<table>
<thead>
<tr>
<th>ACADEMIC_PERIOD</th>
<th>COURSE_ID</th>
<th>COURSE_TITLE</th>
<th>COURSE_NUMBERS</th>
<th>SUBJEC_T</th>
<th>SUBJECT_DESC</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>ABS7700</td>
<td>Independent Research</td>
<td>7700</td>
<td>ABS</td>
<td>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>GR8410</td>
<td>Independent Reading</td>
<td>4810</td>
<td>GR</td>
<td>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>CEG9044L</td>
<td>VLSI Testing Design Lab</td>
<td>7040L</td>
<td>CEG</td>
<td>Computer Engineering</td>
<td>1</td>
<td>Required laboratory for EE 7540 &lt;b&gt;Department Managed Prerequisite(s):&lt;/b&gt; Undergraduate level EE 4540 Minimum Grade of D and Undergraduate level EE 4540L Minimum Grade of D) or (Graduate level EE 4540 Minimum Grade of D)</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>TH1730</td>
<td>MT History/Lit II</td>
<td>3730</td>
<td>TH</td>
<td>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>Subsurface Fluid Flow</td>
<td>6540</td>
<td>EES</td>
<td>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>Digital Marketing</td>
<td>7100</td>
<td>MKT</td>
<td>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 technologies. Objectives are to understand basic principles of marketing, how to design an e-commerce website 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 technologies in marketing.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MIS810</td>
<td>Special Topics in I.S.</td>
<td>7810</td>
<td>MIS</td>
<td>Management Information Systems</td>
<td>3</td>
<td>The Special Topics of Information Systems will offer cutting edge topics that focus on one or 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>Modern Dance II</td>
<td>2110</td>
<td>DAN</td>
<td>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>MCE Science: Curr &amp; Mhdld</td>
<td>6360</td>
<td>ED</td>
<td>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>Dispute Resolution</td>
<td>3700</td>
<td>COM</td>
<td>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>Field School Archaeology</td>
<td>6650</td>
<td>ATH</td>
<td>Anthropology</td>
<td>3</td>
<td>Field training in the surveying and excavation of selected archaeological sites.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MTH7990</td>
<td>Selected Topics</td>
<td>7990</td>
<td>MTH</td>
<td>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>EDST720</td>
<td>Gamification</td>
<td>720</td>
<td>EDST</td>
<td>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</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ML4011</td>
<td>Adaptive Lifespan Lab</td>
<td>4011</td>
<td>ML</td>
<td>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>LG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUS2520</td>
<td>Musicianship IV</td>
<td>2520</td>
<td>MUS</td>
<td>Music</td>
<td>1</td>
<td>Continuation of MUS 2510.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
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<tr>
<td>Fall 2020</td>
<td>PSY5600</td>
<td>Engineering Psychology</td>
<td>5600</td>
<td>PSY</td>
<td>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>PLS6440</td>
<td>Topics Criminal Justice</td>
<td>6440</td>
<td>PLS</td>
<td>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>EEE7600L</td>
<td>Introduction to MEMS Lab</td>
<td>6760L</td>
<td>EE</td>
<td>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>Practicum for PCPNP</td>
<td>7552</td>
<td>NUR</td>
<td>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>BIO3140</td>
<td>Molecular Bio Lab</td>
<td>3140</td>
<td>BIO</td>
<td>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>Psychometrics</td>
<td>4430</td>
<td>PSY</td>
<td>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>CHI5220</td>
<td>Adv. Chinese Composition</td>
<td>5220</td>
<td>CHI</td>
<td>Chinese</td>
<td>3</td>
<td>Continuation of Chinese composition skills development through intensive reading and writing practice. Taught in Chinese.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>STT5610</td>
<td>Applied Statistics II</td>
<td>5610</td>
<td>STT</td>
<td>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>Careers in Accounting</td>
<td>2070</td>
<td>ACC</td>
<td>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>ME6210L</td>
<td>Mechanical Vibrations Lab</td>
<td>6210L</td>
<td>ME</td>
<td>Mechanical and Materials Engineering</td>
<td>0</td>
<td>Required laboratory for ME 6210L.</td>
<td>GR</td>
<td>LB</td>
<td>Lab</td>
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<tr>
<td>Fall 2020</td>
<td>RHB3620</td>
<td>Drug &amp; Alcohol Abuse</td>
<td>3620</td>
<td>RHB</td>
<td>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>MTH6570</td>
<td>Combinatorics and Graphs</td>
<td>6570</td>
<td>MTH</td>
<td>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  PL6580  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  Dirg & Internn: 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  CEG6330L  6330L  Micropo Embedded System Lab  CEG  Computer Engineering  Lab  0  Required laboratory for CEG 6330.  GR  LB  Lab  Fall 2020  MTH7310  7310  Real Analysis I  MTH  Mathematics  4  Cardinality of sets. Metric spaces, convergence, completeness, compactness. Fixed point Theorems. Spaces of continuous functions, Az麒e-Ausell Theorem, Stone-Weierstrass Theorem. Lebesque measure and integration on R^n. Convergence theorems, Fubini’s Theorem. Lp spaces.  GR  LE  Lecture  Fall 2020  ANT2120L  2120L  Human Anatomy & Phys II Lab  ANT  Anatomy  0  Required laboratory for ANT 2120.  LG  LB  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 Religious Mov 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 Peru and Ecuador, 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  BHE  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. Researchers, inventors and entrepreneurial resources. Students will consider factors including technology, customers, feasibility, competition, 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 De 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.  GR  IS  Seminar  Fall 2020  CS8920  8920  Independent Study in CS  CS  Computer Science  1  Independent study in computer science.  GR  IS  Independent Study  Fall 2020  ENGI540  540  Multigenre Writing  ENG  English  3  Advanced strategies for writing in multiple and mixed genres.  UG  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  ENGT720  720  Sem in Le&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.  UG  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.  GR  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.  GR  SE  Seminar
Fall 2020

BMS7030 7030 Research Ethics BMS Biomedical Sciences 0.5 (Also listed as BMB 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

ART120 6120 Adv St Medieval Art ART Art 3 Intensive studies of the period, major movements, and artists of the time. Titles vary.

GR LE Lecture

Fall 2020

RHB3650 3650 Rehab & Corrections RHB Rehabilitation 3 Introduction to rehabilitation students to corrections. Students will learn about correctional programs and barriers to community reentry for ex-offenders.

UG LE Lecture

Fall 2020

PSY3070 3070 Tests & Measures PSY Psychology 3 Introduction to the use, application, evaluation, and development of psychological tests and measures including ability, aptitude, attitude, standardized, or norm-referenced measurements.

UG LE Lecture

Fall 2020

SW7630 7630 SW Field Ed III SW Social Work 1 Completion of 300 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.

GR IN Internship

Fall 2020

PPHE230 8230 PH 1 LE Corrd Credit PPH Population & Public Health 1 Continuation of integrative learning experience project research carried out with faculty approval and supervision. <b>Department Managed Prerequisite(s): Graduate level PPH 8210 Minimum Grade of P or Graduate level PPH 8220 Minimum Grade of P</b>.

GR IS Independent Study

Fall 2020

ED2650 6250 MCE Intern Pt 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 IN Internship

Fall 2020

PLS3990 3990 Selected Subjects PLS Political Science 1 Problems, approaches and issues in the field of political science. Topics vary. Integrated Writing course.

