later 19th centuries.  UG  LE  Lecture

Fall 2020  HUM7000  7000  Grad Res Methods in Hum  HUM  Humanities  3  An introduction to graduate research in the humanities with primary emphasis on research writing.  GR  SE  Seminar


Fall 2020  NUR4870  4870  Communities Toward Hlth  NUR  Nursing  3  Integrates population-based concepts to assess populations. Emphasizes all levels of prevention to promote health of individuals, families, and groups, including lifestyle and genetic factors impacting population health.  UG  LE  Lecture

Fall 2020  PTX7400  7400  Laboratory Management  PTX  Pharmacology/Toxiology  3  The topics are designed to give students laboratory management experience along with a short weekly lecture that will provide background information on the theory behind the project.  GR  LE  Lecture

Fall 2020  BIO6720  6720  Ornithology  BIO  Biology  4  This class is an introduction to the world of birds. We will cover the whole range of scales important to any organism from genetics that underlie evolution and phylogeny to global ecology and conservation. You will be introduced to diversity, form and function, physiology, behavior, life history, ecology and conservation of birds. Lectures are paired with labs that add hands on experience in bird research. We will work on bird identification by sound and sight, and study design.  GR  LE  Lecture

Fall 2020  HPR2810  2810  Physical & Hlth Ed - MCE  HPR  Health Phys Educ & Recreation  3  Curriculum teaching methods and materials, for 4th- 9th grades, promoting a positive lifestyle. Comprehensive school health program, activity for optimal growth and controversial issues will be covered.  UG  LE  Lecture

Fall 2020  ENG4650  4650  Professional Editing  ENG  English  3  Instruction and experience in editing technical and professional documents, including both print and online publications. Courses types of editing, the production process, and issues in editing. <b>Department Managed Prerequisite(s): Undergraduate level ENG 3610 Minimum Grade of D/CR.</b>  UG  LE  Lecture

Fall 2020  EE7590L  7590L  CMOS RF IC Design Lab  EE  Electrical Engineering  1  Required lab for EE 7590. <b>Department Managed Prerequisite(s): Graduate level EE 7580 Minimum Grade of D and Graduate level EE 7580L Minimum Grade of D.</b>  GR  LB  Lab

Fall 2020  PTX8060  8060  Six Sigma, Green Belt  PTX  Pharmacology/Toxiology  3  This course is an introduction to the tools and techniques of the lean six sigma philosophy of management that focuses on eliminating defects through processes that emphasize understanding, measuring, and improving processes.  GR  LE  Lecture

Fall 2020  CHM5150  5150  Physical Chemistry I  CHM  Chemistry  3  Theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids.  GR  LE  Lecture

Fall 2020  PSY5110  5110  Abnormal Psychology  PSY  Psychology  3  Facts and theories pertaining to abnormal behavior. Topics include classification and diagnosis, and causes and treatment of abnormal behavior.  GR  LE  Lecture

Fall 2020  URS6200  6230  Ethics & Leadership  URS  Urban Affairs  3  A systematic study of ethics and leadership in public service. Examines models of contemporary leadership and ethical reasoning, and the relevant roles, obligations, values, standards, codes of conduct, and strategies for resolving ethical dilemmas within the context of organizations, communities, and government.  GR  LE  Lecture

Fall 2020  MUS1550  1550  Keyboard Musicianship I  MUS  Music  1  Class instruction in functional keyboard skills including technique, chord construction and connection, improvisation, harmonization, playing by ear, sight reading, score reading, ensemble playing, and performing repertoire pieces.  UG  LE  Lecture
Fall 2020
PSY4950 4950 Sex & Endocrinology Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on sexuality and endocrinology. Students will apply knowledge of hormonal influences to human sexual behavior through reading and critically analyzing primary scientific research and thoughtful reflection and collegial discussion. Integrated Writing course.
UG SE Seminar
Fall 2020
PSY4130 4130 Psy in Film Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge examining psychology in film. Integrated Writing course.
UG SE Seminar
Fall 2020
IT4425 4425 Senior Seminar IT Information Technology 2 Small interactive seminar on academic experiences for life in the design graphic field.
UG SE Seminar
Fall 2020
GR LE Lecture
Fall 2020
CEG632L 632L VLSI Design Lab CEG Computer Engineering 1 Work station based exercise designingasic devices for evaluation and testing.
GR LB Lab
Fall 2020
ATH3300 3300 Primate Behavior ATH Anthropology 3 An exploration of the biology, behavior, and cognitive abilities of the Order Primates – prosimians, monkeys, apes, and humans. Nonhuman primates are studied as unique animals, focusing on their distinctive biological attributes and behavioral adaptations, and humans and nonhuman primates are compared in order to identify the biological and behavioral features they share.
UG LE Lecture
Fall 2020
NUR8202 8202 Final Prac-Leadership NUR Nursing 1 Individually monitored practicum that requires leadership and practice at the aggregate/systems/organizational level of health care. Includes required seminar that facilitates application, synthesis, and evaluation of prior learning in applied practice.
GR SE Seminar
Fall 2020
PHY4510 4510 Electricity Magnition II PHY Physics 3 Fundamental laws of electricity and magnetism from viewpoint of fields. Electromagnetic waves; time-dependent potentials and fields; radiation; resonant cavities; waveguides and transmission lines.
UG LE Lecture
Fall 2020
CNL7650 7650 Prin & Prac of Schl Coun CNL Counseling 3 This course explores the design, implementation, management, and evaluation of comprehensive school counseling programs. School counseling programming is discussed in terms of its relationship to the total school program and to community support systems.
GR LE Lecture
Fall 2020
ED7650 7650 Lit Leadership Prac II ED Education 3 Working as a literacy leader to plan, develop, and present a supervised professional development on a literacy topic. Coaching and mentoring of an adult professional. This course involves a supervised practicum.
GR LE Lecture
Fall 2020
EDS6731 6731 Professional Seminar: MM EDS Education - Special Education 0.5 Seminar focus will prepare candidates for state licensure requirements. Topics include: planning for instruction and assessment, instruction and engaging learners, assessing learning, and creating a portfolio.
GR SE Seminar
Fall 2020
SOC6620 6620 Social Gerontology SOC Sociology 3 Provides students with an understanding of social gerontology, its origins, and present domains of focus. A life course perspective that incorporates cultural, economic, historical and structural contexts provides the framework for examining aging-related issues, particularly with regard to the impact on quality of life for older adults.
GR LE Lecture
Fall 2020
CHM7000 7000 Prin Instruction Chem CHM Chemistry 1 Survey of available instructional materials and discussion of educational theory and techniques leading to more effective instruction. For chemistry majors only.
GR LE Lecture
Fall 2020
ART3770 3770 Fab/Construction Process ART Art 3 Development of personal concepts and aesthetic expression using wood and metal fabrication. Emphasis on theoretical and perceptual issues, such as the relationships between objects and the process of their making and the choice and manipulation of materials. This course has a fee that is non-refundable once the term begins.<br>Department Managed Prerequisite(s): Undergraduate level ART 2080 Minimum Grade of D<br>UG LB Lab
Fall 2020
DAN2520 2520 Dance History II DAN Dance 3 Survey of Western theatrical dance of the twentieth and twenty-first centuries. Integrated Writing course.
UG LL Lecture/Lab Combination
Fall 2020
ED7800 7800 Literacy Research Famwk ED Education 3 Develop a knowledge and understanding of literacy research and research methods. Written literacy research projects to include: introduction, research purpose and questions, review of literature, and methodology.
GR LE Lecture
Fall 2020
BMB7030 7030 Research Ethics BMB Biochem & Molecular Biology 0.5 Also listed as BMS 7030. Research ethics emphasizes the evaluation of hypothetical ethical scenarios in biomedical research. Class discussion is based on integrating ethical policy and practices as they relate to research at Wright State and beyond.
GR LE Lecture
Fall 2020
EE4550 4550 IC Hwtr Secrty & Trust EE Electrical Engineering 3 Analyze hardware security/trust and be able to implement various countermeasures to improve trust for hardware IC systems. Topics include IC design flow/lifecycle, trust issues at each stage of the IC lifecycle, attack methodologies that threaten HW IC systems, countermeasures to improve trust for HW IC systems, improving Trust for both ASIC and FPGA based systems.
UG LE Lecture
Fall 2020
EDL8320 8320 Action Resrch Practicum EDL Educational Leadership 1 Implement and analyze an action research project.
GR LL Lecture/Lab Combination
Fall 2020
LE1120 1120 Police Academy 3 LE Law Enforcement 3 Ohio Police Training Academy curriculum. Human relations and safety issues. Study of law on search and seizure, interview and interrogation, civil liability and use of force, and testifying. Requires admission to Grand Lake Law Enforcement Academy.
UG LL Lecture/Lab Combination
Fall 2020
DAN2025 2025 Ballet for Dance Minor DAN Dance 3 An intermediate level ballet class designed to help students refine their ballet technique. Practice and repetition followed by corrections, clarification and detailed analysis, developing strength, stamina, coordination and flexibility. Correct body alignment and basic anatomical terms to increase movement efficiency and to avoid injuries.
UG ST Studio
Fall 2020
PLS6080 6080 Radical Black Thought PLS Political Science 3 Examines radical black thought and philosophy from a Pan-Africanist perspective, primarily focuses on the 20th century.
GR LE Lecture
Fall 2020
ME3600 3600 Exp. Man. & Instr. ME Mechanical and Materials Engg 3 Techniques, equipment, and measurement procedures used by Mechanical Engineers: writing lab reports, performing data acquisition, applying statistics to experimental data, signal analysis, measurement system analysis, etc. Integrated Writing course.<br>Department Managed Prerequisite(s): Undergraduate level EGR 3350 Minimum Grade of D and Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level MTH 2530 Minimum Grade of D and Undergraduate level EE 2010 Minimum Grade of D<br>UG LE Lecture
Fall 2020
EE6800 6800 Grad Special Topics EE EE Electrical Engineering 1 Graduate special topics in electrical engineering. Topics vary.
GR LE Lecture
Fall 2020
TH2450 2450 Acting II TH Theatre 3 Continues training with monologues and scenes. Emphasis is on non-classical, contemporary scripts.
UG LL Lecture/Lab Combination
PHY 1120  1120 Principles of Physics II  DG  4 Fundamentals of charge, electric field, magnetism, optics and modern physics. Topics include electric and magnetic fields, electromagnetic induction, electromagnetic waves, geometric and wave optics, optical instruments, relativity, quantum theory, and nuclear physics.  UG  LE  Lecture

EE 7540L  7540L VLSI Testing Design Lab  EE  1 Required laboratory for EE 7540. <b>Department Managed Prerequisite(s): Undergraduate level EE 4450 Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D).<br/></b><br/>GR  LB  Lab

EES 4290  4290 Remote Sensing of Earth  EES  3 Remote sensing from an earth science perspective. Students learn to interpret various types of images including stereo air photos, airborne multi-spectral digital images and satellite images. Hands-on digital image processing using industry standard software.  UG  LL  Lecture/Lab Combination

CEG 7420  7420 Res Env & Prop Analysis  CEG  3 This course will build on computer security topics discussed in CEG 6420. Host Computer Security and will involve discussion of low-level computer security vulnerabilities, reverse engineering, malware analysis, vulnerability discovery, reverse engineering tool development, and advanced program analysis techniques.<br/>Department Managed Prerequisite(s): Graduate level CEG 6420 Minimum Grade of D.<br/>GR  LE  Lecture

MUS 1010  1010 Theory of Music I  MUS  3 Theoretical study of music through written exercises including melody, harmony, rhythm, form and analysis.  UG  LE  Lecture

KBNH 1160A  1160A Dance: Latin  KHN  1 Fundamental skills and knowledge of Dance: Latin. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

SOC 3720  3720 Policing in Society  SOC  3 History and theories of policing and review of the role and function of police.  UG  LE  Lecture

ENG 6699  6699 Tech Wrt & Skills Intvl  ENG  3 Written and spoken communication in science and engineering with an emphasis on the various forms of technical documents and oral presentations. For non-native speakers of English only.  GR  LE  Lecture

KBNH 1440B  1440B Phys Ed for Disabled  KHN  1 Fundamental skills and knowledge of Physical Education for Disabled. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

BIE 7300  7300 Res Meth in HFE  BIE  3 Introduction to research methods available to human factors engineers. Topics include experimental ethics, experimental methods, non-experimental methods, data analysis, and writing research papers. Students are required to conduct and analyze an experiment. <b>Department Managed Prerequisite(s): Graduate level BIE 6130 Minimum Grade of D or Graduate level EGR 7050 Minimum Grade of D</b>.  GR  LE  Lecture

PSY 4240  4240 Attention & Perform Cap  PSY  3 Communication-intensive seminar integrating knowledge on attention and performance. Integrated Writing course.  UG  SE  Seminar

ATH 4600  4600 African Oral Traditions  ATH  3 Study of oral traditions in Africa, including oral traditions, oral history, and societies with combinations of oral traditions and written history. Explores how oral traditions are generated, their contexts, and their significance for those who produce them. Applicable to many situations beyond the continent of Africa. Integrated Writing course.  GR  LE  Lecture

IDL 7120  7120 Instruct Design Digital Learn  IDL  3 Participants will learn the basic concepts and elements of an instructional design model. The course teaches the "backward design" approach and "alignment" to ensure that course design focus on the "big ideas."<br/>GR  LE  Lecture

ENG 6790  6790 TEFL Practice & Material  ENG  3 Identifies the diverse needs of students learning English as a foreign language and the most effective curriculum development, resources, and teaching techniques to address these needs.<br/>Department Managed Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D or Undergraduate level ENG 6710 Minimum Grade of D.<br/>GR  LE  Lecture

NUR 2100  2100 Hlth Pro & Assess Adults  NUR  3 Incorporates self-directed activities to promote maximum health in self and others. Development of a systematic approach to obtaining a complete health history and performing physical assessment to determine health and illness in adults.<br/>GR  LE  Lecture

EED 3750  3750 Writing Methods P-5  EED  3 The study of writing development, writing theory, writing genres, writing assessment, instructional pedagogy, and materials in elementary language arts program development, and the integration of literature and language arts across P-5 grade curricula. Integrated Writing course.  UG  LE  Lecture

LA 6600  6600 CELLA Internship  LA  1 Internship with a local arts organization under the auspices of CELLA, Wright State's Ohio Center of Excellence in Collaborative Education, Leadership and Innovation in the Arts.  GR  IN  Internship

CTE 6515  6515 CTE Practicum - Grad  CTE  3 Teaching experience integrated with academic instruction; application of learned concepts to practical situations within the candidates teaching field. Coordinated by a university faculty member who observes the candidate in a school setting.  GR  PR  Practicum

ARA 6410  6410 Intro to Arabic Fiction  ARA  3 A two-credit course introducing students to the history and development of Arabic fiction through the study of classical and modern texts. Undergraduate level ARA 3210 Minimum Grade of D or Undergraduate level ARA 5210 Minimum Grade of D or Graduate level ARA 5210 Minimum Grade of D.<br/>GR  LE  Lecture

HPR 2020  2020 Teaching Fitness in PE  HPR  3 Develops fitness knowledge, skills and teaching strategies in future physical education teachers to enhance fitness and physical activity across P-5 grade curricula. Integrated Writing course.  UG  LE  Lecture/Lab Combination

ME 6490  6490 Aerospace Structures  ME  3 Analysis and design of flight structures. Stress, deformation, and stability analysis of aerospace structures. Thin-walled members bending, torsion, and shear stresses calculation in multi-cell structures. Buckling of thin plates.<br/>Department Managed Prerequisite(s): Graduate level ME 5120 Minimum Grade of D.<br/>GR  LE  Lecture

MTH 1440  1440 Math Modern World w/ Alg  MTH  3 Mathematics 4 An application of mathematics to modeling real world problems from the behavioral, computational, managerial, and social sciences. Includes such topics as graph theory, linear programming, probability, descriptive and inferential statistics, voting systems, game theory, population growth, computer algorithms, and codes and data storage. Incorporates selected topics in algebra for underprepared students.  UG  LE  Lecture

MTI 7890  7890 Research in MI  MI  1 Students will complete their research and/or thesis under the guidance of a faculty member.  GR  LB  Lab

PSY 4340  4340 Physical Ergonomics  PSY  2 This addresses the physical demands of work, with an emphasis on cognitive work in technical settings.  GR  SE  Seminar

CNL 5862  5862 Asses. & Diag. of PTSD  CNL  3 Overview of trauma theories, assessment, and diagnosis of PTSD in clinical mental health settings. Emphasis on knowledge and skills of trauma assessment, diagnosis, multicultural and diversity issues using lifespan perspective.  GR  LE  Lecture
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<td>Graduate Pedagogy</td>
<td>7800</td>
<td>MUS</td>
</tr>
<tr>
<td>MTH4550</td>
<td>Advanced Linear Algebra</td>
<td>4550</td>
<td>MTH</td>
</tr>
<tr>
<td>EE6470</td>
<td>Antenna Theory &amp; Design</td>
<td>6470</td>
<td>EE</td>
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<tr>
<td>PL6100</td>
<td>Pol Psychology</td>
<td>6100</td>
<td>PL</td>
</tr>
<tr>
<td>BOO3850</td>
<td>Tropical Ecology</td>
<td>3850</td>
<td>BOO</td>
</tr>
<tr>
<td>LDR3600</td>
<td>Ind Study in Leadership</td>
<td>3600</td>
<td>LDR</td>
</tr>
<tr>
<td>URS4450</td>
<td>Community Development</td>
<td>4450</td>
<td>URS</td>
</tr>
<tr>
<td>MTH4910</td>
<td>HS Math Adv Perspective</td>
<td>4910</td>
<td>MTH</td>
</tr>
<tr>
<td>PSI9120</td>
<td>Neuropsych Assessment</td>
<td>9120</td>
<td>PSI</td>
</tr>
</tbody>
</table>

**Fall 2020**

- **DAN2010**: Ballet II (DAN Dance, 3 credits)
- **ENG4770**: ESL: Pre-K-12 (ENG English, 3 credits)
- **MUS6160**: Piano Pedagogy (MUS Music, 3 credits)
- **MUE2660**: Concert Band (MUE Music: Ensembles, 1 credit)
- **NUR8002**: Population Health (NUR Nursing, 3 credits)
- **EES6140**: Sedimentary Petrology (EES Earth & Environmental Sciences, 4 credits)
- **LEP0120**: Writing Workshop Level 3 (LEP LEAP, 0 credits)
- **EDT8610**: HPA Clinical Teaching (EDT Educational Technology, 1 credit)
- **PSY4220**: Psycholinguistics Cap (PSY Psychology, 3 credits)
- **MUS3430**: Orchestration/Vocal Arr (MUS Music, 3 credits)
- **ENG6820**: Adv Poetry Wrtp Seminar (ENG English, 3 credits)
- **BME4460**: Nanomed Fundamentals (BME Biomedical Engineering, 3 credits)
- **DEV0280**: Found for Coll Algebra (DEV Developmental Education, 2 credits)
- **ATH3900**: Readings in Anthropology (ATH Anthropology, 3 credits)
- **KHI290A**: H2O Zumba (KHI Kinesiology & Health, 1 credit)
- **BMST600**: Molec Bio of the Nucleus (BMST Biomedical Sciences, 3 credits)
- **KHI1750**: Intro Distance Running (KHI Kinesiology & Health, 2 credits)
- **BME3512**: Bioelectronics II (BME Biomedical Engineering, 4 credits)
- **MUS7800**: Graduate Pedagogy (MUS Music, 1 credit)
- **MTH4550**: Advanced Linear Algebra (MTH Mathematics, 1 credit)
- **EE6470**: Antenna Theory & Design (EE Electrical Engineering, 1 credit)
- **PL6100**: Pol Psychology (PLS Political Science, 1 credit)
- **BOO3850**: Tropical Ecology (BOO Biology, 3 credits)
- **LDR3600**: Ind Study in Leadership (LDR Leadership, 1 credit)
- **URS4450**: Community Development (URS Urban Affairs, 3 credits)
- **MTH4910**: HS Math Adv Perspective (MTH Mathematics, 3 credits)
- **PSI9120**: Neuropsych Assessment (PSI Professional Psychology, 3 credits)

**Additional Notes**

- **Vocabulary, techniques, and theory of ballet**: Emphasis on body alignment and flexibility.
- **Class offers a historical overview**: of keyboard pedagogy and examinations, collections, and studies written for piano students at various performance levels.
- **Course may accommodate non-refundable once the term begins.**
- **Participants are introduced to educational technologies and teaching applications that are used in the health professional environment such as simulations, standard patients, team-based training, and active-learning strategies.**
- **Communication-intensive seminar integrating knowledge on language**: its development during the first years of life, its biological basis, its normal and abnormal characteristics. Integrated Writing course.
- **Molec Bio of the Nucleus**: (Also listed as BMST 760) A Literature-based course covering molecular events in the nucleus including DNA replication, repair, recombination, and transcription.
- **Modern electronic devices/circuits applied to human systems / biomedical applications**: and devices. Hands-on laboratory component provides experience in designing, assembling, testing, and employing amplifiers, filters, digital logic circuits used for collecting and analyzing data related to biomedical engineering applications.
- **Modern electronic devices/circuits applied to human systems / biomedical applications**: including the application to biomedical problems. Cutting-edge nanomedical technologies for sensing and imaging, drug delivery, and therapeutic applications will be addressed. Nano/micro/mono to bring out the unique properties of nanotechnology in nanomedicine.
- **The focus is on safe, quality, culturally-appropriate advanced nursing practice activities to meet emerging world needs.**
- **The focus is on safe, quality, culturally-appropriate advanced nursing practice activities to meet emerging world needs.**

**Additional Terms**

- **Combination**: Semester, Lab, Lecture/Lab, Course, Lecture/Lab
- **Independent Study**: Undergraduate credit, independent study, independent study, independent study
- **Professional Psychology**: Integrated Writing course.
- **Neurology Assessment**: Introduction to the field of clinical neuropsychological assessment. Students learn to select, administer, score, and interpret neuropsychological tests in different clinical situations.
Fall 2020  FAS2100  2100  Farm Business Management  FAS  Food and Agricultural Systems  3  Fundamentals of farm business management. Principles of management, cost analysis, agricultural enterprise budgets, farm budgets, cash flow analysis, and organizational structure and planning in agricultural operations.

Fall 2020  CHM6680  6680  Exp Nanomaterials  CHM  Chemistry  3  This course will provide a series of laboratory experiments similar to the state-of-the-art R&D in nanotechnology and nanoscience. The experiments include 1) fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets; 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, tensiometry, spectroscopy, electrochemical analyses etc.; and 3) computational modeling of nanoscale physical phenomena.

Fall 2020  NUR4980  4980  Honors Project Proposal  NUR  Nursing  2  Under the guidance of a faculty member, students develop an honors project.