UG LE Lecture

Fall 2020

ARA3980 3980 Studies in Selc Subj ARA Arabic 1 Individual research project approved and supervised by a full-time faculty member. Taught in Arabic. <b>Department Managed Prerequisite(s): Undergraduate level ARA 3110 Minimum Grade of D or Undergraduate level ARA 3120 Minimum Grade of D or Undergraduate level ARA 3220 Minimum Grade of D</b>.

UG LE Lecture

Fall 2020

CS7950 7950 MSCE Thesis Research CS Computer Science 1 Master's thesis research in computer science.

GR IS Independent Study

Fall 2020

CS5980 5980 Special Topics in CS CS Computer Science 1 Special topics in computer science.

GR LE Lecture

Fall 2020

HST300 6300 African History HST History 3 Examines particular periods, regions, or countries in African history.

GR LE Lecture

Fall 2020

KHN7840 7840 Field Experience APE KHN Kinesiology & Health 4 Provides a review of the APENS standards and how they relate to teaching individuals with disabilities. A 200-hour field experience will prepare students as they translate theory into practice.

GR IN Internship

Fall 2020

GEO4430 4430 Geographic Info Systems GEO Geography 4 Principles, structure and application of macro and micro spatial analytical techniques. Use of state-of-the-art software to create map layers that can be stacked and interpreted.

UG LE Lecture

Fall 2020

BBIO430L 8430L Vertebrate Histology Lab BBIO Biology 0 Required laboratory for BIO 6430.

UG LB Lab

Fall 2020

KHN1200A 1200A Fencing: Beginning KHN Kinesiology & Health 1 Fundamental skills and knowledge of Fencing: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate.

UG LB Lab

Fall 2020

EE4100 4100 NANO/Micro Fabrication EE Electrical Engineering 3 History, design, and fabrication of CMOS and micro-electro-mechanical systems (MEMS). CMOS front-end-of-line (FEOL), back-end-of-line (BEOL), surface micromachining and bulk micromachining. Typical VLSI devices and selected RF MEMS.

UG LE Lecture

Fall 2020

ATR4860 4860 Medical Conditions in AT ATR Athletic Training 3 Knowledge, skills, and dispositions required of the entry-level Certified Athletic Trainer to properly evaluate and refer medical conditions that may occur in athletic training.

UG CL Clinical

Fall 2020

PSY4460 4460 Adv Org Psych Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on industrial/organizational psychology. Topics will vary. Integrated Writing course.

UG SE Seminar

Fall 2020

EE6750 6750 Intro to Radar Systems EE Electrical Engineering 3 Introductory 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, sidelobe clutter, synthetic arrays, and pulse compression techniques.

GR LE Lecture

Fall 2020

EDS4400 4400 Collab Differentiation EDS Education - Special Education 3 Co-teaching models with emphasis on differentiation, integration of academic instruction/behavior management; collaborative consultation and communication strategies to enhance instruction for those with exceptional learning needs. Field experiences required. Integrated Writing course.

UG LE Lecture

Fall 2020

EDT6210 8210 App Psych Theory for DL EDT Educational Technology 3 Introduction to multimedia learning theory and how theory can be integrated into instructional design.

GR LE Lecture

Fall 2020

STT6240 6240 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. <b>Department Managed Prerequisite(s): Undergraduate level STT 3610 Minimum Grade of D or Undergraduate level STT 3630 Minimum Grade of D</b>.

GR LE Lecture

Fall 2020

ENG2800 2800 Intro Creative Writing ENG English 3 Fundamental techniques and strategies of poetry and short fiction; analysis of anthologized poems and stories; group discussion of manuscripts.

UG LE Lecture

Fall 2020

GER3220 3220 Adv Writing in German GER German 3 Writing techniques and grammar review; literary and/or film analysis incorporating targeted grammar, vocabulary, and stylistic devices; taught in German. Integrated Writing course. <b>Department Managed Prerequisite(s): Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D</b>.

UG LE Lecture

Fall 2020

CEG5520 6520 Sci Vis and Virt Env CEG Computer Engineering 3 Covers various visualization approaches for different data types. These visualization approaches are discussed using real-world data sets. Different usage modalities will be discussed, including non-traditional input devices and display types. <b>Department Managed Prerequisite(s): Undergraduate level CEG 4500 Minimum Grade of D or Undergraduate level CEG 6500 Minimum Grade of D</b>.

GR LE Lecture

Fall 2020

ED7902 7902 Current Topics&Trends in Edu ED Education 1 Centers on the effective implementation of various instructional practices, the evidence behind the practices, and their practical application in PK-12 classrooms based on current trends in education.

GR SE Seminar

Fall 2020

PSY6120 6120 Applied Sports Psy Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge within Sports Psychology.

GR SE Seminar

Fall 2020

BME9980 6980 Special Topics in BME I BME Biomedical Engineering 1 Graduate special topics in advanced biomedical engineering. Topics vary.

GR LE Lecture

Fall 2020

HST7100 7100 Seminar US to 1865 HST History 3 Examines United States history through the Civil War. Topics vary and may include the following periods: Colonial, Revolutionary, early Republic, antebellum, Civil War.
Fall 2020 EE3510 3510 Cont & Dis Linear System EE Electrical Engineering 3 Students will learn the ability to develop models of physical systems, to classify systems, to apply Laplace transforms, a transform, and understand sampling theory. Nyquist, and signal reconstruction, quantization, and analyze continuous and discrete-time linear systems. <b>UG</b> Department Managed Prerequisite(s): (Undergraduate level EE 2010 Minimum Grade of C and Undergraduate level EE 2010L, Minimum Grade of C) or (Undergraduate level EE 2011 Minimum Grade of C and Undergraduate level EE 201IL Minimum Grade of C)<b>/b></b> Intended for BSECET majors. May be taken for credit in other programs with approval. UG LE Lecture

Fall 2020 ME3310 3310 Thermodynamics I ME Mechanical and Materials Engineer 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</b> Department Managed Prerequisite(s): Undergraduate level EGR 1010 Minimum Grade of D and Undergraduate level PHY 2400 Minimum Grade of D<b>/b></b>

Fall 2020 SOM707 707 Year 2 Medical Study SOM School of Medicine 24

Fall 2020 CHM4680 4680 Experimental Nanoscience CHM Chemistry 3 Laboratory experiments include fabrication of nanomaterials such as metal nanoparticles and graphene nanostructures, 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 LE Lecture

Fall 2020 EC5220 5220 Grad Surv Prize of Mexico 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 LE Lecture

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 LE Lecture

Fall 2020 APS4030 4030 History of Ideas of Race AFS Afr/Afr Amer Studies 3 Examination of the development of various ideas of race from 1600-present. Integrated writing course. UG LE Lecture

Fall 2020 ECC210 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 LE Lecture

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 LE Lecture

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 LE Lecture

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 LE Lecture

Fall 2020 URS7500 7040 Human Resources in PA URS Urban Affairs 3 Examine personnel functions such as job evaluation, recruitment and selection, performance appraisal, compensation, training, labor relations, and affirmative action. GR LE Lecture

Fall 2020 BME4401L 4441L Biomaterials Lab BME Biomedical Engineering 0 Required laboratory for BME 4401. GS4030