Fall 2020  NEU1030  1020  The Neuroscience of Learning  NEU  Neuroscience  1  Understand the neuroscientific principles that underlie learning and practice behaviors that further promote learning.

Fall 2020  CHM7440  7440  Strau Concept Org Chem  CHM  Chemistry  2  Skills are developed to predict behavior and movement of chemical contaminants in atmospheric, aquatic, and soil systems. Physical and chemical properties of contaminants and environmental interactions are evaluated to determine their ultimate fate.

Fall 2020  MKT4850  4850  Special Topics in Marketing  MKT  Marketing  3  Seminar on special topics such as consumerism and social issues, nonprofit organization marketing, advanced retailing management, channels of distribution, pricing, or persuasion. Topics vary. Requires approval of the department chair and the faculty member.

Fall 2020  ITA1010  1010  Beginning Italian I  ITA  Italian  3  Communicative introduction to Italian. Study of the vocabulary and structure of the Italian language; practice in speaking, listening, reading, and writing.

Fall 2020  KNH3380A  1380A  Kayaking: Recreational  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of Kayaking: Recreational. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020  PTX8080  8080  Wound Healing  PTX  Pharmacology/Toxicology  3  This is a translational medicine class that connects wound healing (skin anatomy and physiology phases of wound healing) with wound care (wound closure and the reconstructive ladder in plastic surgery).

Fall 2020  PLS4280  4280  Natl Security Politics  PLS  Political Science  3  Study of U.S. national defense and security policy process and major strategic issues facing the U.S. government. Integrated Writing course.

Fall 2020  PSY1010L  1010L  Intro to Psychology Lab  PSY  Psychology  0  Required laboratory for PSY 1010. Integrated Writing course.

Fall 2020  PLS4460  4460  Public Budgeting  PLS  Political Science  3  Also listed as URS 4420. Examines the major phases of the governmental budget cycle, types of budgets, budgetary reform, economic and public policy impact of government budgeting, the decision making process, and legislative/executive relations in budget formation and implementation.

Fall 2020  KNH6980  6980  Workship in Health, PE&Rec  KNH  Kinesiology & Health  1  Intensive study of content, curriculum, method, or materials designed to meet the needs of pre-service and in-service professionals in health, physical education, and recreation. Titles vary.

Fall 2020  EES640L  640L  Subsurface Fluid Flow Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 640L.

Fall 2020  ANT4340  4340  Biological Safety  ANT  Anthropology  2  Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.

Fall 2020  DCN0015  9015  Leadership Theories  DOIS  Doctor Org Studies  3  Focus on historical and contemporary leadership models and theories, and current developments that affect leaders today. Strengths, weaknesses, and methodological contributions will be analyzed to provide foundational knowledge for continuous study of leadership.

Fall 2020  WGS1000  1000  Sex Health & Diversity  WGS  Women, Gender, and Sexuality  3  Introduces students to the interdisciplinary study of sexuality, focusing on sexual health from a diverse and comprehensive (i.e. including sexual pleasure) perspective. Topics covered may include: sexual anatomy and function, sexual and gender identity, sexual behavior, communication, and virginity.

Fall 2020  MUS6520  6520  Piano Literature II  MUS  Music  3  A survey of the literature of the piano and its predecessors—clavichord, harpsichord, and the pianoforte—from early English Virgilian music to the present time.

Fall 2020  GER3320  3320  Survey of German Lit II  GER  German  3  Historical survey of German literature from its beginning to the present, including Classicism, Romanticism, Poetic Realism, and Modern Period. Taught in German. Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D and (Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D).  Integrated Writing course.

Fall 2020  CHM6560  6560  Concepts Chem II MCE  CHM  Chemistry  4  Concepts in chemistry II is for graduate students in middle childhood science education (MST Program). Course includes detailed study of chemical reactions, kinetics, environmental issues, acids/bases, and nuclear chemistry. Portfolio development will be utilized for students to learn the development of inquiry activities for the classroom.

Fall 2020  ED7970  7970  Learn ED Education  3  This course guides implementation of individual Master's thesis projects in education. The course includes inquiry and data gathering through analysis and solution identification, writing of thesis, and formal presentation.

Fall 2020  LAW4300  4300  Legal Aspects Workplace  LAW  Law  3  Introduction to selected federal and Ohio workplace laws and policies with legal implications for human resource professionals and/or managers and for interacting with legal counsel.

Fall 2020  HPR2900  2900  Exceptionalities  HPR  Health Phy Educ & Recreation  3  Overview of historical and current legal, philosophical, and education issues surrounding the definition, identification, causes/prevalence of specific exceptionalities, service delivery/placement options and multidisciplinary team process across education and community settings.

Fall 2020  LDR7510  7510  Statistics and Research  LDR  Leadership  3  Introduction to basic statistical methods and data analysis for research and evaluation.

Fall 2020  HST4400  4400  Asian History  HST  History  3  Examines various periods of Chinese, Japanese, and other Asian histories. Topics vary. Integrated Writing course.

Fall 2020  ATH4400  4400  Sem Woodland Archaeology  ATH  Anthropology  3  Intensive review of the prehistoric Woodland period (608 B.C. A.D. 900) of eastern North America. Covers major regional cultures such as Adena and Hopewell, and explores such topics as social and political organization, site architecture, mortuary customs, and exchange systems.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
<th>Credit Level</th>
<th>Mode</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME4920</td>
<td>Capstone Design II</td>
<td>ME</td>
<td>2</td>
<td>Second of a two-course sequence in solving realistic engineering design problems. Research in professional literature, application of systems engineering principles, and reporting of technical results.</td>
<td>UG</td>
<td>Practice</td>
<td></td>
</tr>
<tr>
<td>MUS3210</td>
<td>Basic Conducting</td>
<td>MUS</td>
<td>2</td>
<td>Basic baton technique and score reading for choral and instrumental conducting.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PSY6210</td>
<td>Info Processing Cap</td>
<td>PSY</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on information processing skills such as selective attention, pattern recognition, reading, problem solving, and human performance.</td>
<td>GR</td>
<td>Seminar</td>
<td></td>
</tr>
<tr>
<td>FAS3100</td>
<td>Agriculture Finance</td>
<td>FAS</td>
<td>3</td>
<td>Agriculture finance tools and resources utilized in modern agricultural business operations. Topics include insurance, legal contracts, commodity markets, USDA farm bill programs, taxation, and lending programs.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CEG4530</td>
<td>OS Internals and Design</td>
<td>CEG</td>
<td>3</td>
<td>Overview of operating systems internals. File-system usage and design, process usage and control, virtual memory, multi user systems, access control.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>JPN3700</td>
<td>Internship in Japanese</td>
<td>JPN</td>
<td>3</td>
<td>Supervised use of Japanese in workplace settings. Must complete an application available from the Department of Modern Languages.</td>
<td>UG</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>PSY8130</td>
<td>Fund. Motion Perception</td>
<td>PSY</td>
<td>3</td>
<td>A detailed introduction to visual motion perception, covering historical, psychophysical, neural, computational, and applied perspectives.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CTE4550</td>
<td>Essentials of CTE</td>
<td>CTE</td>
<td>3</td>
<td>Explore the development of CTE, Federal legislation, legal issues, special needs, professional and student organization, current issues, and the philosophy of CTE. Integrated writing course.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PTE8013</td>
<td>Communication in Science</td>
<td>PTE</td>
<td>3</td>
<td>A crash course in bringing clarity, plain language and fun to scientific communications.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BMS8560</td>
<td>Gial Cell Physiology</td>
<td>BMS</td>
<td>2</td>
<td>(Also listed as F&amp;H 6500) Concepts of glial cell physiology based on the analysis of current primary literature. Topics include interactions between glia and other cell types and the role of glia in pathophysiology.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>PSY3730L</td>
<td>Perception Methods Lab</td>
<td>PSY</td>
<td>0</td>
<td>Required laboratory for PSY 3730. Integrated Writing course.</td>
<td>UG</td>
<td>Lab</td>
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</tr>
<tr>
<td>PHY2410</td>
<td>General Physics II</td>
<td>PHY</td>
<td>4</td>
<td>Introductory survey of electricity and magnetism. Uses calculus in interpreting physical phenomena. Topics include electric field and potential, currents, DC circuits, magnetic fields, Faraday's law, and optics.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>IT4435</td>
<td>Internship in Japanese</td>
<td>IT</td>
<td>2</td>
<td>Practical graphic design experience under the joint supervision of a faculty member and a business representative. May be taken for a letter grade or pass/unsatisfactory.</td>
<td>UG</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>ASM7210</td>
<td>Aeromedical Concerns Ops</td>
<td>ASM</td>
<td>3</td>
<td>This course builds on the basics of aerospace medicine course (ASM 6510) to advance the understanding of the relevant aeromedical aspects related to the operational flight &amp; space environments.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>FMS2500</td>
<td>Interdisc Film Studies</td>
<td>FMS</td>
<td>3</td>
<td>Examination of films related to specific disciplines—for instance, films adapted from literature or depicting literary figures, depicting historical periods or figures, illustrating psychological concepts, etc. Can be repeated on different topics.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>SOC4600</td>
<td>Sociology of Sexuality</td>
<td>SOC</td>
<td>3</td>
<td>Explores issues of sexual identity and sexual behavior. Also addresses how social institutions affect sexuality. Theories of sexuality, such as social constructionism and essentialism are reviewed. Integrated Writing course.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>REL5780</td>
<td>Apocalypse of John</td>
<td>REL</td>
<td>3</td>
<td>A literary and historical study of the Book of Revelation in its original setting with a consideration of its ongoing influence.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>SLI3540</td>
<td>Sign to English-Voice Interpreting</td>
<td>SLI</td>
<td>3</td>
<td>Knowledge and competencies for interpreting a variety of texts from signed modes to spoken English, using correct English grammar and syntax, while choosing appropriate vocabulary and register. Clarification and correction, peer review and self analysis strategies are developed.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CEG2171</td>
<td>C++ Progress for Sci &amp; Egr</td>
<td>CEG</td>
<td>4</td>
<td>Object-oriented programming using the C++ programming language. Topics include abstract data types, inheritance, polymorphism, abstract classes, templates, pointers, linked lists, stacks, queues, recursion, sorting algorithms, and binary trees. Students will apply problem-solving techniques and algorithm development to solve problems in engineering and science, and will implement those algorithms in the C++ language. Integrated Writing course.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PSY6700</td>
<td>Adv. Topics Percept Cap</td>
<td>PSY</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on perception. Topic will vary by title. Integrated Writing course.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EDS6050</td>
<td>ASID Practicum</td>
<td>EDS</td>
<td>3</td>
<td>Final Certificate program course. Students will develop and implement a research driven initiative that demonstrates their expanded knowledge in working with students with autism. Initiatives will vary depending on interest, setting and specialization.</td>
<td>GR</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>PSY8620</td>
<td>Organizational Behavior</td>
<td>PSY</td>
<td>4</td>
<td>Review of behavior in organizations within a framework of psychological theory and research. Topics include socialization, careers, organizational design, and leadership.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>HST4150</td>
<td>Modern Europe</td>
<td>HST</td>
<td>3</td>
<td>Examines a variety of countries, topics and periods in European history from the Enlightenment to the present. Topics vary. Integrated Writing course.</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EDC2550</td>
<td>Digital Citizenship</td>
<td>EDC</td>
<td>3</td>
<td>Examines the issues and responsibilities of using digital technologies. Consideration of issues of intellectual property rights, ethics, managing online reputation, and professional responsibilities.</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EE6800L</td>
<td>Special Topics in EE Lab</td>
<td>EE</td>
<td>1</td>
<td>Laboratory for EE 6800.</td>
<td>GR</td>
<td>Lab</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020  PLS4300  4300  American Gov't Seminar  PLS  Political Science 3  Selected and varying topics related to American politics and institutions. Emphasis on readings, discussion and research. Topics vary. Integrated Writing course.  UG  SE  Seminar
Fall 2020  ME2700  2700  StructProp of Mat. I  ME  Mechanical and Materials Engr 3  This course covers the fundamentals of the structures of solids and their effect on the mechanical properties of metals, polymers, and ceramics. Additional topics include phase diagrams and heat treatment. An overview of engineering materials is also presented.<b> Department Managed Prerequisite(s): Undergraduate level CHEM 1210 Minimum Grade of D and Undergraduate level PHYS 2400 Minimum Grade of D- or better. </b>  UG  LE  Lecture
Fall 2020  KNH1300B  1300B  Hiking  KNH  Kinesiology & Health 1  Fundamental skills and knowledge of hiking. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  ENG2560  2560  Basic Media Writing  ENG  English 3  Introduction to writing for media. Includes structure and organization of media copy. Requires reporting in the field. Integrated Writing course.<b> Department Managed Prerequisite(s): Undergraduate level COM 1520 Minimum Grade of D or better. </b>  UG  LE  Lecture
Fall 2020  PHY7890  7890  Continuing Registration  PHY  Physics 1  Continuing Registration  GR  IS  Independent Study
Fall 2020  DMV4010  4010  DMV Registration  DMV  DMV Consortium 0.5  UG  LE  Lecture
Fall 2020  MUA4990  4990  Senior Recital  MUA  Music: Applied Music 0  A solo concert performance on the major instrument during the senior year.  UG  IS  Independent Study
Fall 2020  CS1021  1021  Intro to Microsoft Access  CS  Computer Science 1  This course focuses on learning MS Access software application using a case study approach where critical thinking and problem solving skills are required.  UG  LE  Lecture
Fall 2020  PPH7660  7660  Public Health Terrorism  PPH  Population & Public Health 3  This course provides an in-depth investigation of terrorists, their targets and potential methods and the resultant implications for public health and emergency managers. This course explores terrorism and their motives, vulnerability of critical infrastructure and other civilian targets, risk assessment and interventions. This course will describe and critique local, national and international resources and initiatives in this evolving modern phenomenon.  GR  LE  Lecture
Fall 2020  ME7740  7740  Quantitative Microscopy  ME  Mechanical and Materials Engr 3  Deals with quantifying microstructural features, such as volume fraction, grain size, shape, and orientation of phases. The course covers stereology, the science of relating 2-dimensional images to 3-dimensional structure, and image analysis.  GR  LL  Lecture/Lab Combination
Fall 2020  URS4300  4300  Nonprofit Administration  URS  Urban Affairs 3  Examines the organizational and managerial foundations of nonprofit organizations. Explores areas such as the nature and mission of nonprofit organizations, evaluating performance, resource development/fund raising, and managing volunteers.  UG  LE  Lecture
Fall 2020  PTX7004  7004  MD/MS Journal Club  PTX  Pharmacology/Toxicology 2  This course was developed to give the medical students in the Clinical Investigation M.S. track the opportunity to become familiar with clinical research. This course includes hands-on training at the Pharmacology Translational Unit, W3F, as well as in-depth understandings of clinical research in the current literature.  UG  LE  Lecture
Fall 2020  SPN3430  3430  Spanish Culture  SPN  Spanish 3  Study of Spanish culture with emphasis on its uniqueness among the family of nations. Taught in Spanish. Spanish majors who take SPN 3430 may not take ML 3500 for credit.<b> Department Managed Prerequisite(s): Undergraduate level SPN 3210 Minimum Grade of C- or Undergraduate level SPN 3250 Minimum Grade of C- or better. </b>  UG  LE  Lecture
Fall 2020  REL5300  5300  Topics in Islam  REL  Religion 3  Topics on Islamic religion and religious practices.  GR  LE  Lecture
Fall 2020  CHM1210R  1210R  General Chemistry Lab I Rec.  CHM  Chemistry 0  Required recitation for CHM 1210.  UG  RE  Recitation
Fall 2020  EE6460L  6460L  Microwave Egr II Lab  EE  Electrical Engineering 1  Required laboratory for EE 6460.  GR  LB  Lab
Fall 2020  RST2910  2910  Regional Studies MidEast  RST  Regional Studies 3  Introduction to the history, peoples, cultures, and geography of the Middle East from Mauritania to Pakistan from the seventh century to the present. Integrated Writing course.  UG  LE  Lecture
Fall 2020  PSY2940  2940  Mind, Body & Conscious  PSY  Psychology 3  An exploration of modern ideas about consciousness, how it is related to the mind and body, its usefulness, and its relationship to reality.  UG  LE  Lecture
Fall 2020  KNH1480  1480  Rappelling  KNH  Kinesiology & Health 1  Fundamental skills and knowledge of Rappelling. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  CEG5750  5750  Pattern Recognition  CEG  Computer Engineering 3  Supervised and unsupervised classification are covered, including feature extraction, feature selection, distance measures, sequential clustering, hierarchical clustering, Bayesian decision theory, parameter estimation, and applications of pattern recognition.  GR  LE  Lecture
Fall 2020  BME7113  7113  Medical Image Analysis  BME  Biomedical Engineering 3  Topics of 2-D and 3-D image segmentation and registration; 2-D and 3-D feature selection; validation methods; and visualization techniques for volumetric medical images are covered.<b> Department Managed Prerequisite(s): Graduate level BME 7112 Minimum Grade of D or Undergraduate level CEG 4500 Minimum Grade of D or Graduate level CEG 6500 Minimum Grade of D- or better. </b>  GR  LE  Lecture
Fall 2020  ART2070  2070  Photography I  ART  Art 3  Exploration of black and white photographic materials and camera techniques. Investigation of aesthetic possibilities and basic processes of the media. Development of personal concepts and aesthetic expression in photography.  UG  LB  Lab
Fall 2020  LEP0550  0550  LEAP Pronunciation Imp.  LEP  LEAP 0  The course provides high-intermediate to advanced non-native English speakers with the skills they need to improve their intelligibility when speaking English. In-class activities and outside practice focus on the most important aspects of North American English pronunciation. Topics include the vowel and consonant sounds of NAE, the rhythmic and music aspects such as syllable stress and intonation, and how to use the voice and articulators to improve accuracy of speech production.  UG  LE  Lecture
Fall 2020  BIO2310L  2310L  Evolution & Ecology Lab  BIO  Biology 0  Required laboratory for BIO 2310. Integrated Writing course.  UG  LB  Lab
Fall 2020  IDL7150  7150  Digital Profession Development  IDL  Instructional Design & Learning 3  Students will use elements of instructional design and learning theory to create multimedia professional development materials.  GR  LE  Lecture
Fall 2020  HPR3560  3560  Assessment in HPE  HPR  Health Phys Edu & Recreation 3  Introduction to the construction, evaluation, and interpretation of assessments utilized in K-12 health and physical education. Emphasis on standards-based assessments and analysis of data to inform instruction. Integrated Writing course.  GR  LE  Lecture
Fall 2020  PHY7700  7700  Selected Topics  PHY  Physics 3  This course explores a topic for which no other course exists. Topics vary. Only 6 credit hours may be applied to those required for the MS degree.  GR  IS  Independent Study
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
<th>Requirement</th>
<th>Grade</th>
<th>Meeting</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS7462</td>
<td>Rehab Eng Computer II</td>
<td>BMS</td>
<td>3</td>
<td>SEM</td>
<td>Signalling and Molecular mechanisms of Apoptotic Cell Death and relationship to human diseases.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PS6990</td>
<td>Lab Rotation</td>
<td>PN</td>
<td>1</td>
<td></td>
<td>Special physiological problems or research designed for specific needs and talents of the student.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ASM8990</td>
<td>Aeromed Research Thesis</td>
<td>ASM</td>
<td>4</td>
<td></td>
<td>Under supervision of an advisor, students choose research problems, prepare bibliographical searches, plan experimental protocol, and conduct experimentation. A full report, consisting of a thesis, is written and defended before a graduate committee.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>SOC4800</td>
<td>Aging and HIV</td>
<td>SOC</td>
<td>3</td>
<td></td>
<td>Socio-historical overview of the impact of HIV/AIDS on adults 50 and older.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MUS2550</td>
<td>Piano for Music Ed I</td>
<td>MUS</td>
<td>1</td>
<td></td>
<td>Class instruction in functional keyboard skills. Continuation of MUS 1560. Special emphasis on skills needed for vocal/choral music education.</td>
<td>Fall 2020</td>
<td>UE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MGT3100</td>
<td>Pathogenic Mechanisms</td>
<td>MGT</td>
<td>4</td>
<td></td>
<td>Understanding the behavior of people within a work setting and the development of management competencies.</td>
<td>Fall 2020</td>
<td>UE</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EED8110</td>
<td>Long in a Digital World</td>
<td>EED</td>
<td>3</td>
<td></td>
<td>Instructor and course designers are introduced to the relationship between learning theory and teaching practices that incorporate digital technologies to enhance student learning.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PSY8440</td>
<td>Task Analysis/Work Analy</td>
<td>PSY</td>
<td>3</td>
<td></td>
<td>This course extends the theoretical understanding of human capabilities to the analysis of human behavior in complex work settings. The course covers the ergonomic, cognitive and socio-technical aspects of human behavior that influence any realistic work setting.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>KHE3360B</td>
<td>Karate</td>
<td>KHE</td>
<td>1</td>
<td></td>
<td>Fundamental skills and knowledge of Karate. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lab</td>
<td></td>
</tr>
<tr>
<td>BMS8720</td>
<td>Mechanisms of Cell Death</td>
<td>BMS</td>
<td>2</td>
<td></td>
<td>Signalling and Molecular mechanisms of Apoptotic Cell Death and relationship to human diseases.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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</tr>
<tr>
<td>REL5600</td>
<td>Topics in Am Religion</td>
<td>REL</td>
<td>3</td>
<td></td>
<td>Examination of inflected topics related to the history and practice of religion in America.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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</tr>
<tr>
<td>MGT3100</td>
<td>Mgt &amp; Org Behavior</td>
<td>MGT</td>
<td>3</td>
<td></td>
<td>Understanding the behavior of people within a work setting and the development of management competencies.</td>
<td>Fall 2020</td>
<td>UE</td>
<td>Lecture</td>
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</tr>
<tr>
<td>EES4300</td>
<td>Analy &amp; Pred Complex Sys</td>
<td>EES</td>
<td>3</td>
<td></td>
<td>Exploring quantitative analysis and probabilistic forecasting of the behavior of complex nonlinear natural and human systems. Methods of analysis include fractals to quantify spatial, size, and temporal scaling and chaos to study sensitivity to initial conditions and feedback. Modeling includes self-organization and cellular automata. Systems studied include seismology, chemistry, biochemistry, hydrology, medicine, geography, and coupled human and natural systems.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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</tr>
<tr>
<td>EDL9880</td>
<td>Research &amp; Educ Leader</td>
<td>EDL</td>
<td>3</td>
<td></td>
<td>Practical applications and issues in research; research design and methodology, sampling techniques, instrument development, proposal writing, and the application of skills through a research project.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>SOC3210</td>
<td>Sociology of Deviance</td>
<td>SOC</td>
<td>3</td>
<td></td>
<td>Extensive exploration of the various sociological approaches to the study of deviance and social disorganization with emphasis on contemporary sociological theory and research.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
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<tr>
<td>ED6180</td>
<td>Asaens Midst Educats</td>
<td>ED</td>
<td>3</td>
<td></td>
<td>This course focuses on varying assessment techniques and strategies (teacher-created and standardized) utilized in middle level education. Students will read, analyze and interpret assessment data to modify instruction and promote student success.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>ANT7020</td>
<td>Special Dissection</td>
<td>ANT</td>
<td>1</td>
<td></td>
<td>An independent study course in advanced anatomical dissection. Students undertake special cadaver donor dissections for use in the anatomy courses.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>LB</td>
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</tr>
<tr>
<td>PSY8630</td>
<td>Psychometrics</td>
<td>PSY</td>
<td>2</td>
<td></td>
<td>Communication-intensive seminar integrating knowledge on behavioral embryology and teratology.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Seminar</td>
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</tr>
<tr>
<td>PSY9690</td>
<td>Behav Embr &amp; Terat Cap</td>
<td>PSY</td>
<td>3</td>
<td></td>
<td>Communication-intensive seminar integrating knowledge on behavioral embryology and teratology.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Seminar</td>
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</tr>
<tr>
<td>BIO7020</td>
<td>Intro Research Biology</td>
<td>BIO</td>
<td>1</td>
<td></td>
<td>The class will emphasize building talents and skills required to succeed in the Biology M.S. program. Special emphasis will be placed on the components of proposal writing that are required for degree completion. The class will also emphasize how to conduct responsible and ethical research. This will include obtaining the necessary approvals required by the university.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>EED3650</td>
<td>Phonics &amp; Word Study P-5</td>
<td>EED</td>
<td>3</td>
<td></td>
<td>An in-depth analysis of how children in P-5 learn phonics and word study, and use this knowledge while reading and writing.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
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<tr>
<td>SCM7810</td>
<td>Supply Chain Management</td>
<td>SCM</td>
<td>3</td>
<td></td>
<td>Intensive reading or research in a selected field of supply chain management. Individualized instruction with varying topics. Permission of the instructor and departmental approval required. This course has a fee that is non-refundable once the term begins.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Independent Study</td>
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<tr>
<td>PHL3050</td>
<td>19th Century Philosophy</td>
<td>PHL</td>
<td>3</td>
<td></td>
<td>Study of 19th century European philosophy. Topics include the idealist rejection of materialism by Hegel and Schopenhauer; Kierkegaard and Nietzsche's critique of rationalism on behalf of concrete existence; and Marx's synthesis of idealism's optimism about humanity's ability to shape its world and a commitment to the material world over the ideal.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>EDL7210</td>
<td>Curr Design for Tchr</td>
<td>EDL</td>
<td>3</td>
<td></td>
<td>Management and leadership skills as related to developing and organizing curriculum and materials relating to implementing the learning program with students.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>ART3110</td>
<td>Adv Synt Accl/Class</td>
<td>ART</td>
<td>3</td>
<td></td>
<td>Intensive studies of the period, major movements, and artists of the time. Titles vary.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>EE870L</td>
<td>Antenna Thay Design Lab</td>
<td>EE</td>
<td>1</td>
<td></td>
<td>Required laboratory for EE 6470.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lect Lab</td>
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<tr>
<td>CNL7800L</td>
<td>Sys Tech in Marr &amp; Fam Lab</td>
<td>CNL</td>
<td>0</td>
<td></td>
<td>Required laboratory for CNL 7800.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lect Lab</td>
<td></td>
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<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
<td>Type</td>
<td>Letters</td>
<td>Grade</td>
<td>Notes</td>
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<td>CEG4420</td>
<td>4420 Host Computer Security</td>
<td>CEG</td>
<td>Introduces security hardening of a single system, and how to protect it when connected to a network. It explains how malware can compromise security and privacy from the moment a machine is powered on until shut down. Topics include Privilege Escalation, Buffer Overruns, Network Packet Munging, Session Hijacking, Firewalls, and ethics. Lab work uses tools such as nmap and BackTrack Linux.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>BMST410</td>
<td>7410 Struc Concept Org Chem</td>
<td>BM</td>
<td>Study of molecular orbital theory, reaction, theories of acids and bases, and an introduction to stereoisomerism.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>MUA1120</td>
<td>1120 Applied Music</td>
<td>MUA</td>
<td>Open only to music majors or minors. All students must have auditioned for and received departmental approval before registering for applied music.</td>
<td>UG</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>LDR7100</td>
<td>7100 Develop Interns Complt LDR Leadership</td>
<td>LDR</td>
<td>This course focuses upon the understanding, application, and assessment of interpersonal competencies. Further, the course addresses the emotional and social awareness necessary to sustain leadership effectiveness. This course has a fee that is non-refundable once the term begins.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ED3020</td>
<td>3020 Prin Pract &amp; Learn &amp; SLI</td>
<td>ED</td>
<td>Development of the young child in pre-adulthood, developmentally appropriate pedagogical strategies and practices for effective teaching and learning.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ART3400</td>
<td>7400 Therapeutic Interventions</td>
<td>ATR</td>
<td>Principles and applications of therapeutic interventions utilizing exercise, manual therapy, and modalities, including, but not limited to, thermal, electromagnetic, and ultrasound agents.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>SPN3260</td>
<td>3260 Business Spanish II</td>
<td>SPN</td>
<td>Study of the business culture behind Spanish. Development of the communication skills and intercultural understanding. Use of Spanish in international business. Integrated Writing course. Prerequisite: Undergraduate level SPN 3230 Minimum Grade of D or higher.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ED56570</td>
<td>6570 Inst &amp; Beh Man SKls</td>
<td>EDS</td>
<td>Prepares intervention specialists and other professionals to meet the instructional and behavioral management demands particular to working with individuals with exceptionalities, including those with severe emotional disturbance. Fifteen hours field experience required.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ARA3120</td>
<td>3120 Levantine Arabic</td>
<td>ARA</td>
<td>An introduction to the spoken Arabic dialect of Syria, Lebanon, Jordan and Palestine for advanced speakers of Arabic. Prerequisite: Undergraduate level ARA 2020 Minimum Grade of D or higher.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ME2620</td>
<td>6260 Intro Robotics</td>
<td>ME</td>
<td>(Also listed as CEG 6560 and ME 6560.) An introduction to the mathematics of robots. Topics covered include coordinate systems and transformations, manipulator kinematics and inverse kinematics, Jacobians, dynamic and trajectory planning.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>GEO6100</td>
<td>6100 Remote Sensing</td>
<td>GEO</td>
<td>Survey of remote sensing spatial analysis. Applications, technology, and spatial measurements used to interpret remote sensed images.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ASM9711</td>
<td>7971 Aerospace Research</td>
<td>ASM</td>
<td>Introduction to Aerospace Medical Research 1 will introduce students to the history of aerospace medical research and the techniques by which contemporary scientific inquiry are performed. This course will also assist students in the completion of their aerospace medicine research project required for graduation.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>EES6440</td>
<td>6440 Geophy Well Log Anal</td>
<td>EES</td>
<td>Theory, application, and interpretation of geophysical logs with emphasis on the use in correlation and determination of porosity, permeability, and fluid content of subsurface formations. Three hours lecture.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>DA3070</td>
<td>3070 Interned Tap Dance I</td>
<td>DAN</td>
<td>Group class exploring tap dance technique.</td>
<td>UG</td>
<td>ST</td>
<td>Studio</td>
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<tr>
<td>MUE4990</td>
<td>4990 Collegiate Chore</td>
<td>MUE</td>
<td>Development of advanced choral and vocal skills. Emphasis on advanced choral concert repertoire representing a wide range of historical and compositional styles. Audition required.</td>
<td>UG</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>PTX7000</td>
<td>7000 Biostats for Health Prof</td>
<td>PTX</td>
<td>Introduction to the basic principles and applications of statistical methods as they are applied to data arising in the health professions.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ISE4960</td>
<td>4960 Dept Honors Research ISE</td>
<td>ISE</td>
<td>Research in industrial and systems engineering in fulfillment of departmental honors requirements. Topics vary.</td>
<td>UG</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>EC7899</td>
<td>7899 Continuing Registration</td>
<td>EC</td>
<td>Development of advanced choral and vocal skills. Emphasis on advanced choral concert repertoire representing a wide range of historical and compositional styles. Audition required.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>BMB8000</td>
<td>8000 Biochemistry Seminar</td>
<td>BMB</td>
<td>Current departmental research in Biochemistry and Molecular Biology presented in an informal seminar format.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>GER4810</td>
<td>4810 Independent Rdg Adv Stu</td>
<td>GER</td>
<td>Topics vary. Prerequisite(s): Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D.</td>
<td>UG</td>
<td>IS</td>
<td>Independent Study</td>
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<tr>
<td>OIS1150</td>
<td>1150 Business/Office Corres</td>
<td>OIS</td>
<td>Study of terminology and formats used in business communication: letters, reports, memos, diction, grammar, sentence construction, punctuation, and spelling.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>SLI3550</td>
<td>3550 Interpreter Mentoring</td>
<td>SLI</td>
<td>Mentoring and maintaining good relationships with interpreting colleagues. Includes self-assessment techniques, improvement plans, and cognitive and emotional strategies for providing and receiving professional feedback.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>EDR390</td>
<td>3900 Inst Design Online Learn</td>
<td>EDT</td>
<td>Use learning theory and instructional design principles to develop high quality, engaging online instruction.</td>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>ACC3010</td>
<td>3010 Intermediate Account I</td>
<td>ACC</td>
<td>Financial accounting concepts applied to complex problems in the measurement of balance sheet accounts, determination of net income and preparation of financial statements. Course emphasizes measurement and reporting of assets.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>ENG650</td>
<td>6500 Sp Topics Creative Writ</td>
<td>ENG</td>
<td>Specialized courses in genres, modes, styles, practices, creative processes, and the craft of fiction, creative non-fiction, poetry, or playwrighting.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>KIN5500</td>
<td>5500 Tech &amp; Emergency Mgmt</td>
<td>KIN</td>
<td>Explores technology applications of emergency management.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>CHM5520</td>
<td>5520 Physical Chemistry II</td>
<td>CHM</td>
<td>Theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>MIL1010</td>
<td>1010 Ldsplp &amp; Prsl Development</td>
<td>MIL</td>
<td>Introduction to the personal challenges and competencies that are critical for effective leadership. Relationship of life skills such as goal setting, time management, physical fitness, stress management, leadership, decision making, efficacy, and the Army profession. Contracted students are required to participate in two-hour lab, physical fitness program and weekend training exercises.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<td>Code</td>
<td>Year</td>
<td>Title</td>
<td>Credits</td>
<td>Description</td>
<td>Type</td>
<td>Location</td>
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<tr>
<td>SPN2020</td>
<td>2020</td>
<td>Intermediate Spanish II</td>
<td>3</td>
<td>Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Taught in Spanish.</td>
<td>UG</td>
<td>LE</td>
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</tr>
<tr>
<td>REL6810</td>
<td>2020</td>
<td>Independent Study</td>
<td>1</td>
<td>Faculty-directed, individualized study on student-selected topics. Limited to advanced students. Permission of faculty and a minimum 3.5 GPA required.</td>
<td>GR</td>
<td>IS</td>
<td></td>
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</tr>
<tr>
<td>BIE7360</td>
<td>2020</td>
<td>Cognitive Systems Engr</td>
<td>3</td>
<td>Students will acquire knowledge and experience that will assist them in developing quantitative means of modeling, analyzing, and predicting the performance of human-machine systems. Topics include human-system integration, automation, cognitive engineering, discrete control modeling, cognitive field research, information processing, decision theory, heuristics and biases, and expert and analytical reasoning.</td>
<td>GR</td>
<td>LE</td>
<td></td>
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<tr>
<td>MUE5770</td>
<td>2020</td>
<td>Chamber Orchestra</td>
<td>1</td>
<td>Instrumental ensembles, consisting primarily of strings and varying combinations of wind and percussion instruments, devoted to the study and performance of music written for that medium.</td>
<td>UG</td>
<td>IS</td>
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<tr>
<td>NUR3040</td>
<td>2020</td>
<td>Finan Resour Mgmt Nig Ad</td>
<td>5</td>
<td>Financial management concepts for nurses administrators. Content focuses on financial reporting function, resource allocation, managerial issues related to finance, financial planning and control in nursing administration.</td>
<td>UG</td>
<td>LE</td>
<td></td>
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<tr>
<td>EES4450</td>
<td>2020</td>
<td>Petroleum Geology</td>
<td>3</td>
<td>History and legal aspects of the petroleum business including lease acquisition, assignment of working interests, overriding royalties, etc. Petroleum geology, oil and gas exploration technologies, geology of oil producing regions, well drilling, well interpretation, enhanced oil and gas recovery, CO2 sequestration, production equipment, oil and gas sales and marketing.</td>
<td>UG</td>
<td>LE</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>COM4570</td>
<td>2020</td>
<td>Intercultural Comm</td>
<td>3</td>
<td>Emphasis on research and theory to better understand the complexity of cross-cultural communication interactions.</td>
<td>UG</td>
<td>LE</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CEG9990</td>
<td>2020</td>
<td>Computer Engineering</td>
<td>0</td>
<td>Practical work experience in graduate level Computer Engineering.</td>
<td>GR</td>
<td>IN</td>
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</tr>
<tr>
<td>EED3210</td>
<td>2020</td>
<td>Elementary Education P-S</td>
<td>1</td>
<td>Candidates, mentored by an elementary educator, assist in the planning, organizing, delivering, and assessing of instruction in a P-5 grade setting applying pedagogical content knowledge from elementary education methods.</td>
<td>UG</td>
<td>PR</td>
<td></td>
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</tr>
<tr>
<td>EES7490</td>
<td>2020</td>
<td>Modeling Sub Fluid Flow</td>
<td>3</td>
<td>Applications of models for simulating subsurface flow and mass transport in aquifers and oil gas reservoirs. The emphasis will be on developing the dimensibility, the spatial and temporal discretization, the initial and boundary conditions, and the parameterization needed in formulating a model from field data.</td>
<td>GR</td>
<td>LE</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PSY9050</td>
<td>2020</td>
<td>Quasi-Experimentation</td>
<td>4</td>
<td>Issues in design and analysis for field settings are reviewed. These issues quasi-experimental design, validity, and statistical analysis.</td>
<td>GR</td>
<td>SE</td>
<td></td>
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</tr>
<tr>
<td>PSY3230</td>
<td>2020</td>
<td>Cognition &amp; Learning Mth</td>
<td>3</td>
<td>Laboratory research in various areas of cognitive psychology. Integrated Writing course.</td>
<td>UG</td>
<td>LE</td>
<td></td>
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</tr>
<tr>
<td>MGT4780</td>
<td>2020</td>
<td>Human Ind Study in Mgmt</td>
<td>3</td>
<td>Emphasis on research in various areas of cognitive psychology. Integrated Writing course.</td>
<td>UG</td>
<td>IS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY6220</td>
<td>2020</td>
<td>Psycholingistics Cup</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on language: its development during the first years of life, its biological basis, its normal and abnormal characteristics.</td>
<td>GR</td>
<td>SE</td>
<td></td>
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</tr>
<tr>
<td>EDT340</td>
<td>2020</td>
<td>LMS &amp; Evaluation</td>
<td>3</td>
<td>Examines integrating curriculum with educational technologies such as leaning management systems and the knowledge and skills necessary to evaluate the quality of online courses.</td>
<td>GR</td>
<td>LE</td>
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</tr>
<tr>
<td>NUR3130</td>
<td>2020</td>
<td>Psych MH NP Pract III</td>
<td>7</td>
<td>The focus is on synthesis of knowledge and implementation of the role of the Psychiatric-Mental Health Nurse Practitioner (PMHNP). Experiences emphasize clinical decision making in an interprofessional environment with focus on the PMHNP as a principle provider of care for individuals with acute and chronic psychiatric/mental health disorders across the lifespan.</td>
<td>GR</td>
<td>LE</td>
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</tr>
<tr>
<td>ES7140</td>
<td>2020</td>
<td>Complexity in Env System</td>
<td>4</td>
<td>The emphasis is on synthesis of knowledge and implementation of the role of the Psychiatric-Mental Health Nurse Practitioner (PMHNP). Experiences emphasize clinical decision making in an interprofessional environment with focus on the PMHNP as a principle provider of care for individuals with acute and chronic psychiatric/mental health disorders across the lifespan.</td>
<td>GR</td>
<td>LE</td>
<td></td>
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</tr>
<tr>
<td>SLI1700</td>
<td>2020</td>
<td>Interpreting Process</td>
<td>3</td>
<td>Cognitive skills used in the process of interpreting: visualization, prediction, listening, memory, abstracting, closure, dual tasking, and processing time. Introduction to Demanda Control Schema.</td>
<td>UG</td>
<td>LE</td>
<td></td>
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<tr>
<td>BME6720</td>
<td>2020</td>
<td>Biomedical Optics</td>
<td>3</td>
<td>Quantitative biomedical optics, principles and applications of light propagation in biological tissues; optical imaging contrasts, light transport models including photon diffusion in living tissue; optical devices for light-based diagnostics for cancer detection, brain function monitoring; light-based therapies as alternative treatment for cancer and brain diseases. Application of concepts in lab experiments. Presentation of translational research of optical methods and clinical applications.</td>
<td>GR</td>
<td>LE</td>
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<tr>
<td>SAA6680</td>
<td>2020</td>
<td>Career Dev Prog/Employment</td>
<td>3</td>
<td>Focus of the course will be on understanding group facilitation dynamics, working with and understanding individuals from diverse backgrounds, applying Career Development Facilitator ethical guidelines to real world situations, writing and critiquing job search correspondence, evaluating interviewing models, and developing appropriate career programs for various individuals and groups.</td>
<td>GR</td>
<td>LE</td>
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<tr>
<td>BIO6440</td>
<td>2020</td>
<td>Plant Physiology</td>
<td>4</td>
<td>Course covers plant physiology, including the major features of nutrition, photosynthesis, transport, hormones, development, and environmental responsiveness. Laboratory will expose students to analytical techniques, experimental design, and interpretation and communication of scientific results.</td>
<td>GR</td>
<td>LE</td>
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</tbody>
</table>
Fall 2020

**STT6610** 6610 Theory of Statistics I  STT Statistics 4 Probability, random variables, density and distribution functions, expectation, moment generating functions, special discrete and continuous distributions; joint, marginal and conditional distributions; independence, properties of expected values, functions of random variables, order statistics, transformations, limiting distributions, convergence in distribution, central limit theorem, statistics and sampling distributions. <br><sup>(GR</sup> Department Manager Prerequisite(s): Undergraduate level MTH 2320 Minimum Grade of D-)<sup>)<br></sup><br><sup>(LE</sup> Guest lecturers from high-tech companies provide insight on entrepreneurship and innovation. Students gain an understanding of the associated challenges, as well as the resources available within the community.<sup>)(GR</sup><br><sup>(UG</sup> SE Lecture

**ISE4420** 4420 I&E Seminar Series  ISE Industrial & Systems Engr 1 Seminars meet once a week. Guest lecturers from high-tech companies provide insight on entrepreneurship and innovation. Students gain an understanding of the associated challenges, as well as the resources available within the community.<br><sup>(GR</sup> SE Seminar

**EES6460** 6460 Sequence Stratigraphy  EES Earth & Environmental Sciences 3 Examines the mechanisms that produce sea-level change, how sediments respond to changes in sea-level, and how the architecture of basins may be assessed using the sequence stratigraphic model. Topics include the scales of stratigraphic cycles, seismic applications and outcrop scale high-resolution sequence stratigraphy.<br><sup>(GR</sup> LE Lecture

**EES6100** 6100 Earth Science Research  EES Earth & Environmental Sciences 3 Provides research experience to prospective high-school science teachers. Students will use laboratory and library research to give qualitative explanations of natural phenomena.<br><sup>(GR</sup> LB Lab

**HST7120** 7120 Seminar in AC-Arm History  HST History 3 Focuses on African Diaspora in the Americas. Topics include the black experience in the United States and Latin America from the colonial period to the present. Topics vary.<br><sup>(GR</sup> SE Seminar

**ENG6440** 6440 Studies Ethnic/Reg Lit  ENG English 3 Intensive study of literature from different regions of America or reflecting the experiences of different ethnic groups. Intended to develop an understanding of race, region, and ethnicity as important both to literature and to its critical appreciation.<br><sup>(GR</sup> LE Lecture

**BME7116L** 7116L Instrumentation Meas Lab  BME Biomedical Engineering 0 Required laboratory for BME 7116.<br><sup>(GR</sup> LB Lab

**PHIL5140** 5140 Theories of Knowledge  PHL Philosophy 3 Examination of philosophical theories of knowledge from ancient times to the present. Readings vary but may include: Plato, Descartes, Hume, Kant, Russell, Moore, Gettier, Nozick, Bonjour, Quine, Kripke, Putnam and Williamson.<br><sup>(GR</sup> LE Lecture

**BHE6330** 6330 Egr in Occup Sfty & Hlth  BHE Industrial & Hum Fac Engr 3 Topics include: Plato, Descartes, Hume, Kant, Russell, Moore, Gettier, Nozick, Bonjour, Quine, Kripke, Putnam and Williamson.<br><sup>(GR</sup> LE Lecture

**ASME510** 510 Aerospace Medicine Basic  ASM Aerospace Medicine 3 An introduction to the basics of aerospace medical issues that prepares students for the aeromedical concerns and operational flight environment course. Subject matter includes aerospace medical history, illnesses, atmospheric physics, physical environmental issues such as radiation, thermal issues, noise, and space environments.<br><sup>(GR</sup> LE Lecture

**BIO5460** 5460 Concept in Bio II for Ed  BIO Biology 4 Concepts and applications of biology formulated to model implications of state and national pedagogical standards, aimed specifically at preparing students for biology teaching in Grades 4-9.<br><sup>(GR</sup> LL Lecture/Lab Combination

**ENGG710** 710 Intro to Linguistics  ENG English 3 Presents a survey of the scientific study of language and focuses on describing and explaining languages in their natural environment. Includes phonetics, phonology, morphology, syntax, semantics, pragmatics, and sociolinguistics.<br><sup>(GR</sup> LE Lecture

**EDLE720** 720 Bklg-Level Leadership  EDL Educational Leadership 3 Developing procedures of administering staff personnel aspects of school operation. Areas of recruitment, selection, induction, appraisal, development, compensation, and motivation are covered.<br><sup>(GR</sup> LL Lecture/Lab Combination