Fall 2020 CLS5500 5500 Ancient Culture and Soc. CLS Classics 3 Aspects of Greek and Roman civilization with evidence from literature, history, documents, and other materials. GR LE Lecture

Fall 2020 NUR8800 8800 Sys Tking to Adv 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 LE Lecture

Fall 2020 NUR4050 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 LE Lecture

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 LE Lecture

Fall 2020 PL56090 6600 Globalization PLS Political Science 3 Focuses on the economic aspects of globalization and effects on local, national, and international political processes. GR LE Lecture

Fall 2020 GR6530 6530 Greek History & Biographic GR Greek 3 Heroes, stoichades, 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 LE Lecture

Fall 2020 MUS1170 1170 Jazz History and Music MUS Music 3 Historical survey of and related styles from the late 19th century to the present. UG LE Lecture

Fall 2020 ME6550 6550 Geothermal Energy ME Mechanical and Materials Engineer 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>UG</b> Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D or Undergraduate level ME 3560 Minimum Grade of D<b>/b></b>

Fall 2020 LEP0450 0450 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 LE Lecture

Fall 2020 HPR2430 2430 Motor Dev & Learning HPR Health Phy Edu & Recreation 4 Examination of the factors influencing the development, performance and learning of motor skills. UG LE Lecture

Fall 2020 RHB4020 4020 Career Assessment RHB Rehabilitation 3 Provides training in comprehensive vocational and career evaluation and assessment strategies. Integrated Writing course. UG LE Lecture

Fall 2020 EE7010 7010 Linear Systems EE Electrical Engineering 3 Graduate level linear engineering methods in finite and infinite dimensions. GR LE Lecture

Fall 2020 POR1110 1110 Essentials of Portuguese POR Portuguese 3 Introduction to Portuguese with an emphasis on speaking the language. GR LE Lecture

Fall 2020 TH1020 1020 Intro Technical Theatre TH Theatre 3 Theory and practice of theatre technology including study of theatre organization, scenery construction, lighting and sound technology, and backstage operating systems. UG LE Lecture
Fall 2020 6110  BIBIO110 The Aquatic Environment  BIO Biology 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 6430  PSY6430 Psychometrics Capstone  PSY Psychology 3 Communication-intensive seminar integrating knowledge on psychometrics.  GR SE Seminar
Fall 2020 7071  ASM7071 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 7124  NUR7124 Adv Hlth 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 7280  CNL7280 Pro Orient Eth & Leg Is  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 7600  ATR7600 Neuroscience in Athletic Trng  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 3480C  NUR3480C Nursing Care of Adults Clin  NUR Nursing 0 Required clinical for NUR 3480.  UG CL Clinical
Fall 2020 5600  SOC5600 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 4010  MLB4010 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 4000  BMB4000 BiMB Seminar  BMB Biomed & Molecular Biology 1 Students will attend, evaluate and summarize selected lectures given by experienced researchers.  UG SE Seminar
Fall 2020 7920  PPH7920 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 1110L  PHY1110L Prin Physics Lab I  PHY Physics 1 Introductory-level laboratory problems.  UG LB Lab
Fall 2020 4260  MTH4260 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.  UG LE Lecture
Fall 2020 3110  PHL3110 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 7820  EC7820 Research in Economics II  EC Economics 1 Title vary. Intensive reading or research in selected fields of economics.  GR IS Independent Study
Fall 2020 4100  PLS4100 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 4025  OPL4025 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 8240  EDT8240 Digital Teach.Liter Revie  EDT Educational Technology 3 Students will explore techniques used for constructing a research-based literature review in the field of instructional technology.  UG LE Lecture
Fall 2020 7361  NUR7361 Stt Plg Nsg & Hlth Care  NUR Nursing 5 This course focuses on the managerial 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 4710  PHL4710 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 4160  PLS4160 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 7780  BMS7780 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 8770  PSY8770 Org. Dev. & Change  PSY Psychology 2 Overview of the systems approach to organizational diagnosis, planning, and intervention in human service organization. Behavioral interventions are emphasized.  GR SE Seminar
Fall 2020 4150  ART4150 Studies Med Contemp Art  ART Art 3 General surveys and intensive studies of the period, major movements, and artists of the time.  GR LE Lecture
Fall 2020 4022  MIL4022 Ldrshp Complex World Lab  MIL Military Science 0 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 cadre-led and cadre-supervised. Mandatory weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises.  UG LB Lab
Fall 2020 3750  ART3750 Armature/Figure Modeling  ART Art 3 Development of personal concepts and aesthetic expression in sculpture. Emphasis is 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.  GR LB Lab
Fall 2020 2010  MUS2010 Theor 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

**EES6360** 6360  Eav Field Tech  EES  Earth & Environmental Sciences  2  A lecture and field practice course examining the principles of monitoring environmental water quality, including lake, river, groundwater, and related issues. Theoretical considerations are learned before field practices, which include monitoring system design, well design for various monitoring purposes, sampling protocol, and sample preservation, and monitoring and sampling at field sites, which include groundwater, lake, and river

**IELE7200** 7200  Professional Practice  BDL  Instructional Design & Learning  3  Examines the ethical, legal, and political implications of instructional design. Consideration of issues of intellectual property rights, ethics, managing online reputation, and professional responsibilities are discussed.

**CS7200** 7200  Alg. Design and Analysis  CS  Computer Science  3  Study of algorithmic methods and associated computational complexity for problem solving. Techniques include divide and conquer methods, greedy algorithms, dynamic programming, and parallel algorithms. (b) Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D or

**BIO3110** 3110  Clinical Micro Bio Lab  BIO  Biology  2  The study of biological processes of microorganisms, with emphasis on microorganisms that cause human disease (pathogens). Integrated Writing course.

**TTF2050** 2050  Business Finance  TFI  Technical Finance  3  Basic concepts, principles, and analytical techniques of financial management. Emphasis on planning and managing assets, and financial structure decisions. Topics include asset management, capital budgeting, cost of capital, financial leverage, and the demands for funds in the business sector of the economy.

**ENG4720** 4720  History of Engl Language  ENG  English  3  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.

**ECC6350** 6350  Comparative Capital Inst  EC  Economics  3  Compares economic institutions of industrialized countries including the newly industrialized countries (NICs). Addresses such issues as industrial relations, roles of state, methods of corporate finance, and social safety nets. (b) Department Managed Prerequisite(s): Graduate level EC 5220 Minimum Grade of C or

**SOC5300** 5300  Social Organization  SOC  Sociology  3  Theories and analysis of social organization in its historical and present context. Emphasis on the interrelationship between individuals, the family, and other organizations.

**TH1200** 1200  Make-up for the Theatre  TH  Theatre  1  Theory and practice of stage make-up.

**ME7080** 7080  Multidisc Struct Opm  ME  Mechanical and Materials Engr  3  Structural optimization of large scale systems with constraint approximations, sensitivity analysis, and design variable linking methods. Primal, dual, and optimality criteria methods for shape and size optimization. 5 hour lecture. (b) Department Managed Prerequisite(s): Graduate level ME 6080 Minimum Grade of D and Graduate level ME 6120 Minimum Grade of D or Graduate level ME 7100 Minimum Grade of D or

**MP3990** 3990  Studies Select Subjects  MP  Motion Picture  1  Practical experience or research in topics in the field of motion pictures. Topics vary.

**CHM3350** 3350R 3520R  Physical Chemistry II Rec  CHM  Chemistry  0  Required recitation for CHM 3520. Integrated Writing course.

**ENG4710** 4710  Intro to Linguistics  ENG  English  3  A survey of the scientific study of language. Focuses on describing and explaining languages in their natural environment, including phonetics, phonology, morphology, syntax, semantics, pragmatics, sociolinguistics, and the history of the English language.

**CHM8000** 8000  Seminar  CHM  Chemistry  1  Departmental Seminar

**ISE4950** 4950  Undergrad Resrch ISE II  ISE  Industrial & Systems Engr  3  Undergraduate research in advanced Industrial and Systems Engineering. Topics vary.

**SLI510** 510  ASL Discourse Analysis  SLI  Sign Language Interpreting  3  Introduction to American Sign Language discourse features, focusing on language used in real world situations. Consider specialized settings and emphasis interpretation strategies such as discourse mapping.

**EC1050** 1050  Elem Mth Eco/Bus Mod/Method  EC  Economics  4  Elementary mathematical models and methods with emphasis on applications in economic and business analyses and decision-making.

**URS4200** 4200  Public Mgr Strategies  URS  Urban Affairs  3  Investigates urban management and various techniques to achieve public service goals, including efficiency, quality, and effectiveness. Study of program management, planning, fiscal management, resource allocation through budgeting, program development, and organizational development.

**KNI1450A** 1450A  R ape Def Strat Basic  KNI  Kinesiology & Health  1  Fundamental skills and knowledge of Rape Defense Strategies: Basic. Competency-based approach. Course may accommodate disabled students when appropriate.

**GER1150** 1150  German for Read Knowled  GER  German  3  Introduction to all main points of grammar; practice in recognizing grammatical constructions and using a dictionary; and selected readngs of adults-level texts from various fields. May be taken for letter grade or pass/unsatisfactory. (b) Department Managed Prerequisite(s): Undergraduate level GER 1010 Minimum Grade of D or

**CHM5510L** 5510L  Physical Chemistry Lab I  CHM  Chemistry  2  Experimental methods of physical chemistry.

**PSI9670** 9670  Multiprofessional Ethics  PSI  Professional Psychology  3  Physicians, psychologists and clergy must interact with a variety of professionals in their practices and in their roles as community leaders. The course will address ethical issues of common concern to these professional groups. Discussing these issues in an interdisciplinary context will increase understanding of the issues themselves as well as increase appreciation for the tasks and problems of professional partners.

**TH1300** 1300  1300  Illustration  IT  Information Technology  3  Relation of art applications to graphic design. Application of sketching and computer generated illustration.

**BHE7430** 7430  Manual Control  BHE  Industrial & Hum Fac Engr  3  Description of human control processes and their models. Analyses of human skills and skill typology

**URS4460** 4460  Transportation Principle  URS  Urban Affairs  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.

**SW6880** 6880  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.
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<th>Credits</th>
<th>Title</th>
<th>Department</th>
<th>Prerequisites</th>
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<td>LE</td>
<td>Lecture</td>
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<td>BMS6460</td>
<td>Computational Statistics BMS Biomedical Sciences</td>
<td>3</td>
<td>LE</td>
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<tr>
<td>PPH7150</td>
<td>Applied Epidemiology PPH Population &amp; Public Health</td>
<td>3</td>
<td>SE</td>
<td>Seminar</td>
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<tr>
<td>ASM7571</td>
<td>Aerospace Skills I ASM Aerospace Medicine</td>
<td>3</td>
<td>SE</td>
<td>Seminar</td>
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<td>MUE2770</td>
<td>Chamber Orchestra MUE Music: Ensembles</td>
<td>1</td>
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<td>Lecture/Lab Combination</td>
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<td>MTH4990</td>
<td>Selected Topics in Math MTH Mathematics</td>
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<td>Independent Study</td>
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<tr>
<td>BIO3990</td>
<td>Undergrad Teaching Asst BIO Biology</td>
<td>1</td>
<td>IS</td>
<td>Independent Study</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020 PLS3420 3420  Civil Libr: 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, freedom of religion, freedom of speech, of the press, and of education. UG LE Lecture
Fall 2020 CS4810 4810 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 applied to solving specific computational problems in molecular genetics. UG LE Lecture
Fall 2020 CH3030 6030 Adv Studies: Lang & Civ CHI Chinese 3 Advanced course on Chinese or Chinese-American literature, culture or film. Topics vary. May include service-learning component. Taught in Chinese. GR LE Lecture
Fall 2020 LAT1010 1010 Beginning Latin I LAT Latin 3 Introduction to methods and grammatical concepts necessary for further study in Latin. UG LE Lecture
Fall 2020 EDL7900 7900 Instr Ldrshp Practicum EDL Educational Leadership 1 Focusing on the roles performed by practicing instructional leaders. Candidates observe, interact and draw conclusions from field experience by integrating the field experience with knowledge, skills, and dispositions gained in previous coursework. GR IN Internship
Fall 2020 PL6910 6910 Independent Research PLS Political Science 1 Supervised individual research on a selected topic arranged between the student and faculty member directing the study. GR IS Independent Study
Fall 2020 ED6760 6760 AYA: Int Science C&M II ED Education 3 Curriculum and materials concerned with issues at the interfaces of science, technology, and society (STS). Clinical experiences, methodology, literature, resources and rationale are emphasized. GR LE Lecture
Fall 2020 EE7410L 7410L Power Electronics I Lab EE Electrical Engineering 1 Silicon and silicon-carbide p-n-junction and Schottky power diodes, switch MOSFETs, maximum current and breakdown voltage, power stages of PWM converters. Topics vary. Taught in Spanish. GR LB Lab
Fall 2020 CHM5560 5560 Physical Chem Life Sci CHM Chemistry 3 An introduction to physical chemistry, including thermodynamics, properties of liquids and solids, solution properties, and kinetics. Intended for biologists, premedical students and others with an interest in physical chemistry. GR LE Lecture
Fall 2020 BMS8530 8530 Ion Channels BMS Biomedical Sciences 3 (Also listed as P&B 7220.) This course explores the role of ion channels in a variety of cell types with an emphasis on both electrophysiological and biochemical methods for evaluation of channel function. GR LE Lecture
Fall 2020 GEO3500 3500 Environmental Geography GEO Geography 3 Economic and spatial examination of resources with an emphasis upon and analysis of supply, consumption and sustainability. Conservation presented as a principal strategy to manage resources for future generations. UG LE Lecture
Fall 2020 MTH6150 6150 Scientific Computation MTH Mathematics 3 Modern computational techniques for simulating scientific phenomena. Topics vary. Taught in Spanish. GR LE Lecture
Fall 2020 URS3980 3980 Quantitative Research URS Urban Affairs 3 Introduces students to research and data collection methods and investigates what makes research useful, valid, and ethical. Credit will not be given to students who have already completed URS 4980. Integrated Writing course. UG LE Lecture
Fall 2020 LDR7590 7590 Qualitative Research MTH LDR Leadership 3 Theoretical bases for qualitative research in education; including training in qualitative methods, specifically, observation, interviewing, collecting written documents, ground surveys, analysis, and interpretation. UG SE Seminar
Fall 2020 NUR8004 8004 Org Sys Ldshlp Hlth Care NUR Nursing 3 Examine application of organizational and leadership theories/strategies to assess process/outcomes in complex practice settings, health care organizations, and communities with a focus on the APN role in analyzing clinical patterns and issues. GR LE Lecture
Fall 2020 IT4400 4400 Motion Graphics IT Information Technology 1 Creating engaging interactive content for mobile-device apps using the industry-leading software. Topics vary. Taught in Spanish. UG LL Lecture/Lab Combination
Fall 2020 SPN4500 4500 Senior Honors Project SPN Spanish 3 Capstone project for Spanish majors involving independent research, service learning, or a creative project. Topics vary. Taught in Spanish. UG IS Independent Study
Fall 2020 SOC3100 3100 Sociology of the Family SOC Sociology 3 Sociological analysis of the development of the family and its relationship to society and the individual. Topics include courtship, marriage, prenuptial agreements, and aging. UG LE Lecture
Fall 2020 STT5860 5860 Ind Read Stat and Prob STT Statistics 1 Independent reading in statistics and probability. Topics vary. Taught in Spanish. GR IS Independent Study
Fall 2020 MIS3840 3840 Data Vis for Business MBS Management Information Systems 3 Introduce students to data visualization in business including both the principles and techniques. Students will learn the value of visualization, specific techniques in information visualization and scientific visualization, and understand how to best leverage visualization methods. UG LE Lecture
Fall 2020 ENG340 340 Seminar: Literary Genres ENG English 3 Reading, research, and discussion on topics relating to the study of a single literary genre (e.g., epic, novel, tragedy, lyric poetry, or historical drama). GR SE Seminar
Fall 2020 EDL7751 7751 Instr Ldrshp Chang: STEM EDL Educational Leadership 3 Strategies for developing and maintaining continual improvement processes using systems planning and instructional data; evaluation of improvement plans and, communicating planning and improvement with all stakeholders within various organizational contexts. GR LE Lecture
Fall 2020 PSY4300 4300 Abnormal Psych Cap PSY Psychology 3 This capstone examines conceptualizations of psychopathologies and their connections to personality pathology. Integrated Writing course. UG SE Seminar
Fall 2020 CLS3400 3400 Art & Archaeology CLS Classics 3 Greece in the Bronze Age, classical Greece and Rome; and selected areas of Greek and Roman art and archaeology. GR LE Lecture
Fall 2020 EDS3400 3400 Curriculum & Materials EDS Education - Special Education 3 Foundations of developmentally responsive middle level programs and interdisciplinary connections for those with exceptional learning needs. Focusing on learning differences/issues of curriculum development, materials, instructional practice, language development, learning comprehension. UG LE Lecture
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  PLS3550  3550  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 party; 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 Cvs-TIk Hmsts  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 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.