**ATH5800** 5800 Sp Topics in Anth Method  ATH Anthropology 3 Selected topics concerning the training of graduate students in current methodologies used in cultural, biological or archaeological anthropology. Topics vary.<br><sup>(GR</sup> LE Lecture

**CEG430L** 430L Intro Robotics Lab  CEG Computer Engineering 1 First exposure to plant modeling and controller design to realize elementary control strategies in a laboratory environment.<br><sup>(UG</sup> LB Lab

**ANTT210** 210 Human Micronatomy  ANT Anatomy 3 Detailed micronatomy of human cells, tissues, and organ systems.<br><sup>(GR</sup> LL Lecture/Lab Combination

**MB990** 990 Microbiology Research  MI Microbiology & Immunology 2 Supervised thesis research.<br><sup>(GR</sup> LB Lab

**PSY6010** 6010 Adv Research Methods  PSY Psychology 4 Advanced methods in selected areas of psychology.<br><sup>(GR</sup> LL Lecture/Lab Combination

**BIO6200** 6200 Design Bio Experiments  BIO Biology 3 This course presents an overview of effective sampling design for biological studies. It shows how to reconcile the peculiarities of biological data with the assumptions of statistical methods. It introduces some statistical methods useful in biology though rarely covered in introductory statistics courses. It outlines the major ways that data are analyzed in biology. It discusses ways to present results.<br><sup>(GR</sup> LE Lecture

**ART13120** 13120 Studies in Medieval Art  ART Art 3 General surveys and intensive studies of the period, major movements, and artists of the time. Titles vary.<br><sup>(GR</sup> LE Lecture

**EC4600** 4600 Economics of Sports  EC Economics 3 Applications of economic principles to professional and intercollegiate sports.<br><sup>(UG</sup> LE Lecture

**EDL9700** 9700 Practicum I: Supt  EDL Educational Leadership 1 The practicum provides significant opportunities for candidates to synthesize and apply the knowledge and skills identified in the district-level standards through substantial, sustained, standards-based work in real settings.<br><sup>(GR</sup> IN Internship

**ME6940** 6940 Mech & Mat EGR Intern  ME Mechanical and Materials Engr 3 Department internship course. Students are supervised via weekly seminars and regular feedback from employer.<br><sup>(GR</sup> IN Internship

**AVI2002** 2002 Private Pilot Flight Lab  AVI Aviation 2 Aeronautical knowledge and experience. Develop the flight proficiency necessary to meet the requirements for a private pilot certificate.<br><sup>(UG</sup> LB Lab

**SOC2210** 2210 Explore Social Problems  SOC Sociology 3 Focuses on specific social problems. Topics vary.<br><sup>(UG</sup> LE Lecture

**PSY4420** 4420 Organizational Psy Cap  PSY Psychology 3 Communication-intensive seminar integrating knowledge on organizational psychology. Organizational psychology focuses on how individuals function within an organization. Topics include job satisfaction, group dynamics, and motivation. Integrated Writing course.<br><sup>(UG</sup> SE Seminar

**ART2110** 2110 Art Hist I: Ancient-Ren  ART Art 3 Historical survey of painting and sculpture in the Western world from antiquity to the Renaissance. Introduces the basic concepts of visual and stylistic analysis.<br><sup>(UG</sup> LE Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
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<tr>
<td>SW6460</td>
<td>Con Foc Older Adults Pol</td>
<td>3</td>
<td>SW</td>
<td>Social Work</td>
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<tr>
<td>SOC6640</td>
<td>Gender and Sexuality</td>
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<td>SOC</td>
<td>Sociology</td>
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<td>FNP Practicum</td>
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<td>NUR</td>
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<td>KHE3820B</td>
<td>Winter Camping</td>
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<td>Kinesiology &amp; Health</td>
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<td>HED4570</td>
<td>Hlhs-Fr Chronic Disease</td>
<td>3</td>
<td>HED</td>
<td>Health Education</td>
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<td>EDD250</td>
<td>Urban Youth</td>
<td>3</td>
<td>ED</td>
<td>Education</td>
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<td>ASM1717</td>
<td>Humans/Machines Extm</td>
<td>4</td>
<td>ASM</td>
<td>Aerospace Medicine</td>
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<tr>
<td>MIS1150</td>
<td>Intro to Bus Programming</td>
<td>3</td>
<td>MIS</td>
<td>Management Information Systems</td>
</tr>
<tr>
<td>KHE1040A</td>
<td>Army Fitness Training</td>
<td>1</td>
<td>KHN</td>
<td>Kinesiology &amp; Health</td>
</tr>
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<td>PLS4260</td>
<td>Supreme Court</td>
<td>3</td>
<td>PLS</td>
<td>Political Science</td>
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<tr>
<td>REL5430</td>
<td>Buddhism</td>
<td>3</td>
<td>REL</td>
<td>Religion</td>
</tr>
<tr>
<td>BMS7220</td>
<td>Upper Orthopedic Eng</td>
<td>7220</td>
<td>BMS</td>
<td>Biomedical Sciences</td>
</tr>
<tr>
<td>ISM8000</td>
<td>Research &amp; Career Dev I</td>
<td>8000</td>
<td>ISM</td>
<td>Interdisc. Appl. Sci. and Math</td>
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<tr>
<td>ENG4735</td>
<td>TESOL Theory and Culture</td>
<td>4735</td>
<td>ENG</td>
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</tr>
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<td>PSY5310</td>
<td>Personality Psychology</td>
<td>5310</td>
<td>PSY</td>
<td>Psychology</td>
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<td>20th C Political PHL</td>
<td>5320</td>
<td>PHL</td>
<td>Philosophy</td>
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<td>ECE3400</td>
<td>3400 Class Mgmt &amp; Pos Guide</td>
<td>3400</td>
<td>ECE</td>
<td>Education - Early Childhood</td>
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<td>PL52510</td>
<td>Comp NW Social Systems</td>
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<td>PLS</td>
<td>Political Science</td>
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<td>7030 Math &amp; Mat: TESOL</td>
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<td>ENG</td>
<td>English</td>
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<td>MII7720</td>
<td>Mechanics of Cell Death</td>
<td>7720</td>
<td>MII</td>
<td>Microbiology &amp; Immunology</td>
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<tr>
<td>ECE5020</td>
<td>ECEG Eff LA-SS Instr</td>
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<td>Education - Early Childhood</td>
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<tr>
<td>PSI9590</td>
<td>Integrative Psycho.</td>
<td>9590</td>
<td>PSI</td>
<td>Professional Psychology</td>
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<tr>
<td>ATR8350</td>
<td>Upper body Assessment</td>
<td>3850</td>
<td>ATR</td>
<td>Athletic Training</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>EE6480</td>
<td>Remote Sensing Det &amp; Sys</td>
<td>EE</td>
<td>4</td>
<td>Learn to analyze and design electro-optic (EO), infrared (IR), and microwave (radar) detection systems commonly used in remote sensing. Topics include remote sensing applications, electromagnetic wave theory, black body radiation, optics and imaging systems, EO, IR, and radar detector design specifications, basic detection and estimation theory, and basic laboratory measurements with EO, IR and radar detectors.&lt;br&gt;Department Managed Prerequisite(s): Graduate level EE 5450 Minimum Grade of C-&lt;br&gt;GR LE Lecture Combination</td>
</tr>
<tr>
<td>MTH2230</td>
<td>Calculus III</td>
<td>MTH</td>
<td>4</td>
<td>Vector functions and their derivatives, motion in two and three dimensions, lines, planes, and parametric surfaces, spherical and cylindrical coordinates. Partial derivatives and multiple integrals in two and three dimensions. Vector fields, line and surface integrals.&lt;br&gt;Grads, Divisions, and State's Instru.</td>
</tr>
<tr>
<td>ME7120</td>
<td>Finite Elem Method Appl</td>
<td>ME</td>
<td>3</td>
<td>Concepts of dynamic analysis using the finite element method (FEM). Application of various computational techniques to dynamic structures and thermal systems including vehicle dynamics. 3 hours lecture, 2 hours lab.&lt;br&gt;Department Managed Prerequisite(s): Graduate level ME 6120 Minimum Grade of D-&lt;br&gt;GR LE Lecture</td>
</tr>
<tr>
<td>STT3600</td>
<td>Applied Statistics I</td>
<td>STT</td>
<td>3</td>
<td>Introduction to probability, random variables and their expectations, some commonly used discrete and continuous distributions, concept of random sampling and sampling distributions. Use of computer software packages for simulating, summarizing, and displaying data.&lt;br&gt;UG LE Lecture</td>
</tr>
<tr>
<td>MUS3250</td>
<td>Choral Conducting</td>
<td>MUS</td>
<td>2</td>
<td>Practical applications of conducting, teaching, and rehearsing in actual conducting situations with live performers.</td>
</tr>
<tr>
<td>KNH1240</td>
<td>Golf</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Golf. Competency-based approach. Course may accommodate disabled students when appropriate.&lt;br&gt;UG LB Lab</td>
</tr>
<tr>
<td>SOC3230</td>
<td>Intensive Alcohol Ed</td>
<td>SOC</td>
<td>1</td>
<td>Observations of and participation in intensive alcohol education program which presents individuals with factual material about the effects of substance abuse.</td>
</tr>
<tr>
<td>REL3720</td>
<td>Pentateuch</td>
<td>REL</td>
<td>3</td>
<td>Pastoral and social narratives and Mosaic legislation of the Pentateuch or Torah, the initial five books of the Bible.&lt;br&gt;UG LE Lecture</td>
</tr>
<tr>
<td>SL4950</td>
<td>Practicum Seminar</td>
<td>SLI</td>
<td>1</td>
<td>Seminar accompanying SLI Practicum placement courses. Discussion and review of practicum experiences, with personal and professional support.&lt;br&gt;UG SE Seminar</td>
</tr>
<tr>
<td>SL4920</td>
<td>Practicum I</td>
<td>SLI</td>
<td>3</td>
<td>Practicum placement in community, business or post secondary educational setting under the direct supervision of a mentor interpreter. 150 hour minimum on-site placement.</td>
</tr>
<tr>
<td>MIS3810</td>
<td>Intro to Business Data</td>
<td>MIS</td>
<td>3</td>
<td>An introduction to the fundamentals of identifying, gathering, managing, visualizing, and analyzing structured, semi-structured, and unstructured data for business decision-making and performance.&lt;br&gt;UG LE Lecture</td>
</tr>
<tr>
<td>LE1050</td>
<td>Int to Crim Eval &amp; Proc</td>
<td>LE</td>
<td>3</td>
<td>Organization and functioning of the court system. Review of arrest and search procedures, issues due process such as the Sixth Amendment and Miranda Law and the role of police, attorneys, and prosecutors.&lt;br&gt;Department Managed Prerequisite(s): Undergraduate level LE 1008 Minimum Grade of D-&lt;br&gt;LE LE Lecture</td>
</tr>
<tr>
<td>ED6470</td>
<td>MA Intern Pl 1- MiH WL</td>
<td>ED</td>
<td>1</td>
<td>Candidates, mentored by a world languages educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a P-12th grade setting applying pedagogical content knowledge from world language content and methods courses.</td>
</tr>
<tr>
<td>DAN4110</td>
<td>Modern Dance IV</td>
<td>DAN</td>
<td>3</td>
<td>Advanced work in various modern dance techniques and styles.</td>
</tr>
<tr>
<td>CST230</td>
<td>Information Theory</td>
<td>CS</td>
<td>3</td>
<td>Course addresses the following questions that are fundamental to the design and evaluation of all information systems: What is information? How can we measure it? What are the fundamental limits on the extraction of information from the environment? What are the fundamental limits on the compression and refinement of information? How should devices be designed to approach these limits? How closely do existing devices approach these limits?&lt;br&gt;Department Managed Prerequisite(s): Undergraduate level EE 3260 Minimum Grade of D-&lt;br&gt;GR GE Lecture</td>
</tr>
<tr>
<td>HST4820</td>
<td>Military History</td>
<td>HST</td>
<td>4</td>
<td>Intensive analysis of topics in the history of military affairs in the world since the late 15th century. Will examine main currents, principal themes, prominent issues and major historiographic debates in the field. Topics vary. Integrated Writing course.</td>
</tr>
<tr>
<td>ATR4620</td>
<td>Adv Concepts in AT</td>
<td>ATR</td>
<td>3</td>
<td>Advanced knowledge, skills and dispositions required of the entry-level Certified Athletic Trainer and application of that knowledge.&lt;br&gt;UG LE Lecture</td>
</tr>
<tr>
<td>MUA4110</td>
<td>Applied Music</td>
<td>MUA</td>
<td>1</td>
<td>Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.&lt;br&gt;IS Independent Study</td>
</tr>
<tr>
<td>BIO7880</td>
<td>Continuing Enrollment</td>
<td>BIO</td>
<td>0</td>
<td>Work toward completion of thesis research, completion of written thesis or completion of an internship or residency program.&lt;br&gt;IS Independent Study</td>
</tr>
<tr>
<td>GER3980</td>
<td>Studies in Selc Sub</td>
<td>GER</td>
<td>1</td>
<td>Individual research project approved and supervised by a full-time faculty member. Taught in German.&lt;br&gt;Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D or Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D-&lt;br&gt;IS Lecture</td>
</tr>
<tr>
<td>CLS4970</td>
<td>Senior Project</td>
<td>CLS</td>
<td>3</td>
<td>Guided research culminating in a major paper on a topic chosen by the student and the instructor. Students develop a comprehensive bibliography, prepare a detailed outline, and write and revise the final project. May be completed for Honors.</td>
</tr>
<tr>
<td>PSY3510</td>
<td>Social Psychology</td>
<td>PSY</td>
<td>3</td>
<td>Current theories and experimental findings examining the situational and social causes underlying people's attitudes, beliefs, and behaviors.</td>
</tr>
<tr>
<td>NUR7998</td>
<td>Supervised NUR Exp</td>
<td>NUR</td>
<td>1</td>
<td>Guided exploration of research problem(s) under direct supervision of experienced researcher&lt;br&gt;GR LE Lecture</td>
</tr>
<tr>
<td>WGS3260</td>
<td>Woman Multicultural Pers</td>
<td>WGS</td>
<td>3</td>
<td>Issues, approaches, and topics in woman and gender studies. Explores racial, ethnic, cultural, and other differences among women within the U.S. Titles and topics vary.</td>
</tr>
<tr>
<td>PLS6824</td>
<td>Local/City Internship</td>
<td>PLS</td>
<td>3</td>
<td>Intern 12-15 hours per week in a local governmental office. Jobs include working with city managers, mayors, and other city leaders to meet local needs and help with specific projects.&lt;br&gt;GR IN Internship</td>
</tr>
<tr>
<td>KNH400</td>
<td>Lifeguard Training</td>
<td>KNH</td>
<td>1</td>
<td>Intermediate level of skills and knowledge in lifeguarding. Competency-based approach. Students should check competency levels posted in physical education building before enrolling.</td>
</tr>
</tbody>
</table>

Fall 2020 Courses
Fall 2020  CEG3970  3970  Independent Study  CEG  Computer Engineering  1  Independent study in computer engineering topics.  UG  IS  Independent Study
Fall 2020  CME6490  6490  Survey of Com Research  COM  Communication  3  Introduction to the behavioral approach and current theories and experiments in communications research.  GR  LE  Lecture
Fall 2020  CEG7920  7920  Independent Study in CEG  CEG  Computer Engineering  1  Independent study in computer engineering  GR  IS  Independent Study
Fall 2020  CEG8930  8930  PhD Qualifying Exam  CEG  Computer Engineering  1  Examination that tests understanding of the fundamentals necessary to begin concentrated study in a chosen Ph.D. research area.  GR  IS  Independent Study
Fall 2020  CS4280  4280  Combinatorics and Graphs  CS  Computer Science  4  Permutations, combinatorics, generating functions, recurrence relations, and Polya's theory of counting; methods, results, and algorithms of graph theory, with emphasis on graphs as mathematical models applicable to organizational and industrial situations.  UG  LE  Lecture
Fall 2020  IT2010  2010  Photoshop I  IT  Information Technology  3  Introduction to computer imaging and photo manipulation using raster-based Photoshop software. Filters and text will be explored. 2 hours lecture/2 hours lab.  UG  LL  Lecture/Lab
Fall 2020  HEA5290  9290  Athl High Ed  HEA  Higher Education Admin  3  Explores the role and impact of athletic programs at the intercollegiate level. Students study administrative and organizational structure, specialized functions, and professional career opportunities within the field of intercollegiate athletics. Planning, financing, programming, and management are studied, as well as the role of athletics within the educational experience.  GR  LE  Lecture
Fall 2020  CNL7790  7790  Jdmp Study Minor Prob  CNL  Counseling  1  Planned reading and/or project under the guidance of a Department of Human Services faculty member.  GR  IS  Independent Study
Fall 2020  EE6360  6360  Digital Signal Proc  EE  Electrical Engineering  3  Introduces principles and applications of digital signal processing (DSP) from the design and implementation perspective. Introduction to advanced digital signal processing design concepts. Focus on time and frequency domain algorithms. Methods include multirate signal processing. Filter banks, time-frequency analysis, and wavelets.  UG  LE  Lecture
Fall 2020  PSY9010  9010  Signal Detection Theory  PSY  Psychology  3  Presents signal detection theory in the context of Thurstonian scaling and statistical decision theory. Studies the application of signal detection theory in various areas of psychology including psychophysics, memory, physiology, and psycholinguistics.  GR  LE  Lecture
Fall 2020  EES6200  6200  Micropaleontology  EES  Earth & Environmental Sciences  3  Understand the origination, evolution, and diversity of microfossil organisms. The utilization of microfossils are as biosstratigraphic indicators, and their role in interpreting the geologic history of the Earth. Palaeoecology and paleoenvironmental reconstruction using specific microfossil organisms. Microfossils as indicators of metamorphism  GR  LB  Lab
Fall 2020  EE5450L  5450L  Electromagnetics Lab  EE  Electrical Engineering  1  Laboratory supporting EE 5450. Students will experience hands on learning in lab environment.  GR  LB  Lab
Fall 2020  PSY3710  3710  Perception  PSY  Psychology  3  Examines active processes by which organisms gather, interpret, and respond to environmental stimuli.  UG  LE  Lecture
Fall 2020  FTN4800  4800  Special Topics in Fin  FIN  Finance  3  Seminar in a finance topic of current and timely interest. Topics vary.  UG  SI  Seminar
Fall 2020  SOC4110  4110  Urban Sociology  SOC  Sociology  3  Examines the role of cities in past and present societies, the social and cultural implications of urban living, and special problems associated with city life.  GR  LE  Lecture
Fall 2020  BUS4000  4000  Applied Business Plan  BUS  Business  3  Provides students with a contemporary entrepreneurial experience by solving real business challenges & working with local executives. Student objectives are to face an unstructured business situation & develop recommendations to address the opportunity for commercialization; put fundamental business planning skills into practice; use forecasting methods (e.g., SWOT, marketing & competitive analysis, forecasts, ROI) to develop recommendations.  UG  PB  Practicum
Fall 2020  CHH4000  4000  Univ Honors Seminar  UH  University Honors  3  Emphasis on broadly interdisciplinary topics or issues. Integrated Writing course.  UG  SE  Seminar
Fall 2020  MUE2490  2490  Chamber Players  MUE  Music Ensembles  1  Exploration of performance repertoire composed expressly for small wind ensemble. Works by such composers as Mozart, Strauss, Dvorak, Britten, and Stravinsky. Consent of conductor and student's applied instructor required.  UG  LL  Lecture/Lab
Fall 2020  SCM7910  7910  Perf Mus & SC Transform  SCM  Supply Chain Management  3  Demand management strategies that an organization can use to efficiently combine demand with supply. Course also covers how to manage an organization’s forecasting efforts for use in supply chain planning. This course has a fee that is non-refundable once the term begins.  GR  LE  Lecture
Fall 2020  NUR2021H  2021H  Evidence Based Leadership  NUR  Nursing  3  This course examines evidence practices in leadership practices in complex health care settings focusing on creating and evaluating innovative practices including model applications for financial and clinical outcomes.  GR  LE  Lecture
Fall 2020  CHM2110L  2110L  Organic Chemistry Lab I  CHM  Chemistry  2  Laboratory illustrations of CHM 2110 lecture material and techniques of preparative organic chemistry.  UG  LB  Lab
Fall 2020  DMV1020  1020  DMV Registration  DMV  DMV Consortium  0.5  Students use expert-tool software on each project. Department Managed Prerequisite(s): Graduate level EES 6540 Minimum Grade of D- or Undergraduate level EES 3250 Minimum Grade of D- or Undergraduate level EES 3250 Minimum Grade of D-<b> or Undergraduate level EES 3250 Minimum Grade of D-</b>
Fall 2020  SPH3440  3440  Spanish-American Culture  SPH  Spanish  3  Study of Spanish-American culture with emphasis on its uniqueness among the family of nations. Taught in Spanish. Students who take SPH 3440 may not take ML 3401 for credit. <b>or Department Managed Prerequisite(s): Undergraduate level SPH 3210 Minimum Grade of D or Undergraduate level SPH 3250 Minimum Grade of D- or Undergraduate level SPH 3250 Minimum Grade of D-</b>
Fall 2020  MTH3140  3140  Mathematical Software  MTH  Mathematics  3  Solving scientific problems using computational software packages MATLAB and Mathematica, including procedural and functional programming.  UG  LE  Lecture
Fall 2020  BIO3700  3700  Biotech  BIO  Biology  3  Provides an opportunity to learn about contemporary issues in biology, medicine, and health; recognize, compare, contrast, approach biotechnological and social issues; and acquire and separate factual knowledge from opinion, and demonstrate critical thinking. Integrated Writing course.  UG  LE  Lecture
Fall 2020  MUA3420  3420  Applied Music  MUA  Music Applied Music  4  Open only to music majors or minors. All students must have audited and have received departmental approval before registering for applied music.  UG  IS  Independent Study
Fall 2020  EES7480  7480  Subsurf Hydraulics  EES  Earth & Environmental Sciences  2  Evaluating, analyzing, and interpreting hydraulic data, with particular emphasis on data from pumping tests. Students are presented with a new data set each week, and lectures outline an appropriate methodology to apply to each data set. Students use expert-tool software on each project.  GR  LL  Lecture/Lab
Fall 2020  BIO4950  4950  Senior Honors Research  BIO  Biology  1  Independent research working closely with a faculty sponsor on the formulation and execution of a research project and thesis preparation. Acceptance into the Departmental Honors Program required.  UG  IS  Independent Study
Fall 2020
EE2010L 2010L Analog Circuit Theory Lab EE Electrical Engineering 1 Transform-calculus approach to computer-assisted analysis, instantaneous and dynamic circuits, operational amplifiers and applications. Thevenin equivalents, frequency-domain and time-domain responses, simulation and realization of theoretical predictions. <b>UG</b> Department Managed Prerequisite(s): Undergraduate level ENG 1100 Minimum Grade of C and Undergraduate level MTH 2310 Minimum Grade of C and Undergraduate level PHY 2410 Minimum Grade of D (PHY 2410 can be taken concurrently).<b>UG</b>