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 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

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.

Fall 2020  CHM8990  8990  Thesis Defense  CHM  Chemistry 2  Public defense of a written thesis that is based on original research in a CHM faculty laboratory.

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.

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. (C/E) Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D-. LE

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 theorem of magnetic resonance imaging, with a survey of clinical applications, is also presented.

Fall 2020  REL5940  5940  Existentialism  REL  Religion 3  (Also listed as PHL 5090.) 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 inescapable elements of the human condition, and rejection of traditional ethical systems.

Fall 2020  PLS3110  3110  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.

Fall 2020  PL7010  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.

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.

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.

Fall 2020  ATH5020  5020  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.

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

Fall 2020  SOC3300  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.

Fall 2020  MIP4560  4560  Studies in MP Production  MP  Motion Picture 3  Intensive study of a selected area of motion picture production. Topics vary.

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. (C/E) 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-/D-.
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 3250 Minimum Grade of D-;

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 French-speaking country. Students 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-;

Fall 2020  PLS4410  4410  Natural Resources Law  PLS  Political Science  3  Examine 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 PLS 2100 Minimum Grade of D or Undergraduate level PLS 2120 Minimum Grade of D-;

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 2300 Minimum Grade of D or Undergraduate level ED 3200 Minimum Grade of D-;

Fall 2020  LAT3330  3330  Readings in Roman Epic  LAT  Latin  3  Virgil's Aeneid, Ovid's Metamorphoses; Lucan, Statius, Varinius Flaccus, and Statius. 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 3200 Minimum Grade of D-;

Fall 2020  EDT6620  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 2220 Minimum Grade of D or Undergraduate level EDT 2220 Minimum Grade of D-;

Fall 2020  REL3440  3440  Hinduism  REL  Religion  3  Explores major beliefs and practices of Hinduism. - Department Managed Prerequisite(s): Undergraduate level REL 2440 Minimum Grade of D or Undergraduate level REL 3440 Minimum Grade of D-;

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 2020 Minimum Grade of D or Undergraduate level SPN 2120 Minimum Grade of D-;

Fall 2020  HST6050  6050  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 3050 Minimum Grade of D or Undergraduate level HST 3050 Minimum Grade of D-;

Fall 2020  KNH1160B  1160B  Dance: Latin  KNH  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 KNH 2160 Minimum Grade of D or Undergraduate level KNH 2160 Minimum Grade of D-;

Fall 2020  ENG6300  6300  Studies in American Lit  ENG  English  3  Intensive study of American literary history and 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 ENG 3300 Minimum Grade of D or Undergraduate level ENG 3300 Minimum Grade of D-;

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-;

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 course. - Department Managed Prerequisite(s): Undergraduate level ART 2110 Minimum Grade of D or Undergraduate level ART 2120 Minimum Grade of D-;

Fall 2020  IHE7370  7370  Medical Device  BHE  Industrial & Hum Fac Eng  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): Undergraduate level IHE 6350 Minimum Grade of D or Undergraduate level IHE 4500 Minimum Grade of D-;

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-;

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 ENG 2320 Minimum Grade of D or Undergraduate level ENG 2320 Minimum Grade of D-;

Fall 2020  DCS5200  5200  Doc Workshop in LifeSci  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 DCS 3200 Minimum Grade of D or Undergraduate level DCS 3200 Minimum Grade of D-;

Fall 2020  ACC7810  7810  Special Studies in ACC  ACC  Accounting  3  Title vary. - Department Managed Prerequisite(s): Undergraduate level ACC 4710 Minimum Grade of D or Undergraduate level ACC 4710 Minimum Grade of D-;

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 ATR 3610 Minimum Grade of D or Undergraduate level ATR 3610 Minimum Grade of D-;

Fall 2020  EE7030  7030  Computation Eg 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 EE 6030 Minimum Grade of D or Undergraduate level EE 6030 Minimum Grade of D-;

Fall 2020  ACC7480  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 ACC 6480 Minimum Grade of D or Undergraduate level ACC 6480 Minimum Grade of D-;

Fall 2020  PTX6002  6002  Intro to Cell Biology  PTX  Pharmacology/Toxicology  3  This course will explore the organization, function, and structures of eukaryotic cells. Fundamentals of subcellular organization and biological chemistry will provide a foundation for understanding the molecular and energetic aspects of cells. The course will then cover membrane function as well as cellular signaling pathways with a particular emphasis on understanding how these pathways are useful targets of pharmaceutical agents. - Department Managed Prerequisite(s): Undergraduate level PTX 3002 Minimum Grade of D or Undergraduate level PTX 3002 Minimum Grade of D-;
<table>
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<tr>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Title</th>
<th>Description</th>
<th>Term</th>
<th>Degree</th>
<th>Type</th>
<th>Location</th>
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<tbody>
<tr>
<td>ME4880</td>
<td>3</td>
<td>Powder Processing of Mat Engr</td>
<td>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.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture/Lab</td>
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<tr>
<td>CS3840</td>
<td>3</td>
<td>Applied Machine Learning CS</td>
<td>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.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
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<tr>
<td>RHB7300</td>
<td>7300</td>
<td>Epidemiology Addictions RHB Rehabilitation</td>
<td>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.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>CHM9090</td>
<td>6900</td>
<td>Critical Lit Analysis CHM Chemistry</td>
<td>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.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>PHL4020</td>
<td>4020</td>
<td>Continental Phil Seminar PHL Philosophy</td>
<td>Focused 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.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Seminar</td>
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<tr>
<td>ARA3220</td>
<td>3220</td>
<td>Adv ARA Syntax &amp; Grrm II ARA Arabic</td>
<td>An advanced course based in classical approaches to Arabic grammar and syntax, designed to prepare students to engage primary texts, both modern and classical. Department Managed Prerequisite(s): Undergraduate level ARA 3210 Minimum Grade of D=/&gt;0.6.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
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<tr>
<td>MTH3100</td>
<td>8300</td>
<td>Topics in Analysis MTH Mathematics</td>
<td>Selected advanced topic or topics in analysis.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Independent Study</td>
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<tr>
<td>ACC7930</td>
<td>7390</td>
<td>Advanced Accounting ACC Accountancy</td>
<td>To study the accounting principles and techniques used to consolidate parent and subsidiary companies at the date of combination and in subsequent periods.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>ME7760</td>
<td>7760</td>
<td>Transformation of Solids ME Mechanical and Materials Engr</td>
<td>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. Department Managed Prerequisite(s): Graduate level ME 5760 Minimum Grade of D=/&gt;0.6.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>ME4160</td>
<td>4160</td>
<td>Advanced CAD ME Mechanical and Materials Engr</td>
<td>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. Department Managed Prerequisite(s): Undergraduate level ME 2020 Minimum Grade of D and Undergraduate level ME 2210 Minimum Grade of D=/&gt;0.6.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>TH3990</td>
<td>3990</td>
<td>Selected Subjects TH Theatre</td>
<td>1 Variable content dealing with problems, approaches, and topics in the field of theatre.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture/Lab</td>
<td></td>
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<tr>
<td>PSY730</td>
<td>8730</td>
<td>Training in Organization PSY Psychology</td>
<td>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 differences and motivational factors affecting training, and selected special topics. Department Managed Prerequisite(s): Graduate level PSY 8610 Minimum Grade of D=/&gt;0.6.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EE6530</td>
<td>6130</td>
<td>Cont Control Systems EE Electrical Engineering</td>
<td>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 control.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>KNI220</td>
<td>1220</td>
<td>Fencing Competitive KNI Kinesiology &amp; Health</td>
<td>1 Intermediate level of skills and knowledge in Fencing: Competitive. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lab</td>
<td></td>
</tr>
<tr>
<td>URS4400</td>
<td>4400</td>
<td>Comm/Reg Planning II URS Urban Affairs</td>
<td>1 Examination of the links between urban planning and urban administration, and investigation of planning as a profession and a process.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>SW7350</td>
<td>6730</td>
<td>Child Welfare I SW Social Work</td>
<td>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.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PHIL5090</td>
<td>5090</td>
<td>Existentialism PHIL Philosophy</td>
<td>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-fashioning, its affirmation of uncertainty and absurdity as inseparable elements of the human condition, and its rejection of traditional ethical systems.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture/Relaxation Combination</td>
<td></td>
</tr>
<tr>
<td>LEP6100</td>
<td>0110</td>
<td>Writing - Level 1 LEP LEAP</td>
<td>0 Writing for beginning ESL students. Course has a fee that is non-refundable once the term begins.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>MUS3550</td>
<td>3550</td>
<td>Keyboard Musician MUS Music</td>
<td>1 This course provides vocal performance education majors with functional and technical keyboard skills.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>LAT4550</td>
<td>4550</td>
<td>Readings Roman Politics LAT Latin</td>
<td>3 Readings include Cicero's political essays, the letters of Cicero and Pliny, and Augustus' Res Gestae.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>PSY5070</td>
<td>5070</td>
<td>Tests &amp; Measures PSY Psychology</td>
<td>3 Introduction to the use, application, evaluation, and development of psychological tests and measures including ability, aptitude, attitude, standardized, or normed measures.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>CEG6322</td>
<td>6322</td>
<td>VLSI Design CEG Computer Engineering</td>
<td>(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.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>EED4400</td>
<td>4400</td>
<td>Assessment Methods P-5 EED Elementary Education P-5</td>
<td>Varying assessment techniques and strategies, both formal and informal, utilized in grades P-5. Various forms of assessments used to assess P-5 student's learning in order to plan and implement effective lessons.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>ATH7270</td>
<td>3720</td>
<td>Ethnographic Museum Coll ATH Anthropology</td>
<td>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.</td>
<td>Fall 2020</td>
<td>GR</td>
<td>Lecture</td>
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<tr>
<td>CHI3110</td>
<td>3110</td>
<td>Chinese Conversation CHI Chinese</td>
<td>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. Department Managed Prerequisite(s): Undergraduate level CHI 2020 Minimum Grade of D or AP Chinese Language &amp; Culture 4=/&gt;0.6.</td>
<td>Fall 2020</td>
<td>UG</td>
<td>Lecture</td>
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</table>
ENG4730 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 ENGL 2100 Minimum Grade of D- or higher. UG LE Lecture

Fall 2020 KNH1480 1480 Rape Def Strat: Interned KNH Kinesiology & Health 1 Intermediate level of skills and knowledge in Rape Defense Strategies: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 COM2020 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. Undergraduate level ENG 1100 Minimum Grade of C. UG LL Lecture/Lab Combination

Fall 2020 DAN1110 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 BMS9980 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. GR LB Lab

Fall 2020 EC3170 3170 Interned 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 SOC3730 3730 Soc Courts Law Justice SOC Sociology 3 Critical examination of the US 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 BMS9940 9940 Introduction to Research BMS Biomedical Sciences 4 Introduces BM students to the ongoing research activities within the nine program tracks; involves presentations by BM faculty. Graded pass/fail/satisfactory. GR LE Lecture

Fall 2020 DAG5010 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 KNH1980A 1980A Zumba KNH Kinesiology & Health 1 Fundamental skills and knowledge of Zumba. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

Fall 2020 PL56050 6050 Pol Polarization Am Politics PL5 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. GR LE Lecture

Fall 2020 BME6704 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 enables 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- or higher. GR LE Lecture

Fall 2020 KNH1800A 1800A Weight Training: Women KNH 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 PPH1720 7220 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, appropriate and inappropriate uses. GR LE Lecture

Fall 2020 FAS4100 4100 Food Laws and Regulations 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 SOM717 717 Year 2 Medical Study Part Time SOM School of Medicine 1 MD LE Lecture

Fall 2020 SPN3980 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 3110 Minimum Grade of D or Undergraduate level SPN 3120 Minimum Grade of D or Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3220 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D- or higher. UG LE Lecture