Fall 2020
BME6710 6710 Optical Imaging BME Biomedical Engineering 3 Biophotonics and optical imaging concepts. Basic optics, light propagation in tissue, modern microscopy techniques, diagnostic use of lasers (optical biopsies, optical spectroscopy, optical imaging), thermal aspects of light-tissue interaction, therapeutic use of laser (laser ablation, photodynamic therapy, light-activated therapy), novel technologies and applications including optical molecular imaging. Includes microscopy facility tour and small lab experiments. <b>GR</b> Department Managed Prerequisite(s): Undergraduate level PHY 2410 Minimum Grade of D.<b>GR</b>

Fall 2020
ART3470 3470 Beginning Painting ART Art 3 Working from still life, figure, and landscape emphasizing the use of color and drawing in visual organization. This course has a fee that is non-refundable once the term begins. <b>UG</b> Department Managed Prerequisite(s): Undergraduate level ART 2090 Minimum Grade of D and Undergraduate level ART 2080 Minimum Grade of D.<b>UG</b>

Fall 2020
AES2230 2230 Evolution of USAF II AES Aerospace Studies 1 Preparation for Field Training summer program. Training is cadet-led. Requires participation in two weekly physical training sessions. <b>UG</b> LE Lecture

Fall 2020
BMS4620 8620 Human Physiology BMS Biomedical Sciences 4 (Also listed as P&N 6100.) An overview of human/mammalian organ physiology. Fundamental mechanisms and the experimental basis for current understanding is emphasized. Prerequisite: Introductory biology, chemistry, physics, or permission of instructor. <b>GR</b> LE Lecture

Fall 2020
ENG4740 4740 TESOL Practice/Material ENG English 3 Develops skills in designing curriculums through creating and adapting appropriate materials and activities, as well as evaluating and effectively using existing practices and materials available to the teacher of ESL/EFL. <b>UG</b> LE Lecture

Fall 2020
HEA9240 9240 Infus Sys Thinking HI ED HEA Higher Education Admin 3 Introduction to administrative, organizational, and leadership theory and practice in the two-year and four-year college and university. Participants explore historical, current, and future plans for administration in higher education. <b>GR</b> LE Lecture

Fall 2020
EES4660 4660 OSHA Compliance EES Earth & Environmental Sciences 1 Practical application of the theories of safety and health law. Intended for persons having management responsibility for occupational safety and health. <b>UG</b> LE Lecture

Fall 2020
KHN1720B 1720B Tennis KHN Kinesiology & Health 1 Fundamental skills and knowledge of Tennis. Competency-based approach. Course may accommodate disabled students when appropriate. <b>UG</b> LB Lab

Fall 2020
ME4120L 4120L Finite Element Analysis Lab ME Mechanical and Materials Eng 0 Required laboratory for ME 4120. <b>UG</b> LB Lab

Fall 2020
BME3550 3550 BME Signals and Systems BME Biomedical Engineering 3 Analog and digital linear systems concepts applied to biomedical engineering. Topics include signals, functions, and time-domain operations; Fourier transform and Laplace transforms; steady-state frequency response and analog filter design; discrete signals and discrete Fourier transform; z-transform and frequency response of digital systems; digital IIR and FIR filter design. <b>UG</b> LB Lab

Fall 2020
ED7610 7610 C and I for Learning ED Education 3 Students will understand and create curriculum by analyzing Curriculum and Instruction Theory. <b>GR</b> LE Lecture

Fall 2020
PTXH3520 3520 Scientific Writing I PTX Pharmacology/Toxicology 3 Students are required to independently write a 10-15 page scientific reviews on a current topic in Pharmacology & Toxicology with input from the advisor. <b>GR</b> IS Independent Study

Fall 2020
PSI8310 8310 Psychopathology PSI Professional Psychology 4 This course discusses the psychological disorders of the DSM-IV TR pertinent to children and adults as well as etiology and diagnostic issues, provides a brief review of evidence-based treatment and research salient to those disorders, and addresses multicultural and ethical considerations. <b>GR</b> LE Lecture

Fall 2020
MKT4300 4300 Entrepreneurship MKT Marketing 3 How to start a business. Concepts, strategies and tactics of product innovation/development and planning to initiate or purchase a company. Students may develop a written business plan for a new venture. <b>UG</b> LE Lecture

Fall 2020
STT4860 4860 Ind Read Stat and Prob STT Statistics 1 Independent study in statistics and probability. <b>UG</b> IS Independent Study

Fall 2020
EE7470 7470 EM Simulation Methods EE Electrical Engineering 3 Direct solution of Maxwell's differential equations in the time domain using the finite-difference time-domain (FDTD) method. Absorbing boundary conditions and waveguide or plane wave excitation methods. Application to the solution of problems relevant to radiation, radar cross section (or scattering) and microwave circuit design. Wave equation and integral implementation. Application of one-and two-dimensional EM problems. Comparison with the finite element method. <b>GR</b> Department Managed Prerequisite(s): Graduate level EE 5450 Minimum Grade of B and (Graduate level MTH 5330 Minimum Grade of B or Graduate level MTH 6830 Minimum Grade of B or Graduate level PHY 6750 Minimum Grade of B).<b>GR</b>

Fall 2020
OL4030 4030 Undergrad OL TA OL Organizational Leadership 3 Supervised experience in Organizational Leadership classroom instructional assistance. Experiences include preparing materials, communicating with students, providing feedback, and/or delivering class content as appropriate. <b>UG</b> SE Seminar

Fall 2020
KHN1100A 1100A Bowling KHN Kinesiology & Health 1 Fundamental skills and knowledge of Bowling. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins. <b>UG</b> LB Lab

Fall 2020
CEG9890 9890 Continuing Registration CEG Computer Engineering 1 A student must be registered at the graduate level in the quarter in which the degree is granted, or in any term in which the program is affording some service, such as giving an examination, reading a thesis, or giving advice on the thesis after completion of all other requirements of coursework and research. <b>GR</b> IS Independent Study

Fall 2020
PSY7060 7060 Perception PSY Psychology 4 Study of the active processes by which organisms gather, interpret, and respond to environmental stimuli. <b>GR</b> LE Lecture

Fall 2020
ECI4010 4010 ECE-Gen Prin/PractLearn ECE Education - Early Childhood 3 Historical and underlying philosophy of the middle school concept based on the unique nature of pre-adolescents and adolescents. Current instructional and curricular practices are viewed in relation to this philosophy. <b>UG</b> LE Lecture
Fall 2020  AES3330  3330  Leadership Studies II  AES  Aerospace Studies  3  Advanced skills and knowledge in management and leadership. Cadets apply leadership and management techniques in a supervised environment.  UG  LE  Lecture

Fall 2020  FIN4110  4110  Mergers and Acquisitions  FIN  Finance  3  Students will develop an in-depth understanding of how and when to apply the appropriate tools and skills to successfully complete a merger transaction or business acquisition and how to apply what has been learned to solving real world business problems.  UG  LE  Lecture

Fall 2020  CLS4810  4810  Independent Study  CLS  Classics  1  Faculty-directed, individualized study on student-selected topics. Limited to majors and advanced students. Permission of department and a minimum 3.0 GPA required.  UG  IS  Independent Study

Fall 2020  MIL3022  3022  Applied Team Labship Lab  MIL  Military Science  0  Prepares cadet for six-week summer Leadership Development and Assessment Course. Cadet is required to lead squads of 9-12 in battle drills and patrolling in this cadet-led cadre-supervised lab. Mandatory weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises.  UG  LB  Lab

Fall 2020  LEP1030  0330  List & Speak - Level 3  LEP  LEAP  0  Listening, speaking and pronunciation for high-intermediate ESL students. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture

Fall 2020  CHS1010  5010  Advanced Chinese I  CHI  Chinese  3  Development of linguistic proficiency through studying advanced reading and grammar patterns with emphasis on cultural aspects of communication.  GR  LE  Lecture

Fall 2020  KRN1480B  4408B  Rappelling  KRN  Kinesiology & Health  1  Fundamental skills and knowledge of Rappelling. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  HPR3010  3010  Teaching Invasion Games  HPR  Health Phys Educ & Recreation  3  Models best teaching practices in invasion games such as basketball, soccer, softball, and flag football. Students are required to demonstrate proficiency in sports skills.  UG  LL  Lecture/Lab Combination

Fall 2020  CNL4700  4700  Counseling Workshop  CNL  Counseling  1  Intensive study of selected areas in counseling to meet the particular needs of participating students, schools, and agencies. Titles vary.  UG  SE  Seminar

Fall 2020  ED6250  6250  MCE Intern Pr I: Methods  ED  Education  1  Candidates, mentored by a middle grades teacher, shall assist in the planning, organizing, delivering, and assessing of instruction in a 4-9th grade setting applying pedagogical content knowledge from middle childhood content and methods courses.  GR  PR  Practicum

Fall 2020  ED7660  7660  Theory Found in Literacy  ED  Education  3  Development of an understanding regarding the historical, linguistic, sociological and psychological/cognitive theories related to effective literacy instruction and education.  GR  LE  Lecture

Fall 2020  CIS3210  3210  Intro Health Care Issues  CSD  Community Services Development  3  Broad functions, operations and tools of health care administration; topics such as managing in health services environments, managerial tools and techniques and managing relationships.  UG  LE  Lecture

Fall 2020  BIO3050L  3050L  Animal Physiology Lab  BIO  Biology  0  Required laboratory for BIO 3105.  UG  LB  Lab

Fall 2020  TEG2920  2920  Audios Elect Fluid Power  TEG  Technical Engineering  7  Identification and construction of basic electrical, motor and motor control and fluid power circuits. Includes diagnostics and the repair of simple circuits and controls.  GR  LL  Lecture/Lab Combination

Fall 2020  EE4700L  4700L  Introduction to MEMS Lab  EE  Electrical Engineering  1  Experimental design, realization and testing of MEMS devices with emphasis on sensing applications.  GR  LB  Lab

Fall 2020  SPN3320  3320  Survey of Spanish-Amer L  SPN  Spanish  3  Historical survey of Spanish-American literature. Reading of prose, poetry, and plays by Spanish-American writers. From pre-Columbian times to the present.  UG  LE  Lecture

Fall 2020  ED7480  7480  Reading Recovery II  ED  Education  6  Teachers deepen their understanding of Clay's literacy processing theory through contingent instruction based on student data. Key concepts include teaching for phrased reading within fluent processing and flexible problem solving in reading and writing.  GR  LL  Lecture/Lab Combination

Fall 2020  MIS4250  4250  IT Infrastructures  MIS  Management Information Systems  3  Introduces Information Technology infrastructures including background, types, proper applications, and components of telecommunications, network design, and distributed information systems. Emphasizes telecommunications technology and its impact on information systems and business operations.  UG  LE  Lecture

Fall 2020  FAS2160  2160  Princ Food Proc Eng Lab  FAS  Food and Agricultural Systems  1  Application of food process engineering principles to solve technical problems in food processing.  UG  LB  Lab

Fall 2020  CHM4650L  4650L  Physical Polymer Chem Lab  CHM  Chemistry  0  Required laboratory for CHM 4650.  UG  LB  Lab

Fall 2020  PHY4800H  6800  Classical Mechanics  PHY  Physics  3  Classical theoretical mechanics with emphasis on the mathematical basis of Lagrangian and Hamiltonian systems, and rotational dynamics.  GR  LE  Lecture

Fall 2020  ME4870L  4870L  Machining Lab  ME  Mechanical and Materials Engr  0  Required laboratory for ME 4870.  UG  LB  Lab

Fall 2020  PN7750  7750  Neuroscience & Phys  PN  Physiology & Neuroscience  3  In-depth coverage of cellular neuroscience with an emphasis on physiological concepts. Subjects include nervous system development, generation of ion currents, ionic basis of the action potential, synaptic transmission, and ion channels.  GR  LE  Lecture

Fall 2020  PHL3800  3800  Identity Response Death  PHL  Philosophy  3  Study of three fundamental beliefs in ethical thinking.  UG  LE  Lecture

Fall 2020  HLT3400  3400  Concepts of Pharmacology  HLT  Health  3  Fundamental pharmacologic principles of physiological responses to drugs, therapeutic outcomes, and potential drug interactions. Prepares for critical thinking in application of pharmacotherapy principles. Non-nursing majors may take the course with instructor permission.  GR  LE  Lecture