Fall 2020 EES4310 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 OL4990 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 PPH2000 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 MUE6505 6505 Chamber Music MUE Music: Ensembles 1 Small chamber ensembles of varying instrumentation. Audition required. GR LR Lecture/Lab Combination

Fall 2020 HST7750 7750 Interpretation & Exhibit HST History 3 Examination of history 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 CHI1350 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 3 or higher. UG LE Lecture

Fall 2020 SLI3530 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 Ldrshp 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.<b> thoughtful Department Managed Prerequisite(s): (Graduate 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) or (b) FR 5150 Minimum Grade of C</b>  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.  GE  LE  Lecture

Fall 2020  TEG2910  2910  Main Fund/Indust Mech  TEG  Technical Engineering  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.  GR  LE  Lecture

Fall 2020  TEG4000  4000  Stage Manage Practicum  TH  Theatre  1  Participation in departmental theatre stage management activities. Specific assignments determined at initial meeting.  UG  LE  Lecture

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  BIOS4440  4440  Plant Physiology  BIO  Biology  4  Plant physiology, including the major features of photosynthesis, transport, hormones, development, and environmental responsiveness. Laboratory includes analytical techniques, experimental design, and interpretation of scientific results.  LE  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.  GR  LE  Lecture

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.  LE  LE  Lecture

Fall 2020  PLS3150  3150  Religion and Politics  PLS  Political Science  3  Religion and Politics  LE  LE  Lecture

Fall 2020  PSY3310  3310  Cognitive Systems Engin  PSY  Psychology  3  The role of human factors in system design is examined from a cognitive systems engineering perspective. The analytic tools of CSE are explored and applied in design projects.  GR  SE  Seminar

Fall 2020  ART2350  2350  Ceramics for Non-Majors  ART  Art  3  Art  GR  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.  LE  LE  Lecture

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

Fall 2020  JPN3110  3110  Japanese Conversation  JPN  Japanese  3  Practice in oral use of Japanese, emphasizing the culture of the Japanese world.<b> thoughtful Department Managed Prerequisite(s): Undergraduate level JPN 2020 Minimum Grade of D or AP Japanese Language & Culture 4-5</b>  LE  LE  Lecture

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

Fall 2020  EE4600  4600  UAV Flight Control  EE  Electrical Engineering  3  Introduction to course of UAV autopilot design. Major topics include quadrotor 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  LE  LE  Lecture

Fall 2020  LEF0140  0140  Integrated Skills - Level 1  LEF  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.  LE  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.  LE  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.  LE  LE  Lecture

Fall 2020  PSY930  930  Behav Neuro Ed Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on behavioral neuroscience education.  SE  SE  Seminar

Fall 2020  ED54400  4400  Internship Phase I  ED  Education - Special Education  1  Internship in a middle childhood school for supervised field experience in inclusive setting in one of the two licensure content areas while focusing on professionalism, student assessment, teaching, and collaboration.  IN  IN  Internship

Fall 2020  ED6450  6450  AYA Intern Pt 5-8th 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.  IN  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 cockpit interface, its cognitive processing demand, and implications for designs of technological support.<b> thoughtful Department Managed Prerequisite(s): Graduate level PSY 7210 Minimum Grade of D</b>  LE  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 clinic, industrial setting, Olympics, or professional sports or any other setting approved by the Director of Athletic Training Education.  IN  IN  Internship

Fall 2020  ED56400  6400  Carr Methods Matix Autism  ED  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.  LE  LE  Lecture/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.  LE  LE  Lecture
Fall 2020  
PS9820  9820  Diversity Integration II  
PSI  Professional Psychology  
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 s/he has acquired as a result of diversity courses and clinical training.  
GR  LE  Lecture  

Fall 2020  
OL3990  3990  Special Topics in OL  
OL  Organizational Leadership  
1 Seminar in special topics such as women in leadership, leadership in the public sector, or non-profit leadership. Topics vary.  
UG  SE  Seminar  

Fall 2020  
GR6810  6810  Ind Reading in Greek  
GR  Greek  
1 Reading and discussion of selected works of Greek literature with emphasis on grammatical, rhetorical, literary, and cultural analysis and criticism. Topics vary.  
GR  IS  Independent Study  

Fall 2020  
MTH7770  7770  Applied Analysis  
MTH  Mathematics  
4 Final point theorems and applications, Banach and Hilbert spaces and applications, compact operators, eigenvalues, eigenfunction expansions, Sturm-Liouville problems, inverse operators, variational methods, and basic approximate methods in analysis. -<b>Department Managed Prerequisite(s): Undergraduate level MTH 7110 Minimum Grade of D>=/<b>-  
GR  LE  Lecture  

Fall 2020  
FIN4240  4240  Investing in Real Estate  
FIN  Finance  
3 Explores the theory and practice of real estate investment analysis as it relates to personal financial planning objectives.  
UG  LE  Lecture  

Fall 2020  
ISE1950  1950  Undergrad Research ISE-I  
ISE  Industrial & Systems Engr  
1 Undergraduate research in Industrial and Systems Engineering. Topics vary.  
UG  IS  Independent Study  

Fall 2020  
EDL510  8510  Adv Rich Design Analysis  
EDL  Educational Leadership  
3 Individual and group study of ongoing applied educational research. -<b>Department Managed Prerequisite(s): Graduate level EDL 8520 Minimum Grade of D>=/<b>-  
GR  SE  Seminar  

Fall 2020  
BIO6700  6700  General Entomology  
BIO  Biology  
4 Basic biology of insects, including their morphology, physiology, life history, ecology, evolution and taxonomy. Readings include Cicero's political essays and speeches, the letters of Cicero and Pliny, and Augustus' Res Gestae. Titles vary.  
GR  LE  Lecture  

Fall 2020  
NUR4811  4811  Nur Role for Unlicensed  
NUR  Nursing  
3 Synthesis of concepts, theories, processes, issues of informatics, and models to facilitate a seamless transition of Associate Degree or Diploma prepared nursing student who is awaiting NCLEX passage into professional nursing role.  
UG  LE  Lecture  

Fall 2020  
STT7920  7920  Biotstat Consulting  
STT  Statistics  
2 Consultation with clients on biostatistical problems, under the direct supervision of a professional statistician. -<b>Department Managed Prerequisite(s): Graduate level STT 6620 Minimum Grade of D and Graduate level STT 6670 Minimum Grade of D>=/<b>-  
GR  PR  Practicum  

Fall 2020  
BIO4480  4480  Advanced Cell Techniques  
BIO  Biology  
3 Analysis of cellular proteins. Hands-on experience manipulating human cells in culture, extracting cellular proteins, transferring cells, and performing immunoblotting and immunofluorescence techniques.  
UG  LL  Lecture/Lab  

Fall 2020  
ME4980  4980  Special Topics in ME  
ME  Mechanical and Materials Engineering  
1 Special topics course in Mechanical Engineering or Materials Science and Engineering. Topics vary.  
UG  LE  Lecture  

Fall 2020  
AES4320  4320  SCL Lab  
AES  Aerospace Studies  
0 Preparation for 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  
GEO6440  6440  Adv GIS Applications  
GEO  Geography  
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  
KNH1620B  1620B  Stretch & Tone/Pilates  
KNH  Kiniesiology & Health  
1 Fundamental skills and knowledge of Stretch & Tone/Pilates. Competency-based approach. Course may accommodate disabled students when appropriate.  
UG  LB  Lab  