Fall 2020  EE4780  4780  Coding Theory  EE  Electrical Engineering  3  Essentials of error-correcting codes, including methods for efficient and accurate transfer of information. Perfect and related codes, linear and cyclic codes, BCH codes, Reed-Muller codes, Reed-Solomon codes, Self-dual codes, weight enumerators and bounds.  UG  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Type</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL5720</td>
<td>Pentateuch Research</td>
<td>REL</td>
<td>3</td>
<td></td>
<td>Lecture</td>
<td>LE</td>
</tr>
<tr>
<td>PSY9990</td>
<td>Dissertation Research</td>
<td>PSY</td>
<td>1</td>
<td>Original research of a quality that is publishable in refereed journals. Research must be acceptable to the supervisory committee, submitted in writing and defended by public oral examination.</td>
<td>IS</td>
<td></td>
</tr>
<tr>
<td>DAN4800</td>
<td>Advanced Tap Dance II</td>
<td>DAN</td>
<td>1</td>
<td>Group class exploring upper-level Tap Dance techniques.</td>
<td>ST</td>
<td>Studio</td>
</tr>
<tr>
<td>CS7800</td>
<td>Information Retrieval</td>
<td>CS</td>
<td>3</td>
<td>This course covers foundations of information retrieval systems. Specifically, it discusses models for information retrieval; techniques for indexing and searching; design, implementation, and evaluation of web search engines; and algorithms for classification and clustering.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EED5000</td>
<td>Elementary Education P-5</td>
<td>EED</td>
<td>3</td>
<td>Educators collaborating with families and diverse backgrounds in the care and education of children; building curriculum that addresses the needs of English Language Learners.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MKT7300</td>
<td>Entrepreneurship</td>
<td>MKT</td>
<td>3</td>
<td>The course will discuss the role of entrepreneurship in the economy. The course will also discuss how new ventures are developed. The course draws from a number of disciplines including marketing, finance, accounting, management, ethics, and law that form the foundation of a business. The course will include a discussion of the role of business plans and discuss how to prepare a successful business plan.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY160</td>
<td>Forensic Assessment</td>
<td>PSI</td>
<td>3</td>
<td>Focuses on the interface between psychological assessment and the legal system.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>HST1100</td>
<td>West Civ. to 1500</td>
<td>HST</td>
<td>1</td>
<td>Examination of the character of the pre-modern world from prehistory through the 15th century with special attention to those aspects of ancient and medieval life that had the greatest effect on the development of Western society, politics, and culture.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>TH3360</td>
<td>Pattern Draft &amp; Draping</td>
<td>TH</td>
<td>3</td>
<td>Basic principles of pattern drafting, flat patternmaking, and draping of the female bodice.</td>
<td>ST</td>
<td>Studio</td>
</tr>
<tr>
<td>MI27300</td>
<td>Earl Data and Res Mgmt</td>
<td>MIS</td>
<td>3</td>
<td>Introduces the important topics in Enterprise Resource Planning (ERP). Identify important ERP concepts, advantages and disadvantages and success and failures of ERP implementations; use a commercial ERP package; understand RFID and Auto-ID technology and assess the potential of the RFID in the supply chain automation process. This course has a fee that is non-refundable once the term begins.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEG7050</td>
<td>Trust Integ Ckt Design</td>
<td>CEG</td>
<td>3</td>
<td>This course will cover topics in &quot;Trust for Integrated Circuit Design.&quot; We will explore the problem of Trust at each level of the Integrated circuit design process, from high level simulation all the way to layout, fabrication, and packaging.</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>KHH1555</td>
<td>GRACIE Self Def Interned</td>
<td>KNH</td>
<td>1</td>
<td>Intermediate level of skills and knowledge in GRACIE Self Defense: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>ENG3400</td>
<td>Studies in African Lit</td>
<td>ENG</td>
<td>3</td>
<td>Representative works of established and emerging African writers.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY4100</td>
<td>Cross-Cul Psy Cap</td>
<td>PSY</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on cross-cultural psychology. Explores national differences in perception, cognition, and self-concept as well as in personality dynamics and interpersonal interactions, and addresses the challenges of globalization. Integrated Writing course.</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>FIN4810</td>
<td>Internship in Finance</td>
<td>FIN</td>
<td>1</td>
<td>Faculty-supervised internship in finance. Students work in firms or public agencies, participate in seminars, and submit reports. Topics vary.</td>
<td>IN</td>
<td>Internship</td>
</tr>
<tr>
<td>MUE6700</td>
<td>Univ Symphony Orchestra</td>
<td>MUE</td>
<td>1</td>
<td>Performs orchestral music of all styles and periods.</td>
<td>LL</td>
<td>Lecture/Lab Combination</td>
</tr>
<tr>
<td>PL5480</td>
<td>Gender Violence Am Pol</td>
<td>PL5</td>
<td>3</td>
<td>Examines gender violence in the United States. Considers the range of violence, its sources, and solutions. Topics include domestic violence, rape, human trafficking, reproductive rights, and pornography. Integrated Writing course.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>RRD6480</td>
<td>Impact of HIV</td>
<td>RLD</td>
<td>3</td>
<td>Introduction to HIV and the populations impacted. Overviews of the history, stereotypes and prejudices, prevention and treatment, and specific impact on subpopulation of HIV.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>DMV9999</td>
<td>For Administrative Use Only</td>
<td>DMV</td>
<td>0</td>
<td></td>
<td>PP</td>
<td>OT</td>
</tr>
<tr>
<td>PS8670</td>
<td>Politics of Intelligence</td>
<td>PLS</td>
<td>3</td>
<td>Examines the history and politics of intelligence gathering, analysis and application in policy making in the United States. Addresses the tension inherent to a secret agency operating within a democratic state and considers the role of technology.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY2800</td>
<td>Topics in Human Factors</td>
<td>PSY</td>
<td>3</td>
<td>Seminars with in-depth coverage of special topics in human factors. Topics vary. Permission of instructor. May be taken for a letter grade or pass/unsatisfactory.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>DAN4210</td>
<td>Jazz/Theatre Dance IV</td>
<td>DAN</td>
<td>2</td>
<td>Diversified styles and techniques of advanced jazz/musical theatre dancing. Emphasis on the continued development of advanced dance, synchronization, coordination, coordination, coordination, and interpretation.</td>
<td>ST</td>
<td>Studio</td>
</tr>
<tr>
<td>ESE6760</td>
<td>Air Quality Management</td>
<td>EES</td>
<td>3</td>
<td>Designed to provide a broad overview of the science of air quality and its management: includes atmospheric pollutants, dispersion, health and welfare effects, air-quality monitoring, source control, regulation, and indoor air pollution.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG4640</td>
<td>Topics/tech/prof Writing</td>
<td>ENG</td>
<td>3</td>
<td>Courses, seminars, or workshops in specialized topics related to business, technical, and professional writing.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MUS1560</td>
<td>Keyboard Musicanship II</td>
<td>MUS</td>
<td>1</td>
<td>Class instruction in functional keyboard skills including technique, chord construction and connection, improvisation, harmonization, playing by ear, sight reading, score reading, ensemble playing, and performing repertoire pieces.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EE4440L</td>
<td>Electronic Integ Lab</td>
<td>EE</td>
<td>4</td>
<td>Laboratory supporting EE 4440. Students will experience hands on learning in lab environment.</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>PHY7310</td>
<td>Solid State - L&amp;M</td>
<td>PHY</td>
<td>1</td>
<td>Topics in solid state physics related to electromagnetic properties. Topics may include but are not limited to theories of electronic and spin conduction, theories of magnetism, electronic band structure, dielectric function and polarizability, theories of optical transmission and absorption, ferroelectricity, ferromagnetism, and superconductivity, spin resonance, and the moessbauer effect.</td>
<td>LE</td>
<td>Seminar</td>
</tr>
<tr>
<td>GR1010</td>
<td>Beginning Greek I</td>
<td>GR</td>
<td>3</td>
<td>Essentials of the Greek language.</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Department</td>
<td>Credits</td>
<td>Type</td>
<td>Notes</td>
<td></td>
</tr>
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</tr>
<tr>
<td>MUS4410</td>
<td>4410 Lecture Recital</td>
<td>MUS Music</td>
<td>1</td>
<td>Lecture</td>
<td>Public performance and lecture on a topic relevant to the performer.</td>
<td></td>
</tr>
<tr>
<td>IT4310</td>
<td>4310 History Graphic Design</td>
<td>IT Information</td>
<td>3</td>
<td>Lecture</td>
<td>History of graphic design emphasizing the role of graphic design and the relationship of commerce and technology to the history of graphic design.</td>
<td></td>
</tr>
<tr>
<td>SOC3710</td>
<td>3710 Comparative Crim Jus</td>
<td>SOC Sociology</td>
<td>3</td>
<td>Lecture</td>
<td>Cross-cultural approach examining selected criminal justice systems in Europe, Asia, the Middle East, Latin America, and Africa as compared to the U.S. involving such transnational crimes as terrorism, hijacking, drug smuggling and organized crime networks.</td>
<td></td>
</tr>
<tr>
<td>LA4000</td>
<td>4000 CELLA Internship</td>
<td>LA Liberal Arts</td>
<td>1</td>
<td>Internship</td>
<td>Internship with a local arts organization under the auspices of CELLA.</td>
<td></td>
</tr>
<tr>
<td>MIST100</td>
<td>7100 Data Analytics Ia &amp; Orgs</td>
<td>MIS Management</td>
<td>3</td>
<td>Lecture</td>
<td>This course introduces students to the process of extracting business insights from organizational data. It provides a broad overview of the entire data analytics pipeline including collection, preprocessing, analyzing, visualizing, modeling and interpretation of data. Modern computing tools and essential data mining, machine learning, text, and network analytics methods will be discussed. Emphasis will be placed on learning when to use each technique as well as their theoretical underpinning. This course has a fee that is non-refundable once the term begins.</td>
<td></td>
</tr>
<tr>
<td>FR3700</td>
<td>3700 Internship in French</td>
<td>FR French</td>
<td>1</td>
<td>Internship</td>
<td>Supervised use of French in workplace settings. Must complete an application available from the Department of Modern Languages. Minimum 45 hours a semester for 1 credit, including at least 40 hours of on-site work.</td>
<td></td>
</tr>
<tr>
<td>ME7750</td>
<td>7750 Adv Egr Materials</td>
<td>ME Mechanical</td>
<td>3</td>
<td>Lecture</td>
<td>This course will define and explain crystalline structure of materials, different types of amorphous structures, polarization, band structures and thermal properties, nanostructures, magnetic behavior of materials, and optical phenomena.</td>
<td></td>
</tr>
<tr>
<td>MUS1990</td>
<td>1990 Intro to Music Educ</td>
<td>MUS Music</td>
<td>2</td>
<td>Lecture</td>
<td>Introduction to the social, historical and philosophical foundations of music education. Overview of the music teaching profession, including basic terminology, necessary skills and dispositions, curricular issues, and instructional procedures.</td>
<td></td>
</tr>
<tr>
<td>EDL7220</td>
<td>7220 Instruct Mgmt and Eval</td>
<td>EDL Educational</td>
<td>3</td>
<td>Lecture</td>
<td>Strategies for developing and maintaining continual improvement processes using systems planning, instructional data. Includes evaluation of improvement plans and communication of planning and improvement with all stakeholders.</td>
<td></td>
</tr>
<tr>
<td>URS4390</td>
<td>4390 Issues-Nonprofit Admin</td>
<td>URS Urban Affairs</td>
<td>3</td>
<td>Lecture</td>
<td>Issues and topics related to the administration of nonprofit organizations.</td>
<td></td>
</tr>
<tr>
<td>ENG7110</td>
<td>7110 Literary Theory</td>
<td>ENG English</td>
<td>3</td>
<td>Lecture</td>
<td>Examines current theoretical understandings of literary criticism and scholarship. Emphasis is placed on understanding the development and application of contemporary theories of literature and their effect on the study of literature.</td>
<td></td>
</tr>
<tr>
<td>WGS6500</td>
<td>6500 Topics Feminist Theory</td>
<td>WGS Women, Gender, and Sexuality</td>
<td>3</td>
<td>Lecture</td>
<td>Issues, approaches and topics in feminist theory. Titles and topics vary</td>
<td></td>
</tr>
<tr>
<td>ASL1010</td>
<td>1010 Beginning ASL</td>
<td>ASL American Sign Language</td>
<td>4</td>
<td>Independent Study</td>
<td>An introduction to fundamental vocabulary and conversational skills in American Sign Language, including basic sentence structure of ASL, fingerspelling and numbers and exposure to Deaf culture. Outside activity required.</td>
<td></td>
</tr>
<tr>
<td>TH3150</td>
<td>3150 Singing for the Actor V</td>
<td>TH Theatre</td>
<td>1</td>
<td>Lecture</td>
<td>Private singing lessons for acting, theatre studies and dance majors only.</td>
<td></td>
</tr>
<tr>
<td>KNH338B</td>
<td>1380B Kayaking: Recreational</td>
<td>KNH Kinesiology</td>
<td>1</td>
<td>Lab</td>
<td>Recreational. Competency-based approach. Course may accommodate disabled students when appropriate. This course has a fee that is non-refundable once the term begins.</td>
<td></td>
</tr>
<tr>
<td>NUR7322</td>
<td>7322 Adv Neonatal Assessment</td>
<td>NUR Nursing</td>
<td>4</td>
<td>Lecture</td>
<td>Course allows an immersive experience in the identification of normal and abnormal findings in the neonate. Content includes a comprehensive view of fetal assessment, maternal wellbeing, and family dynamics. Opportunity will be offered to evaluate perinatal histories, perform developmental and physical exams, evaluate diagnostic and laboratory findings, and identify areas for referral. Students will learn to write comprehensive history and physicals using standard nomenclature.</td>
<td></td>
</tr>
<tr>
<td>FAS2010</td>
<td>2010 Agricultural Economics</td>
<td>FAS Food and Agricultural Systems</td>
<td>3</td>
<td>Lecture/Lab Combination</td>
<td>Fundamentals of economic issues relevant to the agricultural industry. Topics include agricultural production and distribution, markets, international trade, entitlement programs, and commodity contracts/trading.</td>
<td></td>
</tr>
<tr>
<td>MUE4450</td>
<td>4450 Collegium Musicum</td>
<td>MUE Music: Ensembles</td>
<td>1</td>
<td>Lecture/Lab Combination</td>
<td>Collegium Musicum is the generic term for an instrumental and vocal ensemble devoted to the study and performance of early music written before 1750. One period (Medieval, Renaissance, Baroque) will be emphasized each term.</td>
<td></td>
</tr>
<tr>
<td>P&amp;N7890</td>
<td>7890 Continuing Registration</td>
<td>P&amp;N Physiology &amp; Neuroscience</td>
<td>1</td>
<td>Independent Study</td>
<td>By permission of instructor. Student must be a member of the College of Fine Arts Department of Music and Dance.</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Title</td>
<td>Degree</td>
<td>Hours</td>
<td>Description</td>
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<tr>
<td>ME4530</td>
<td>4530</td>
<td>Energy Conversion</td>
<td>Mechanical and Materials Eng</td>
<td>3</td>
<td>Fundamentals of energy and energy conversion, the conversion of energy from mechanical, thermal, chemical, and nuclear sources. To demonstrate these energy forms generate, wind, ocean, turbines, direct energy conversion, fossil fuels, biofuels, and nuclear power will be presented. (departmental managed prerequisite). Undergraduate level ME 3310 Minimum Grade of D+ or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D) or (Undergraduate level ME 3310 Minimum Grade of D and Undergraduate level DE 4540L Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D)</td>
<td></td>
</tr>
<tr>
<td>ASM7000</td>
<td>7000</td>
<td>Accident Investigation</td>
<td>Aerospace Medicine</td>
<td>3</td>
<td>This course provides an overview of aerospace accident investigation procedures, relevant regulations, and interdisciplinary management from an aeronautical perspective. Selected advanced topics include the analysis of relevant aerospace accident reports, post-crash survivability, and future directions.</td>
<td></td>
</tr>
<tr>
<td>ED5650</td>
<td>6530</td>
<td>AYA Int Pr II: Std T ISS</td>
<td>Education</td>
<td>8</td>
<td>Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience in grades 7-12 in Integrated Social Studies.</td>
<td></td>
</tr>
<tr>
<td>ELD7665</td>
<td>7665</td>
<td>Mentoring and Coaching</td>
<td>Educational Leadership</td>
<td>3</td>
<td>This course addresses coaching and mentoring in the educational setting: what they are, how they are created, implemented, assessed; and, the professional development resulting from the coaching and mentoring process.</td>
<td></td>
</tr>
<tr>
<td>PLS4881</td>
<td>4881</td>
<td>Diplomacy &amp; Negotiation</td>
<td>Political Science</td>
<td>3</td>
<td>Topics include power and leverage; negotiation strategies; mediation and third-party involvement; and ratification and implementation of agreements. Provides an analytical understanding of how negotiation works, and some level of proficiency and comfort in the practice of negotiation. Integrated Writing course.</td>
<td></td>
</tr>
<tr>
<td>CHM6680</td>
<td>6680</td>
<td>Exp Nanomaterials</td>
<td>Chemistry</td>
<td>3</td>
<td>This course will provide a series of laboratory exercises similar to the state-of-the-art R&amp;D in nanotechnology and nanoscience. The experiments include 1) fabrication of nanomaterials such as metal nanoparticles and graphene nanoplatelets, 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, terahertz spectroscopy, electrochemical analyses, and 3) computational modeling of nanoscale physical phenomena.</td>
<td></td>
</tr>
<tr>
<td>PSY9990</td>
<td>9990</td>
<td>Internship</td>
<td>Professional Psychology</td>
<td>1</td>
<td>Capstone clinical experience for the Psy.D. degree, completed under supervision by a licensed psychologist.</td>
<td></td>
</tr>
<tr>
<td>BMS7110</td>
<td>7110</td>
<td>Biomedical Signals</td>
<td>Biomedical Sciences</td>
<td>1</td>
<td>Seminar level course for the analysis of signals and systems, with a particular emphasis on the use of mathematical tools for analysis of medical imaging systems and data. Time-domain and frequency-domain analysis of continuous-time and discrete-time signals, sampling theory, 2D FFT, Fourier Slice Theorem, Radon transform, Hilbert transform.</td>
<td></td>
</tr>
<tr>
<td>TH4240</td>
<td>4240</td>
<td>Ads Design Studio I</td>
<td>Theatre</td>
<td>3</td>
<td>Intensive study of theatrical costume, scenery, lighting, and sound design with a focus on script interpretation. Includes practical design work with an emphasis on produced designs, professional development, and specialization in the student's area of design.</td>
<td></td>
</tr>
<tr>
<td>PSY9910</td>
<td>9910</td>
<td>Internship</td>
<td>Psychology</td>
<td>1</td>
<td>Internship in private or governmental organizations under the direction of a faculty advisor. Student must have successfully defended their Master's thesis prior to enrollment. Does not count for graduate credit toward the Ph.D. degree in psychology.</td>
<td></td>
</tr>
<tr>
<td>DAN4070</td>
<td>4070</td>
<td>Advanced Tap Dance I</td>
<td>Dance</td>
<td>1</td>
<td>Group class exploring upper-level tap dance techniques.</td>
<td></td>
</tr>
<tr>
<td>ATH3700</td>
<td>3700</td>
<td>Arch Field Methods</td>
<td>Anthropology</td>
<td>3</td>
<td>A review of the techniques of archaeological survey, the development of fieldwork strategies for the investigation of sites, and techniques of mapping sites and recording archaeo-analytical data.</td>
<td></td>
</tr>
<tr>
<td>PHL4110</td>
<td>6110</td>
<td>Ethics Seminar</td>
<td>Philosophy</td>
<td>0</td>
<td>An in-depth investigation of ethical problems, theories, and methods. Variable title course.</td>
<td></td>
</tr>
<tr>
<td>BIO6550</td>
<td>6550</td>
<td>Plant Systems</td>
<td>Biology</td>
<td>4</td>
<td>The diversity of vascular plant species with an emphasis on angiosperms, phylogenetic relationships and methods, terminology pertinent to taxonomic classification and nomenclature.</td>
<td></td>
</tr>
<tr>
<td>EE5720</td>
<td>7520</td>
<td>Low Par VLSI Sys Des</td>
<td>Electrical Engineering</td>
<td>3</td>
<td>CMOS VLSI subsystems and low-power subsystems design. Includes data path operators for FIR and IIR filter design: counters, high-speed adders, multipliers, and memory elements. (departmental managed prerequisite). Undergraduate level EE 4540 Minimum Grade of D and Undergraduate level DE 4540L Minimum Grade of D) or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D)</td>
<td></td>
</tr>
<tr>
<td>EC2100</td>
<td>2100</td>
<td>Econ State and Society</td>
<td>Economics</td>
<td>3</td>
<td>Compares consequences of individual control versus government control of resources. Examines the most important economic questions facing members of a democratic republic. With PRL 2100, part of a two-course Wright State Core cluster on government and society.</td>
<td></td>
</tr>
<tr>
<td>PSY2020</td>
<td>2020</td>
<td>Careers in Psychology</td>
<td>Psychology</td>
<td>1</td>
<td>Topics relating to careers and occupations in psychology.</td>
<td></td>
</tr>
<tr>
<td>IT1400</td>
<td>1400</td>
<td>Layout and Typography</td>
<td>Information Technology</td>
<td>3</td>
<td>Fundamentals of typography as an element and tool of visual communication. Use of various software programs to produce creative and marketable typographic design. 1 hour lecture/2 hours lab.</td>
<td></td>
</tr>
<tr>
<td>RHB4010</td>
<td>4010</td>
<td>Dev Disabilities</td>
<td>Rehabilitation</td>
<td>3</td>
<td>Study of the etiology, eligibility, and rehabilitation of individuals with developmental disabilities. Behavioral observations, evidenced based research study and site visits to rehabilitation facilities are components of course.</td>
<td></td>
</tr>
<tr>
<td>DOS9080</td>
<td>9080</td>
<td>Struc Equation Modeling</td>
<td>Doctor Org Studies</td>
<td>3</td>
<td>This course will develop comprehension and skills for Structural Equation Modeling techniques. The course includes purpose, logic, applications, benefits and limitations of Structural Equation Modeling techniques.</td>
<td></td>
</tr>
<tr>
<td>LA6100</td>
<td>6100</td>
<td>Theory</td>
<td>Liberal Arts</td>
<td>3</td>
<td>An examination of the relationship and relevance of academia, the humanities, and the liberal arts to today's society and the modern learner.</td>
<td></td>
</tr>
<tr>
<td>ISE3512L</td>
<td>3512L</td>
<td>Biotechnics II Lab</td>
<td>Industrial &amp; Systems Eng</td>
<td>0</td>
<td>Required laboratory for ISE 3512.</td>
<td></td>
</tr>
<tr>
<td>ESA9050</td>
<td>4950</td>
<td>Youth Voices</td>
<td>Education</td>
<td>3</td>
<td>Examines the pedagogies that encourage youth in developing the capacity to participate responsibly and effectively in the civic life of their communities. The seminar is centered on a field-based learning experience.</td>
<td></td>
</tr>
<tr>
<td>ASM7777</td>
<td>7777</td>
<td>Space Medicine</td>
<td>Aerospace Medicine</td>
<td>4</td>
<td>This course will provide graduate students with special opportunities to receive information specifically relevant to the practice of Space Medicine and its application in promoting current sub-orbital and orbital space flights, planned missions beyond Low Earth Orbit, and future commercial space flight operations.</td>
<td></td>
</tr>
<tr>
<td>ASL2010</td>
<td>2010</td>
<td>Intermediate ASL I</td>
<td>ASL American Sign Language</td>
<td>4</td>
<td>An intermediate course in American Sign Language that continues to develop grammatical and vocabulary competency, fluency in conversational ranges, and increases knowledge of the Deaf community and its cultural aspects. Outside activity required.</td>
<td></td>
</tr>
<tr>
<td>ARA3101</td>
<td>3101</td>
<td>Beginning Arabic I</td>
<td>Arabic</td>
<td>3</td>
<td>Communicative introduction to Arabic. Study of the vocabulary and structure of the Arabic language; practice in speaking, listening, reading, and writing.</td>
<td></td>
</tr>
<tr>
<td>REL4500</td>
<td>4500</td>
<td>Seminar Amer Religion</td>
<td>Religion</td>
<td>3</td>
<td>Selected topics related to the history and practice of religion in America. Integrated Writing course.</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020  ED6230  6230  Recent -Reading Recovery  ED  Education  3  Teachers learn to apply Marie Clay’s theory of literacy processing while teaching Reading Recovery students. Key concepts include targeted instruction through assessment, the reciprocity of reading and writing, and teaching for accelerated learning.

GR  LE  Lecture

Fall 2020  ED6120  6120  Early Lit Assess/Inst II  ED  Education  3  Teachers deepen their understanding of Clay’s literacy processing theory and contingent instruction while tutoring students who struggle with literacy. Key concepts include teaching for phrased reading, fluent processing, and flexible problem solving.

GR  LE  Lecture

Fall 2020  CEG4322L  4322L  VLSI Design Lab  CEG  Computer Engineering  1  Work station based experience designing axis devices for evaluation and testing. <b>Department Managed Prerequisite(s): Undergraduate level EE 2000 Minimum Grade of D and Undergraduate level EE 2000L, Minimum Grade of D=</b>

UG  LB  Lab

Fall 2020  PSI9974  9974  Practicum - Advanced  PSI  Professional Psychology  1  Field experience supervised by a licensed psychologist.

GR  IS  Independent Study

Fall 2020  ISE6420  4820  Supp Ch Analy & Des  ISE  Industrial & Systems Engr  3  Provides fundamental understanding of supply chain systems and their structure. Techniques for analysis and design of the components and interactions including forecasting, inventory, warehouse operations & location, transportation and contemporary issues.

UG  LE  Lecture

Fall 2020  PSI9430  9430  Psychodynamic Psychother  PSI  Professional Psychology  3  Presents contemporary psychodynamic theory and practice.

GR  LE  Lecture


GR  LE  Lecture

Fall 2020  EDL9955  9955  Superintendent Practicum  EDL  Educational Leadership  3  Provides experience in school leadership and administration at the district level. Candidates perform administrative tasks under the supervision of a licensed school district administrator.

GR  IN  Internship

Fall 2020  ECE4900  4900  ECE Int Pr II: Std Teach  ECE  Education - Early Childhood  9  Candidates, mentored by an early childhood educator, assist in the planning, organizing, delivering, and assessing of instruction in a 1st-3rd grade setting applying pedagogical content knowledge from early childhood methods courses.

UG  IN  Internship

Fall 2020  PSY4200  4200  Cognitive Psych Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on cognitive psychology. Topics will vary. Integrated Writing course.

UG  SE  Seminar

Fall 2020  AFST3000  3000  History of Africa  AFST  Afr /Ar/Amer Studies  3  General introduction to African history. Covers the culture and history of the region from early time periods to the modern era.

UG  LE  Lecture

Fall 2020  REL3540  5540  Asian RELS and Ecology  REL  Religion  3  An examination of Asian religious perspectives (Confucianism, Daoism, Buddhism, and Shinto) on the meaning and value of the natural world and the relationship between human beings and nature. Focuses on environmental ethics in comparative Asian perspective.

GR  LE  Lecture

Fall 2020  PTX9000  9000  Intro to Research  PTX  Pharmacology/Toxicology  3  Three practical laboratory experiences in three week rotations each. The students will spend 3 weeks in 3 laboratories and each rotation will be concluded with a 2 page summary, signed by the laboratory PI. Upon completion the Pharm Tox student should have a laboratory picked to complete thesis work.

GR  LL  Lecture/Lab Combination

Fall 2020  PPH7830  7830  Ethics of Healthcare Policy  PPH  Population & Public Health  3  This course is an introduction to the development of ethical policies for healthcare institutions. The course will focus on major laws and U.S. Supreme Court decisions affecting health care and the protection of human research subjects. In addition, the course will describe how ethical considerations relate to costs, managed care, resource allocation, and institutional policies. The course concludes with a student-specific capstone project.

GR  LE  Lecture

Fall 2020  EE8000  8000  Select Topics in EE  EE  Electrical Engineering  1  Recent developments in Electrical Engineering and related fields. Tirks vary.

GR  LE  Lecture

Fall 2020  ME4860  4860  Metal Forming  ME  Mechanical and Materials Engg  3  Fundamentals of principal deformation processing systems including forging, extrusion, rolling, and sheet forming; material response and formability, and mechanics and analysis of selected processes. <b>Department Managed Prerequisite(s): Undergraduate level ME 2000 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of C=</b>

UG  LL  Lecture/Lab Combination

Fall 2020  TH3370  3370  Acting Musical Theatre I  TH  Theatre  3  Musical theatre acting skills using contemporary texts to integrate fundamental acting and singing techniques.

UG  ST  Studio

Fall 2020  SW7230  7230  SW Assessment & DSM  SW  Social Work  0  Teaches advanced generalist social work direct practice skills with individuals, families, and small groups. Skills applied during following stages of social work intervention: Engagement, Assessment, Intervention, and Evaluation. Content includes accurate application of DSM and other clinical assessment tools, and application of social work clinical treatment models. <b>Department Managed Prerequisite(s): Graduate level SW 6150 Minimum Grade of D and Graduate level SW 6170 Minimum Grade of D and Graduate level SW 6210 Minimum Grade of D=</b>

GR  LE  Lecture

Fall 2020  PLS6730  6730  American Foreign Policy  PLS  Political Science  3  Investigates the role of the United States in contemporary international politics and the relationship of the domestic political system to that role. Discussion of current policy and events included.

GR  LE  Lecture

Fall 2020  PHY4460  4460  Intro NanoSci/Nanotech  PHY  Physics  3  Introduction to nanoscience and technology. Topics include introduction to quantum mechanics, fabrication, characterization, materials, electronic properties, optical properties, magnetic properties, devices, MEMS and NEMS.

UG  LL  Lecture/Lab Combination

Fall 2020  EGR7020  7020  Systems Engrg & Analysis  EGR  Engineering  3  Exposes students to the design of systems and tools for the analysis of complex technological systems. <b>Department Managed Prerequisite(s): Undergraduate level STT 3630 Minimum Grade of D or Graduate level IHE 6120 Minimum Grade of D and Undergraduate level MTH 2310 Minimum Grade of D=</b>

GR  LE  Lecture

Fall 2020  CEG6970  6970  Independent Study in CEG  CEG  Computer Engineering  1  Independent study in computer engineering.

GR  IS  Independent Study

Fall 2020  COM6640  6640  Media Literacy  COM  Communication  3  Analysis of contemporary programming and production practices including the development of critical standards for evaluation.

GR  LE  Lecture

Fall 2020  CS5200  5200  Theory of Computing  CS  Computer Science  3  Introduction to the theory of formal languages and automata with an emphasis on the classes of languages commonly encountered by computer scientists. Compatibility examination of decision problems, the Church-Turing thesis, the undecidability of the Halting Problem, and problem reduction and undecidability. <b>Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 3100 Minimum Grade of D=</b>

GR  LE  Lecture
Fall 2020  SPN1020  1020  Beginning Spanish II  SPN  Spanish  3  Communicative introduction into Spanish language and Hispanic cultures. Study of the vocabulary and structure of the Spanish language, practice in speaking, listening, reading, and writing. Taught in Spanish. <br>Department Managed Prerequisites( ): Undergraduate level SPN 1010 Minimum Grade of C-<br>UG  LE  Lecture

Fall 2020  ED3010  6010  Adv Reading in the Conte  ED  Education  3  Reading in the content area that includes instruction in organizing instruction, use of protocols for oral language development, strategies for word skill development, reading comprehension and assessment for instructional purposes.<br>GR  LE  Lecture

Fall 2020  BID5810  5810  Intro to Bioinformatics  BIO  Biology  3  Tools-oriented approach to bioinformatics emphasizing DNA data structure, string representation in PERL, data searches, pairwise alignments, substitution patterns, protein structure prediction and modeling, proteomics, and use of web-based bioinformatic tools.<br>GR  LE  Lecture

Fall 2020  WGS4000  4000  Topics Gender&Sexuality  WGS  Women, Gender, & Sexuality  3  Issues, approaches, and topics in the field of gender and sexuality studies. Titles and topics vary. Integrated Writing course.<br>UG  LE  Lecture

Fall 2020  OL3020  3020  Leadership Foundations  OL  Organizational Leadership  3  Introduction to leadership practice and skill development, with an emphasis in understanding theories and styles for use in organizational settings.<br>UG  LE  Lecture

Fall 2020  PHP3090  3090  Existentialism  PHL  Philosophy  3  Introduction to the 20th-century philosophical and literary movement. Emphasis on concrete existence and the passions over abstract rationality, conception of self as a product of radically free acts of self-creation, affirmation of uncertainty and absurdity as inseparable elements of the human condition, and rejection of traditional ethical systems. Integrated Writing course.<br>UG  LE  Lecture

Fall 2020  ENG2100  2100  Res Writing&Argument  ENG  English  3  Adapts principles introduced in ENG 1100 to typical university writing tasks. Stressens communicating effectively within disciplinary contexts, reading critically, and using source materials effectively in argumentative and research writing. Students may use any of the following courses to satisfy the requirements of the Core, but only one may count: ENG 2100, ENG 2110, ENG 2120, ENG 2130, or ENG 2140.<br>UG  LE  Lecture

Fall 2020  EES4480  4480  Plate Tectonics  EES  Earth & Environmental Sciences  3  History and development of the theory of plate tectonics with an emphasis on the particular needs of the educator.<br>UG  LL  Lecture/Lab Combination

Fall 2020  STT2640  2640  Elementary Statistics  STT  Statistics  4  Numerical and graphical methods for finding and summarizing important features of data. Principles of designing experiments for collecting data. Introduction to probability. Confidence intervals and hypothesis testing introduction. Applications to means, proportions, two-sample comparisons, contingency tables, linear regression, and analysis of variance. Use of statistical computing package to apply methods and illustrate concepts.<br>UG  LE  Lecture

Fall 2020  CEG4426  4426  Legal Aspects Cyber Sec  CEG  Computer Engineering  3  Examines some of the most pressing threats to data and systems, the major legal and practical responses, and the policy issues they raise, with a particular focus on military divisions, corporations, not-for-profit organizations, and civilian government agencies.<br>UG  LE  Lecture

Fall 2020  CS3170  3170  Mobile App Development  CS  Computer Science  3  Focuses on projects to progressively demonstrate concepts and practical approaches to developing software for mobile devices focusing on iOS devices including any of iPhone, iPad Touch, or iPad. The course covers application design, Apple's core technologies, animation, image processing, video processing, audio, 3D graphics, and built-in sensors.<br>UG  LE  Lecture

Fall 2020  SOC6080  6080  Independent Study  SOC  Sociology  1  Research project in an area of specialized interest in Sociology.<br>GR  IS  Independent Study

Fall 2020  MKT3700  3700  Create,Solve,Communicate  MKT  Marketing  3  Methods for enhancing creativity, team building and communication to better solve problems, all of which are essential tools for effective marketing.<br>UG  LE  Lecture

Fall 2020  ANT4600  4600  Prin Biomedical Research  ANT  Anatomy  1  Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. PBB provides a lecture and student interactive series designed to introduce students to the basics of biomedical research.<br>UG  LE  Lecture

Fall 2020  REL3470  3470  Zen Buddhism  REL  Religion  3  Survey of the history, doctrines, and practices of Zen Buddhism in China, Japan, and the West. Focus on important contributions and innovations of seminal figures. Particular attention also devoted to Zen meditative practices. <br>UG  LE  Lecture

Fall 2020  PPH1210  1210  HSM Practice Placement  PPH  Population & Public Health  1  This practice placement will provide the student with the opportunity to engage in any area of population health, health systems, health policy, health economics and/or health finance. <br>GR  PR  Practicum

Fall 2020  ART4590  4590  Senior Photo Portfolio  ART  Art  3  Exploration of advanced photographic materials and techniques with emphasis on producing a thematic body of work. Investigation of aesthetic possibilities of the media. Development of personal concepts and aesthetic expression in photography. This course has a fee that is non-refundable once the term begins.<br>UG  LB  Lab

Fall 2020  PLS6260  6260  Supreme Court in Am Pol  PLS  Political Science  3  Role of the Supreme Court in the Constitution, its relations with other branches and agencies of the U.S. government, and significant events and trends in the Court.<br>GR  LE  Lecture

Fall 2020  PLS4040  4040  Civil Rights Struggles  PLS  Political Science  3  History and development of castigation in America, focusing upon groups. Examines the struggles of race, ethnicity, gender, sexual orientation, immigrants, native Americans, labor, religion, non-citizens, the disabled and aged and the fetus and animals. Integrated Writing course.<br>UG  LE  Lecture

Fall 2020  SAA6651  6651  Study Abroad in SAHE  SAA  Student Affairs in Higher Ed  3  Provides students with foundational knowledge and skills in study abroad practice and research in higher education.<br>GR  LE  Lecture

Fall 2020  REL4100  4100  Seminar on Judaism  REL  Religion  3  Examines problems, approaches, and topics in the field of Judaism. Topics vary.<br>GR  SE  Seminar

Fall 2020  IT2300  2300  E-Commerce Advertising  IT  Information Technology  3  Techniques and strategies used in e-commerce advertising applied to graphic design. 2 hours lecture/2 hours lab.<br>UG  LL  Lecture/Lab Combination

Fall 2020  ENGT130  130  Discourse Analysis  ENG  English  3  Introduction to the linguistic study of spoken and written language beyond the sentence level.<br>GR  LE  Lecture

Fall 2020  IT1210  1210  Intro Photo Design Sci  IT  Information Technology  3  Basic terminology and techniques of photography including posing subjects and using photo editing software to enhance photography. Integrated lecture and lab.<br>UG  LL  Lecture/Lab Combination

Fall 2020  BMB7600  7600  Molec Bio of the Nucleus  BMB  Biochem & Molecular Biology  3  Also listed as BMS 7600. A literature based course covering molecular events in the nucleus including DNA replication, repair and recombination and transcription.<br>GR  LE  Lecture
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Level</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH4410</td>
<td>Movement IV</td>
<td>TH</td>
<td>2</td>
<td>Training in three weapons styles in preparation for the Skills Proficiency Test at the end of the semester.</td>
</tr>
<tr>
<td>ATR3020</td>
<td>Strength &amp; Conditioning</td>
<td>ATR</td>
<td>3</td>
<td>Introduction to testing and techniques to improve strength, flexibility, power, agility, speed, endurance, body composition and cardiovascular fitness levels.</td>
</tr>
<tr>
<td>STT4210</td>
<td>Sampling Design</td>
<td>STT</td>
<td>3</td>
<td>Classical sampling designs including simple random sampling, stratified sampling, multi-stage sampling, cluster sampling, and systematic sampling.</td>
</tr>
<tr>
<td>SOC3520</td>
<td>Social Psychology</td>
<td>SOC</td>
<td>3</td>
<td>Scientific approach to exploring human expression through the application of contemporary and historic research.</td>
</tr>
<tr>
<td>COM3660</td>
<td>Advanced News Writing</td>
<td>COM</td>
<td>3</td>
<td>Advanced study of writing skills, practices, and procedures used in reporting news for mass media.</td>
</tr>
<tr>
<td>PHIL3010</td>
<td>Ancient Philosophy</td>
<td>PHIL</td>
<td>3</td>
<td>History of philosophy from the Pre-Socratics to Neo-Platonism, with particular emphasis on the philosophical systems of Plato and Aristotle.</td>
</tr>
<tr>
<td>TH3390</td>
<td>Musical Theatre Workshop</td>
<td>TH</td>
<td>3</td>
<td>Exploration of the creation of large-scale musical works using acting, movement and vocal techniques with emphasis on ensemble singing, movement and acting leading to enhanced ensemble performance skills.</td>
</tr>
<tr>
<td>ART6140</td>
<td>Adv Studies Baroque Art</td>
<td>ART</td>
<td>3</td>
<td>Intensive studies of the period, major movements, and artists of the time. Titles vary.</td>
</tr>
<tr>
<td>TH2260</td>
<td>Graphics II: Drawing</td>
<td>TH</td>
<td>3</td>
<td>Introduction to and practice with the basic tools, materials and techniques used in 2D graphics for the theatre.</td>
</tr>
<tr>
<td>BIO1190</td>
<td>Bio Honors Reritation</td>
<td>BIO</td>
<td>1</td>
<td>Reception/discussion section to review basic concepts developed in the laboratory. Co-registration in lecture and honors laboratory is required.</td>
</tr>
<tr>
<td>ISE1990</td>
<td>Independent Study in ISE</td>
<td>ISE</td>
<td>1</td>
<td>Undergraduate independent studies in Industrial and System Engineering. Topics vary.</td>
</tr>
<tr>
<td>PLS5990</td>
<td>Studies in Select Topics</td>
<td>PLS</td>
<td>3</td>
<td>Problems, approaches and topics in the field of political science.</td>
</tr>
<tr>
<td>EES6070</td>
<td>Seismic Processing</td>
<td>EES</td>
<td>3</td>
<td>Students learn the theory and practice of computer processing of seismic reflection data. Every step in this technology is taught including seismic data formats, seismic data manipulation, filtering, velocity analysis, stacking and migration. The student has hands-on experience with industry-standard software packages.</td>
</tr>
<tr>
<td>PSY140</td>
<td>Psychosocialics</td>
<td>PSY</td>
<td>3</td>
<td>Advanced examination of auditory psychophysics and perceptual processes involving consideration of peripheral and central auditory physiology whenever possible.</td>
</tr>
<tr>
<td>BMS7520</td>
<td>Molecular Biochem. II</td>
<td>BMS</td>
<td>3</td>
<td>Survey course emphasizing an experimental and problem-solving approach to metabolism, nuclear acid function, protein synthesis, membranes and hormones.</td>
</tr>
<tr>
<td>ABS7900</td>
<td>Practicum in ABS</td>
<td>ABS</td>
<td>1</td>
<td>On-site participation of students in selected behavioral science projects. Jointly supervised by faculty and on-site personnel.</td>
</tr>
<tr>
<td>BIO4000</td>
<td>Senior Capstone</td>
<td>BIO</td>
<td>1</td>
<td>Students research and evaluate scientific literature and techniques to create and give oral presentations. Integrated Writing course.</td>
</tr>
<tr>
<td>ATH2000</td>
<td>Intro to Anthropology</td>
<td>ATH</td>
<td>1</td>
<td>An introduction to the major including advising, curriculum, and career options. The course is optional, but highly recommended for Anthropology majors and minors.</td>
</tr>
<tr>
<td>EDL8730</td>
<td>Elderly Budget, Mgmt, SS</td>
<td>EDL</td>
<td>3</td>
<td>Leading the pupil personnel service aspects of school operation, including ethical considerations, special education requirements, student attendance and accounting, guidance, counseling, health and wellness, discipline, and extracurricular/extracurricular activities.</td>
</tr>
<tr>
<td>STT6620</td>
<td>Theory of Statistics II</td>
<td>STT</td>
<td>4</td>
<td>Point estimation, properties of estimators, sufficient statistics, and computational approaches to determine mle's. The multivariate normal distribution, random vectors and covariance matrices; linear and quadratic forms. The general linear model; Cochran-Fisher theorems. Hypothesis testing and confidence regions for a vector of parameters.</td>
</tr>
<tr>
<td>ME4150</td>
<td>Mechanical Design II</td>
<td>ME</td>
<td>4</td>
<td>Analysis and design of mechanical elements including beams, trusses, arches, pressure vessels, Buckling, fatigue and fracture, and design of machinery.</td>
</tr>
<tr>
<td>CEG4322</td>
<td>VLSI Design</td>
<td>CEG</td>
<td>3</td>
<td>Introduction to VLSI system and subsystem design. Topics include CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processes and design rules, chip planning and layout, basic system subcomponents (adders, subtracers, ALUs, and others), system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI.</td>
</tr>
<tr>
<td>PLS5450</td>
<td>Political Anthropology</td>
<td>PLS</td>
<td>4</td>
<td>Anthropological study of political life cross-culturally. Evolutionary and historical approaches to political institutions, and classic anthropological analysis of political institutions. Recent developments in the study of politics as a contemporary problem. Integrated Writing course.</td>
</tr>
<tr>
<td>CHM5210R</td>
<td>Adv Inorg Syn &amp; Charact. Res.</td>
<td>CHM</td>
<td>0</td>
<td>Required recitation for CHM 5210.</td>
</tr>
<tr>
<td>KNH1960</td>
<td>Yoga</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Yoga. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
</tbody>
</table>
Fall 2020  STT6670  6670  Statistical Methods II  STT  Statistics  4  Randomization and replication. One-and-two way analysis of variance, multiple comparisons, analysis of covariance.  Multi-factor experiments. Block designs, mixed- and random-effects models, including repeated measures. Nested factors; split-plot designs; confounding and fractions for 2^k factorial experiments.  GR  LE  Lecture
Fall 2020  EE7510L  7510L  Dig Wideband Rec Des Lab  EE  Electrical Engineering  1  New laboratory components using Matlab/Simulink, Xilinx System Generator, Xilinx ISE and FPGA will be developed to engage students in the learning process and give them hands-on examples to connect with the theory aspects.  GR  LE  Lecture
Fall 2020  NUR6102  6102  Teach & Eval. Strut.  NUR  Nursing  4  Examination and application of the art, principles, theories, models, and strategies of teaching and evaluation in nursing education. Role of nurse educator in classroom and clinical is explored.  GR  LE  Lecture
Fall 2020  EES5330  4530  Diagnoses of Sed Rocks  EES  Earth & Environmental Sciences  4  An introduction to the diagnoses of ancient and modern sedimentary rocks. Topics include the theory and application of petrographic techniques with emphasis on porosity development and interpretation of diagenetic environments.  UG  LL  Lecture/Lab Combination
Fall 2020  BIO6600  6600  Population Genetics  BIO  Biology  4  Examination of the causes of genetic differences within and among species and how molecular biology techniques can be used to identify these differences. Emphasized human genetics, anthroplogy, ecology and conservation implications.  GR  LE  Lecture
Fall 2020  ED56730  6730  Sld Tecng: IS M/M  EDS  Education - Special Education  8  Candidates, under the direct supervision of an experiemented specialist, are assigned to a school for intensive teaching experience in grades K-12 special education for students with mild/moderate needs.  GR  IN  Internship
Fall 2020  PHIL5050  5050  19th Century Philosophy  PHIL  Philosophy  3  Study of 19th century European philosophy. Topics include the idealist rejection of materialism by Hegel and Schopenhauer, Kierkegaard and Nietzsche critique of rationalism on behalf of concrete existence, and Marx- synthesis of idealism/optimism about humanity's ability to shape its world and a commitment to action over thought.  GR  LE  Lecture
Fall 2020  EE7590  7590  CMOS RF IC Design  EE  Electrical Engineering  3  Introduction to the design of Radio Frequency Integrated Circuits using CMOS technology. Topics include S-parameters, noise sources in RF Integrated Circuits, low noise RF amplifiers, RF mixers, RF oscillators and synthesizers, phase locked loops and phase noise.  GR  LE  Lecture
Fall 2020  EGR4990L  4990L  Special Topics in EGR Lab  EGR  Engineering  0  Required laboratory for EGR 4990.  UG  Lab  Lab
Fall 2020  ART6130  6130  Adv Stud Renaissance Art  ART  Art  3  Intensive studies of the period, major movements, and artists of the time. Titles vary.  GR  LE  Lecture
Fall 2020  NUR7305  7305  Org. Theory & Dec Mkg  NUR  Nursing  3  Evaluation of the concepts, models, and theories of health care organizations. Analysis of quantitative and qualitative decision making models in health care systems. Continuous quality improvement strategies are analyzed in terms of patient safety and staff outcomes. Introduction to database management for administrative decision making.  GR  LE  Lecture
Fall 2020  PHL3780  3780  Bioethics  PHL  Philosophy  3  Major ethical problems arising in medical settings. Issues include the value of human life, abortion, euthanasia, the status of advanced directives, cloning, and genetic enhancement.  GR  LE  Lecture
Fall 2020  HST7500  7500  Intro to Public History  HST  History  3  Introduce students to the theory, methods, and practice of public history. Explores challenges of historical work in historic sites, museums, archives, and other public history settings. Introduction to career choices in the field of public history, along with issues of ethics, interpretation, and public memory.  GR  LE  Lecture
Fall 2020  IT2220  2220  Digital Animation  IT  Information Technology  3  Use of vector and raster images, movie clips and graphics to create images. Project-based course using the industry leading graphic animation software.  UG  LL  Lecture/Lab Combination
Fall 2020  EES2600  2600  Environmental Sci & Soc  EES  Earth & Environmental Sciences  3  Presents environmental problems and the ethical, social, political, and technological bases for their solution, using examples from diverse countries and cultures.  UG  LE  Lecture
Fall 2020  PSY1110  1110  Positive Psy Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge within Positive Psychology. Integrated Writing course.  UG  SE  Seminar
Fall 2020  THA160  160  Singing for Actor VIII  TH  Theatre  1  Private singing lessons for acting, theatre studies and drama majors only.  UG  ST  Studio
Fall 2020  ATH3030  3030  Peoples/United States  ATH  Anthropology  3  An introductory course focusing on anthropological approaches to the study of culture in the United States. We belong to a community consisting of people of diverse cultural origins, and of different races, classes, genders and sexual orientations. Although we will consider examples of diversity that have often been labeled multiculturalism, we will also look at otherwise familiar forms of cultural expression using an anthropological lens.  UG  LE  Lecture
Fall 2020  GER4030  4030  Adv Studies: Lang & Cis  GER  German  3  Advanced course on German or German-American literature, culture or film. Topics vary. Taught in German.  UG  LE  Lecture
Fall 2020  OL4010  4010  Leading Organizations  OL  Organizational Leadership  3  Focus on understanding and navigating the structural, philosophical, and human domains of organizations to engage in effective leadership.  UG  SE  Seminar
Fall 2020  SW2710  2710  Intro to Social Welfare  SW  Social Work  3  Study of federal and state social welfare in the United States, with an emphasis on policies that reduce poverty, oppression, and discrimination. Study the values and ethics that form the foundation of social services. 48 hour agency observation required.  UG  LE  Lecture
Fall 2020  PHY4460  4460  Multiple Rep Phys Sci  PHY  Physics  3  Acquaints physics teachers with the multiple representation method used in constructing concepts and problem solving in physical science. Focus will be placed on representations including pictorial representations, motion and force diagrams, graphs, energy bar charts, ray and wave front diagrams, and use of analogies.  UG  LL  Lecture/Lab Combination
Fall 2020  BMS7350  7350  Human Cost Engineering  BMS  Biomedical Sciences  3  Modeling, design and analysis of the physiological and cognitive performance of the human operator. Human-technological interactions are characterized as biobehavioral control systems.  GR  LE  Lecture
Fall 2020  PTX7021  7021  Effective Sci Writing:P1  PTX  Pharmacology/Toxicology  3  Students are required to independently write a 10-15 page scientific reviews on a current topic in Pharmacology & Toxicology with input from the advisor.  GR  LE  Lecture

Fall 2020  KNEH1020A  1020A  Aerobic Conditioning  KNE  Kinesiology & Health  1  Fundamental skills and knowledge of Aerobic Conditioning. Competency-based approach. Course may accommodate disabled students when appropriate.  LG  LB  Lab

Fall 2020  REL5530  5530  Asian Religious Ethics  REL  Religion  3  Exploration of ethics and morality as construed in a variety of Asian religious traditions including Hinduism, Buddhism, Jainism, and Confucianism. Reading of primary sources ranging from analytic ethical debates to popular folktales in which moral and immoral behavior figure prominently. Exposure to a variety of cultural approaches to universal human problems and critical readings of primary universal.  GR  LE  Lecture

Fall 2020  EES5680  5680  Hazardous Waste  EES  Earth & Environmental Sciences  3  Covers the operation of managing hazardous materials and emergency response in the workplace or at spills or hazardous waste sites. Satisfies OSHA training requirements No. 29 CFR 1910.120.  GR  LE  Lecture

Fall 2020  EES4300  4300  Env Applications of GIS  EES  Earth & Environmental Sciences  4  Concepts, terminology, data models, and analytical functions of Geographic Information Systems. Availability and processing of digital data, application of GIS as a mapping tool, spatial analysis of environmental and geologic problems. Hands-on exercises and a guided mapping project.  LG  LL  Lecture/Lab Combination

Fall 2020  ENG4540  6450  Studies in Lit Theory  ENG  English  3  Intensive study of literary theory in order to develop an understanding of critical questions and approaches.  GR  LE  Lecture

Fall 2020  CHM4890  8980  Thesis Research  CHM  Chemistry  1  Progress and completion of a research project which is suitable for publication.  GS  IS  Independent Study

Fall 2020  ATH4200  6200  Auth of Women's Health  ATH  Anthropology  3  Offers a graduate-level anthropological perspective on the health of women around the world. Integrates biological and socio-cultural dimensions of disease and illness and focuses on the intersection of gender, ethnicity and class in western and non-western societies.  GR  LE  Lecture

Fall 2020  PTX9200  9200  Pharm Clinical Research  PTX  Pharmacology/Toxicology  1  This class is designed to give pharmacology and medical students supervised research involving human subjects.  GR  CL  Clinical

Fall 2020  SPN4830  4830  Business in L. America  SPN  Spanish  3  This course studies, in both English and Spanish, fundamental concepts of doing business, managing, and marketing in Latin America. Examines cultural, institutional, behavioral and management systems and their operations in Latin America.  GS  SE  Seminar

Fall 2020  PL56560  6560  Politics of Europe  PL5  Political Science  3  Comparative study of the political systems of Great Britain, France, and West Germany.  GR  LE  Lecture

Fall 2020  DAN2510  2510  Dance History I  DAN  Dance  3  Survey of Western theatrical dance from its roots in early cultures to the early twentieth century.  LG  LL  Lecture/Lab Combination

Fall 2020  URS3000  3000  Intro to Cities&Communities  URS  Urban Affairs  3  Interdisciplinary introduction to the field of urban studies. Examines the evolution of the social, political, and economic systems in cities and suburbs, both in the United States and internationally. The course gives special attention to the importance of communities and the work of nonprofit organizations. Integrated Writing course.  LG  LE  Lecture

Fall 2020  ME7980  7980  Special Topics in ME  ME  Mechanical and Materials Engrr  1  Special topics in Mechanical Engineering or Materials Science and Engineering. Topics Vary  GR  LE  Lecture

Fall 2020  ML2040  2040  The Hispanic World  ML  Modern Languages  3  Introduction to Hispanic cultures with particular focus on Spain's relationship with its "Others" such as Muslims and Jews; the colonial legacies of Latin America, with particular attention to the portrayal of women, Indians and Afro-Latinos; and Latino cultural impact in the United States.  UT  LE  Lecture

Fall 2020  EE7460  7460  Adv Electromagnetics Eng  EE  Electrical Engineering  3  Understand the physical and engineering principles of electromagnetic wave propagation, radiation and scattering; understand electro-dynamic forms of Maxwell's equations and the associated mathematical models and analysis methods; understand application of Maxwell's equations to engineering problems in radiation and scattering.  GR  LE  Lecture

Fall 2020  EE2020  2020  Intro to Mechatronics  EE  Electrical Engineering  3  Learn to perform system level design integrated systems, program an embedded microcontroller, analyze and design basic sensor interface circuits, analyze and design driver circuits, and develop simple programs that control actuators.  LG  LE  Lecture

Fall 2020  ART3680  3680  Beg Printnkgr; Lithograph  ART  Art  3  Introduction to basic lithographic techniques using stone and/or metal plate. Emphasis on black-and-white printing and aesthetic possibilities of the media. This course has a fee that is non-refundable once the term begins.  GS  Department Managed Prerequisite(s): Undergraduate level ART 2280 Minimum Grade of D and Undergraduate level ART 2090 Minimum Grade of D or Combination

Fall 2020  ISE4940  4940  Indv&Sys Eng Intrn II  ISE  Industrial & Systems Engrr  1  Industrial and systems engineering internship course. Students are supervised via weekly seminars and regular feedback from employer. Must have completed all of the 3rd year courses as listed in the program guide. Minimum of 10 hours pe' week for each credit hour registered. A minimum total of 450 hours of work is required for 3 credits of technical elective credit.  GR  IN  Internship

Fall 2020  BID4500L  4500L  Clin Exercise Phys Lab  BID  Biology  0  Required laboratory for BI 4500.  LG  LB  Lab

Fall 2020  ME4010  4010  Capstone Design I  ME  Mechanical and Materials Engrr  2  First of a two-semester course in solving realistic engineering design problems. Research in professional literature, application of systems engineering principles, and reporting of technical results. Integrated Writing course.  GS  Department Managed Prerequisite(s): Undergraduate level ME 1040 Minimum Grade of D and Undergraduate level ME 3600 Minimum Grade of D and Undergraduate level ME 3250 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D and Undergraduate level PHY 2410L Minimum Grade of D and Undergraduate level ME 3210 Minimum Grade of D and Undergraduate level ME 3350 Minimum Grade of D and Undergraduate level ME 3360 Minimum Grade of D and Undergraduate level ME 4140 Minimum Grade of D or Undergraduate level ME 3760 Minimum Grade of D and Undergraduate level ME 4620 Minimum Grade of D (ME-4620 can be taken concurrently) and Undergraduate level ME 4720 Minimum Grade of D or Combination

Fall 2020  BIO4500L  4500L  Clin Exercise Phys Lab  BIO  Biology  0  Required laboratory for BI 4500.  LG  LB  Lab

Fall 2020  ME4010  4010  Capstone Design I  ME  Mechanical and Materials Engrr  2  First of a two-semester course in solving realistic engineering design problems. Research in professional literature, application of systems engineering principles, and reporting of technical results. Integrated Writing course.  GS  Department Managed Prerequisite(s): Undergraduate level ME 1040 Minimum Grade of D and Undergraduate level ME 3600 Minimum Grade of D and Undergraduate level ME 3250 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D and Undergraduate level PHY 2410L Minimum Grade of D and Undergraduate level ME 3210 Minimum Grade of D and Undergraduate level ME 3350 Minimum Grade of D and Undergraduate level ME 3360 Minimum Grade of D and Undergraduate level ME 4140 Minimum Grade of D or Undergraduate level ME 3760 Minimum Grade of D and Undergraduate level ME 4620 Minimum Grade of D (ME-4620 can be taken concurrently) and Undergraduate level ME 4720 Minimum Grade of D or Combination
Fall 2020
FR3990 3990 Studies Selected Subject FR French 1 Individual research project approved and supervised by a full-time faculty member. Taught in French.<b> Department Managed Prerequisite(s): (Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D) or (Undergraduate level FR 3020 Minimum Grade of C-).</b> UG IS Independent Study
Fall 2020
RST2620 2620 Regional Studies: China RST Regional Studies 3 Introduction to the historical, cultural, economic, and political reality of the world's most populous country, highlighting the cultural contributions of China's rich history, not only in the creation of modern Chinese culture but its impact on other cultures. Integrated Writing course. UG LE Lecture
Fall 2020
ENG6780 6780 Studies TESOL Education ENG English 3 Focus on theoretical issues and practical problems of teaching English to speakers of other languages (TESOL).<b> Department Managed Prerequisite(s): (Undergraduate level ENG 3500 Minimum Grade of D or Graduate level ENG 4710 Minimum Grade of D) or Graduate level ENG 4710 Minimum Grade of D).</b> GR LE Lecture
Fall 2020
EDT1100 1100 Special Topics in E Lib EDT Educational Technology 1 Topics vary. UG LE Lecture
Fall 2020
NUR8102 8102 Final Pract-Direct Care NUR Nursing 1 Individuals with recent experience in the fields of nursing. Includes seminar that facilitates synthesis and application of all prior learning for evidence-based practice. GR SE Seminar
Fall 2020
OL4950 4950 Ldshlp Skills Applica OL Organizational Leadership 3 Students will examine, in depth, four facets of leadership that resonated with them throughout the program. Through the development of a book, students will explain and apply the concepts they reviewed to real-world situations. They will demonstrate a clear understanding of the four facets they select and create a list of suggestions and takeaways for leaders to use and apply in addressing organizational challenges. Integrated Writing course. UG SE Seminar
Fall 2020
KNH1020 1020 Aerobic Conditioning KNH Kinesiology & Health 1 Fundamental skills and knowledge of Aerobic Conditioning. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab
Fall 2020
ASM7471 7471 Environmental Medicine ASM Aerospace Medicine 3 Interaction of humans with occupational environments and environmental exposures of both man made and natural sources. Emphasis is focused on injuries, illnesses, risk assessment, as well as public health concerns and prevention in both occupational and environmental settings. GR LE Lecture
Fall 2020
CHM8550 8550 Select Topic Phys Chem CHM Chemistry 1 Selected topics in the field of physical chemistry such as molecular spectroscopy, advanced molecular structure, magnetic resonance, X-rays, crystal structure, statistical mechanics, and precision physical-chemical measurements. GR LE Lecture
Fall 2020
TEN0850 0850 Basic Writing TEN Technical English 3 Grammar, sentence structure, paragraph development, essay writing, and proofreading. Cannot be applied toward graduation. Graded pass/unsatisfactory. UG LE Lecture
Fall 2020
ME412L 412L Industrial Controls Lab ME Mechanical and Materials Engr 1 Hands-on experience in Industrial Controls, Automated Controls systems, plant modeling and control system performance.<b> Department Managed Prerequisite(s): (Undergraduate level CEG 2710 Minimum Grade of D and Undergraduate level EE 3210 Minimum Grade of D) or (Undergraduate level ME 1020 Minimum Grade of D and Undergraduate level ME 3210 Minimum Grade of D).</b> UG LB Lab
Fall 2020
ED6670 6670 MA. World Lang. C&M I ED Education 3 Presents world language curriculum and materials with emphasis on ACTFL Standards in order to plan and implement effective lessons and activities focused on PK-12 second language acquisition. GR LE Lecture
Fall 2020
EDT6230 8230 Digital Teach: Res Meth EDT Educational Technology 3 Students will conceptually explore different research methodologies in relation to the scholarship of teaching and learning. Both qualitative and quantitative techniques will be discussed. GR LE Lecture
Fall 2020
EDT7450 7450 Content Literacies K-12 ED Education 3 Exploration of content area learning with an emphasis on effective literacy strategies including vocabulary/concept development, comprehension, writing, technology, and resources to enhance literacy learning for diverse learners in grades K-12. GR LE Lecture
Fall 2020
EDL9600 9600 Pol & Soc Contexts EDL Educational Leadership 3 The course is designed for current and aspiring district-level administrators exploring the political and social forces shaping educational policy, instructional leadership, and classroom practice. GR SE Seminar
Fall 2020
KNH1260A 1260A HE20 Deep Conditioning KNH Kinesiology & Health 1 Fundamental skills and knowledge of HE20 Deep Conditioning. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab
Fall 2020
PSY2780 8270 Cognitive Neuroscience PSY Psychology 3 This graduate course will introduce students to current topics and controversies in cognitive neuroscience. The course will demonstrate how different research traditions are integrated to inform and advance present-day understanding of the relationship between brain and behavior. GR LE Lecture
Fall 2020
MUE6500 6500 Symphonic Band MUE Music: Ensembles 1 Performs band music of all styles. Open to all students, each semester, with intermediate to advanced experience. Audition required. GR LL Lecture/Lab Combination
Fall 2020
SPN5260 5260 Business Spanish II SPN Spanish 3 Study of the business culture behind Spanish. Development of communication skills and intercultural understanding. Use of Spanish in international Business.<b> Department Managed Prerequisite(s): (Undergraduate level SPN 3250 Minimum Grade of C).</b> GR LE Lecture
Fall 2020
BIO4070 4070 Wetlands Biology BIO Biology 5 Ecological investigation of wetlands of United States, with emphasis on Midwes. Covers soils, vegetation, hydrology, conservation, and restoration. Primarily field oriented and some lecture. UG LL Lecture/Lab Combination
Fall 2020
PLS4890 4890 Foreign Service Seminar PLS Political Science 1 Learn about foreign service and prepare for the U.S. foreign service exam. Will review components of the exam, learn about the exam process and available jobs, and practice interviewing and other skills necessary to pass the exam. UG SE Seminar
Fall 2020
BMB4880 4880 Ind Read Biochem Mol Bio BMB Biochem & Molecular Biology 1 Review of current literature in biochemistry and molecular biology. UG IS Independent Study
Fall 2020
WGS3700 3700 Research Methods in LA WGS Women, Gender, and Sexuality 3 Introduces social science and humanities majors to research design, and the kinds of data produced, in describing, explaining, and understanding social problems. UG LE Lecture
Fall 2020
DAN4310 4310 Pointe Class DAN Dance 1 Emphasizes pointe work for the female dancer to develop strength on pointe for classical ballet. UG ST Studio
Fall 2020
ECE3500 3500 Fam, Comm, & Schools ECE Education - Early Childhood 3 Early childhood educators collaborating with families and diverse backgrounds in the care and education of children, birth age 8, building curriculum that addresses the needs of English Language Learners. UG LE Lecture
Fall 2020
ED6960 6960 Cont Sem: AYA/Science ED Education 3 Seminar accompanying Adolescent and Young Adult Internship focusing on pedagogical content knowledge in Integrated Science, assessment of the National Science Teachers Association (NSTA) standards and the completion of the professional portfolio. GR SE Seminar
Supervised use of Spanish in workplace settings. Must complete an application available from the Department of Developmental Education.

Introduction to microscopic and macroscopic physical systems developed from concepts of statistical physics.

Study of the interactions between natural fresh waters and their geologic environments. Included topics are chemical equilibrium concept, Modeling using PHREEQC, carbonate system, water-rock interactions, sorption isotherms, redox reactions, biologic influences on aqueous geochemistry, and applications of environmental isotopes.

Study of survey of mathematical physics including vector analysis, tensor analysis, calculus of several variables, ordinary and partial differential equations, integral equations, theory of distributions. Ability to apply these to mechanics, electromagnetism, and thermodynamics, and quantum mechanics.

Survey of the physical environment with particular emphasis on the classification of rocks and minerals.


Linguistic and social history of the Spanish language. Language variation in Spain, Latin America, United States, and other areas of the world where Spanish is spoken.

History of psychology, research methods, biological foundations, perception, consciousness, learning, memory, cognition, language, development, motivation, emotion, social behavior, personality, health, psychopathology and therapy, and organizational psychology. Integrated Writing course.

Theoretical and practical aspects of written and oral communication in a second language. Preparatory course for students who need to improve their proficiency in a modern language. Minimum time commitment 135 hours a semester, including a minimum of 120 hours of on-site study. No credit for students who have completed an equivalent course in high school or who have received transfer credit for an equivalent course.

Introduction to the theory and practice of investing in stocks, bonds, and other securities.

Principles of process engineering including mass and energy balances, fluid flow, mass and heat transfer, and their relation to food equipment design, process design, and food quality.

Faculty-supervised internship in information systems. Students work on an information systems project in a firm or public agency and submit reports for completion of the course.

The research work to be performed will be supervised by an ISM Program Faculty member. The scope and milestones required for the independent research shall be decided upon by the faculty member in consultation with the student.

A study of statistical mechanics. Applications to classical and quantum systems will be presented as well as theories of phase transitions, critical phenomena and fluctuations.

Examines historical and current race/ethnic, gender, sexual orientation, ability, and social class stereotypes and biases as they relate to schooling and education. Students will identify personal preconceptions and learn ways of becoming culturally responsive educators.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Description</th>
<th>Grade</th>
<th>Type</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISE4150</td>
<td>Adv Prob and Stats Engineers</td>
<td>4</td>
<td>Topics in probability and statistics with an emphasis on solving engineering problems. Following this course, students will be able to analyze data, design and analyze statistically valid experiments, and draw statistically valid conclusions. Topics include probability, sampling distributions, probability distributions, confidence intervals, hypothesis testing, regression and correlation, analysis of variance (ANOVA), design of experiments, statistical process control, classification, and computer software for basic statistical analysis.</td>
<td>UG</td>
<td>LE</td>
<td>GR</td>
</tr>
<tr>
<td>PHY6510</td>
<td>Electricity &amp; Magnetism</td>
<td>5</td>
<td>Fundamental laws of electricity and magnetism presented from the viewpoint of field theory. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation.</td>
<td>GR</td>
<td>LE</td>
<td>GR</td>
</tr>
<tr>
<td>URS6302</td>
<td>Managing Volunteer Org</td>
<td>3</td>
<td>Prepares students to design, plan, and evaluate volunteer programs. Topics address management principles including program design, recruitment, retention, training, and placement and assessment.</td>
<td>LE</td>
<td>LE</td>
<td>LE</td>
</tr>
<tr>
<td>KNE2000</td>
<td>Army Fitness Tr. Ill</td>
<td>3</td>
<td>Fundamental skills and knowledge of Army Fitness Training. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>CEG4870L</td>
<td>Intelligent Control Lab</td>
<td>4</td>
<td>Implements intelligent control strategies on systems and subsystems in industrial and engineering applications.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>EDL7820</td>
<td>School Law</td>
<td>3</td>
<td>Examines the legal framework that all school personnel must function in. Emphasis on both legal precedents and statutory provisions.</td>
<td>LE</td>
<td>LE</td>
<td>LE</td>
</tr>
<tr>
<td>CHM7890</td>
<td>Continuing Registration</td>
<td>3</td>
<td>Introduction to the principles and practices of objective personality assessment and report writing.</td>
<td>IB</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
<tr>
<td>PSH120</td>
<td>Object Pers. Assns</td>
<td>3</td>
<td>Introduction to the principles and practices of objective personality assessment and report writing.</td>
<td>IS</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ANT7010</td>
<td>Selected Topics in ANT</td>
<td>3</td>
<td>A selected area of anatomy is discussed in greater detail than in basic anatomy courses. Some topics may include laboratory.</td>
<td>IS</td>
<td>LE</td>
<td>Independent Study</td>
</tr>
<tr>
<td>PTX7120</td>
<td>Journal Club</td>
<td>3</td>
<td>WSU faculty driven course. Students are presented with current literature on around a specific topic. The students will give presentations on the material.</td>
<td>SE</td>
<td>LE</td>
<td>Seminar</td>
</tr>
<tr>
<td>SOC4420</td>
<td>Ethnographic Methods</td>
<td>3</td>
<td>Explores the meaning, scope and dilemmas of ethnography using both a hands-on ethnographic project and a wide array of readings. Integrated Writing course.</td>
<td>LE</td>
<td>LE</td>
<td>LE</td>
</tr>
<tr>
<td>CTE4810</td>
<td>Teaching At-Risk Student</td>
<td>3</td>
<td>At-risk students present distinctions in interests, abilities and temperament, which have implications for teaching and learning. Includes suggestions for adjusting the educational environment and decreasing the dropout rate.</td>
<td>LE</td>
<td>LE</td>
<td>LE</td>
</tr>
<tr>
<td>PN6200</td>
<td>Neuronal immune Sy Homeostasis</td>
<td>3</td>
<td>Multidirectional interactions between the nervous and immune systems have been documented in homeostasis and pathologies ranging from multiple sclerosis to autism, and from leukemia to acute and chronic inflammation. This course focuses on neuro-immune interactions at barrier surfaces—mostly the gut, but also including the skin and the airways, areas densely populated by neurons and immune cells that constantly sense and adapt to tissue-specific environmental challenges.</td>
<td>LE</td>
<td>LE</td>
<td>LE</td>
</tr>
<tr>
<td>EES4240</td>
<td>Oceanography</td>
<td>4</td>
<td>Introduction to the interrelated geology, physics, chemistry, and biology of the ocean.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PHL5120</td>
<td>History of Ethics</td>
<td>3</td>
<td>Study of the development of ethical philosophy through a detailed investigation of such figures as Plato, Aristotle, Hobbes, Butler, Home, Kant, Mill, and Nietzsche.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>REL3410</td>
<td>Chinese Religions</td>
<td>3</td>
<td>Introductory survey of religious thought and practice in Chinese history and culture. Primary focus on Confucianism, Daoism, and Buddhism. Themes examined include religion and politics in Chinese history, human nature and self-cultivation, and conceptions of the sage in Chinese religions.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ME7730</td>
<td>Adv Physical Properties</td>
<td>3</td>
<td>This course focuses on some of the advanced physical properties of solid-state materials including thermoelectric energy conversion, optoelectronics, principles of lasers, high-k dielectrics, magnetoresistance, negative differential resistance, superconductivity, effects of reduced dimensionality and nanostructures.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>RHB4700</td>
<td>Special Topics</td>
<td>3</td>
<td>Independent study in areas of interest to students that are not readily available in any existing course. Topics vary. May be taken for letter grade or pass/unsatisfactory.</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>DEV0401</td>
<td>Introductory Algebra</td>
<td>4</td>
<td>Review of arithmetic and basic algebra concepts and skills including operations involving signed numbers and fractions, polynomials, exponents, linear equations, and applications. This course has a fee that is non-refundable once the term begins.</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>CEG7030</td>
<td>VLSI Des Synth Optim</td>
<td>3</td>
<td>VLSI Synthesis and optimization including data path synthesis, glue logic synthesis control-unit synthesis, and resource sharing. Covers behavioral level to layout level synthesis and corresponding algorithms.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEG900L</td>
<td>Spec Topics in Comp. Eng</td>
<td>3</td>
<td>Special Topics in Computer Engineering.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>IDL7110</td>
<td>Learning in a Digital World</td>
<td>3</td>
<td>Instructor and course designers are introduced to the relationship between learning theory and teaching practices that incorporate digital technologies to enhance students' learning. This course provides an introduction to the research and science of learning.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY3010L</td>
<td>Research Methods Psy I Lab</td>
<td>0</td>
<td>Required laboratory for PSY 3010. Integrated Writing course.</td>
<td>LB</td>
<td>Lab</td>
<td>Lab</td>
</tr>
<tr>
<td>MTH6070</td>
<td>Optimization Techniques</td>
<td>3</td>
<td>Algorithms for optimizing real functions of several variables subject to equality and inequality constraints. Convexity properties of functions and sets, linear programming, simplex and interior point methods, integer programming, branch and bound algorithm, transportation problem, necessary and sufficient conditions for nonlinear function optimization, Newton and quasi-Newton methods, Lagrange multiplier conditions, Kuhn-Tucker conditions, dynamic programming.</td>
<td>LE</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Semester</td>
<td>CRN</td>
<td>Title</td>
<td>Dept.</td>
<td>Units</td>
<td>Description</td>
<td>Level</td>
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<tr>
<td>Fall 2020</td>
<td>3450</td>
<td>Public Relations</td>
<td>COM</td>
<td>3</td>
<td>Simulation focusing on the processes of a public-relations campaign: fact finding, action planning, implementation of communication channels, and program evaluation.</td>
<td>UG</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>7940</td>
<td>Special Topics in EGR</td>
<td>EGR</td>
<td>1</td>
<td>Special topics in engineering. Prerequisite: instructor approval.</td>
<td>GR</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>4780</td>
<td>Hon: Ind Study Economics</td>
<td>EC</td>
<td>3</td>
<td>Research in economics for fulfillment of the Honors Program project requirement.</td>
<td>UG</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>4450</td>
<td>Medical Biochemistry</td>
<td>BMB</td>
<td>3</td>
<td>Emphasizes biochemistry and the biochemical principles of diseases.</td>
<td>UG</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>4040</td>
<td>Topics in Modern Biology</td>
<td>BIO</td>
<td>1</td>
<td>Advanced topics of current interest. Topics vary.</td>
<td>UG</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>3110</td>
<td>French Conversation</td>
<td>FR</td>
<td>3</td>
<td>Practice in oral use of French emphasizing the culture of the French-speaking world. Taught in French.</td>
<td>UG</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>7560L</td>
<td>Advanced Robotics Lab</td>
<td>EE</td>
<td>1</td>
<td>Required laboratory for EE 7560. Department Managed Prerequisite(s): Undergraduate level FR 2020 Minimum Grade of D or AP French Language 4/b&gt;</td>
<td>GR</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>6490</td>
<td>Genetic Screen using RNA</td>
<td>BIO</td>
<td>3</td>
<td>Students will perform original research in the fields of developmental and reproductive biology by using planarian screens to identify genes expressed in the reproductive system and required for development of eggs and sperm. Cloned genes in bacterial vectors will then be used to determine whether genes are expressed in the reproductive system, and perform loss-of-function experiments by RNA-interference (RNAi). This will uncover molecular mechanisms required for developmental function.</td>
<td>GR</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>7601</td>
<td>Prime Care Women/Child</td>
<td>NUR</td>
<td>6</td>
<td>Provides the nurse practitioner with knowledge and skills needed to deliver primary health care to women, children and adolescents in multiple settings. Emphasizes the application of problem identification and management, health promotion, and client and family counseling. Clinical and supervised lab experiences focus on foundations of nurse practitioner practice, initial role identification and opportunity to apply classroom and core content.</td>
<td>GR</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>6490</td>
<td>TTW Int: Job Training Coord</td>
<td>TTW</td>
<td>1</td>
<td>Students assigned to an experienced job training coordinator in the field for observing, discussing, researching, and practicing skills in the area of job placement, particularly those related to collaborating with support agencies for transition.</td>
<td>GR</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>4410</td>
<td>Applied Music</td>
<td>MUA</td>
<td>4</td>
<td>Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.</td>
<td>UG</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>3000</td>
<td>Critical Thinking</td>
<td>PHL</td>
<td>3</td>
<td>Introduction to fundamental reasoning skills as understood philosophically and as applied in a variety of areas, including science, religion, politics, and morality. Topics include the structure of deductive and inductive reasoning, valid and invalid arguments, truth tables, syllogisms, formal and inductive fallacies.</td>
<td>UG</td>
</tr>
</tbody>
</table>