Fall 2020  
EES6590  6590  Adv Aquatic Geochem  
EES  Earth & Environmental Sciences  
3 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.  
GR  LE  Lecture  

Fall 2020  
ED6200  6200  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).  
GR  IN  Internship  

Fall 2020  
REL3110  3110  Judaism: Faith & People  
REL  Religion  
3 Judaism as a religious faith and people, with special reference to formative historical, social, ethnic, and cultural factors.  
UG  LE  Lecture  

Fall 2020  
PSY2530  2530  Influence and Persuasion  
PSY  Psychology  
3 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, policy law.  
UG  LE  Lecture  

Fall 2020  
CEG6130  6130  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. -<b>Department Managed Prerequisite(s): Undergraduate level CEG 4110 Minimum Grade of D or Undergraduate level CEG 6110 Minimum Grade of D>=/<b>-  
GR  LE  Lecture  

Fall 2020  
ED6560  6560  AYA Int Pr II: Std T S  
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 Science.  
GR  IN  Internship  

Fall 2020  
MUS202D  2020  Theory of Music IV  
MUS  Music  
3 Continuation of MUS 1010 and 1020. Part-writing, analysis, and harmony on a more advanced level.  
UG  LE  Lecture  

Fall 2020  
EES4430  4430  Analys & Pred Complex Sys  
EES  Earth & Environmental Sciences  
3 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 geomorphology, chemistry, biogeochemistry, hydrology, medicine, geography, and coupled human and natural systems.  
UG  LE  Lecture  

Fall 2020  
PHY7400  7400  Nucl. Methods in Physics  
PHY  Physics  
3 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  
GR  SE  Seminar  

Fall 2020  
BIE6712  6712  Sim & Stock Models  
BIE  Industrial & Hum Fac Engr  
4 Study of quantitative techniques to analyze and predict systems performance. Topics include queuing models, system simulation, model validation, data collection, quantitative analysis of system performance, and system design evaluation. -<b>Department Managed Prerequisite(s): Graduate level BIE 6150 Minimum Grade of D>=/<b>-  
GR  LE  Lecture
Fall 2020  PPH6100  6100  Biostatistics for Health  PPH  Population & Public Health 3  Introduction to the basic principles and applications of statistical methods as they are applied to data arising in the health professions.  GR  LE  Lecture
Fall 2020  RHB4990  4990  Rehab Internship  RHB  Rehabilitation 1  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.  UG  IN  Internship
Fall 2020  CEG4330L  4330L  Microproc Embedded Sys Lab  CEG  Computer Engineering 0  Required laboratory for CEG 4350.  UG  LB  Lab
Fall 2020  PTX6220  9220  Scientific Writing 2  PTX  Pharmacology/Toxicology 3  Students will independently write a 10-15 page scientific review on a current topic in Pharmacology & Toxicology with at least 25 references.  GR  IS  Independent Study
Fall 2020  ISE4310  4310  Ergonomics  ISE  Industrial & Systems Engr 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-station and equipment design.  GR  LE  Lecture
Fall 2020  M&J4310  4310  Virology  M&J  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  LAT6530  6530  Roman Hist & Biography  LAT  Latin 3  Readings in Latin focusing on prose narrative in history and biography. Authors include Sallust, Livy, Tacitus, and Suetonius. Titles vary.  GR  LE  Lecture
Fall 2020  PHY2400R  2400R  General Physics I Recitation  PHY  Physics 0  Required recitation for PHY 2400.  UG  RE  Recitation
Fall 2020  CLS3500  3500  Ancient Culture and Soc  CLS  Classics 3  Special topics in ancient culture and civilization based on literature, art, archaeology, legal documents, and other sources. Integrated Writing course.  GR  LE  Lecture
Fall 2020  SRV4000  4000  Engaged Citizenship Capstone  SRV  Service Learning 3  Culminating experience of the Citizen Scholar Certificate Program. 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.  UG  IS  Independent Study
Fall 2020  GER3210  3210  Writing in German  GER  German 3  Oral and written composition in German. Writing techniques and grammar review. Taught in German. Integrated Writing course.  GR  LE  Lecture
Fall 2020  PHL5410  5410  Aesthetics and PHL Art  PHL  Philosophy 3  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 immoral artworks be good art? Students will critically examine their artistic 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.  GR  LE  Lecture
Fall 2020  ME3870  3870  Machining  ME  Mechanical and Materials Engr 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. (3 Lecture)  GR  LE  Lecture
Fall 2020  AFES890  890  Variable Topics  AFS  Afr/Afr Amer Studies 3  Examines variable topics that pertain to the African American experience. Integrated Writing course.  GR  LE  Lecture
Fall 2020  PSW9630  9630  Practice Mgmt  PSI  Professional Psychology 1  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.  GR  LE  Lecture
Fall 2020  NEU4030  4030  Sr Cap Neuro Rev Art  NEU  Neuroscience 2  Senior 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.  GR  LE  Lecture
Fall 2020  NUR7002  7002  Info Tech in Hlth Care  NUR  Nursing 3  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.  GR  LE  Lecture
Fall 2020  CS4710  4710  Introductory Data Mining  CS  Computer Science 3  Introduction to the fundamentals of data mining. Emphasis is on data preparation/exploration/exploration, association rules, classification, clustering, OLAP/OLAM, pattern/model evaluation, anomaly detection. Students will develop and use data mining software.  GR  LL  Lecture/Lab Combination
Fall 2020  ACC7410  7410  Fin ACC Adv Topics/Res  ACC  Accountancy 3  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.  GR  LE  Lecture
Fall 2020  SW3000  3000  Research Methods in LA  SW  Social Work 3  Introduce social science and humanities majors to research design, and the kinds of data produced, in describing, explaining, and understanding social problems.  GR  LE  Lecture
Fall 2020  ITA1020  1020  Beginning Italian II  ITA  Italian 3  Communicative introduction to Italian. Study of the vocabulary and structure of the Italian language; practice in speaking, listening, reading, and writing. Integrated Writing course.  GR  LE  Lecture
Fall 2020  EE7490  7490  Antenna Theory & Design  EE  Electrical Engineering 3  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.  GR  LE  Lecture
Fall 2020  CEG4430  4430  Cyber Network Security  CEG  Computer Engineering 3  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 logics, firewalls, as well as the design and evaluation of intrusion detection systems.  UG  LE  Lecture
Fall 2020  PHL6240  6240  Literature and Philos.  PHL  Philosophy 3  A study of literary texts with strong philosophical themes such as philosophy and tragedy or philosophy of science fiction.  GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Department</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR8815</td>
<td>Fund Schp. of Hlth Care Analysis</td>
<td>NUR</td>
<td>3</td>
<td>GR</td>
<td>DNP foundational course with 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>
</tr>
<tr>
<td>MSIT200</td>
<td>IS Project Management</td>
<td>MIS</td>
<td>3</td>
<td>GR</td>
<td>IS Project Management encompasses the knowledge, techniques, and tools necessary to manage the development of information systems projects. Leading edge tools, techniques, and concepts will be presented through the course. This course has a fee that is non-refundable once the term begins.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>BIO455OL</td>
<td>Plant Systematics</td>
<td>BIO</td>
<td>3</td>
<td>SE</td>
<td>Required laboratory for BIO 4550.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>EDS5900</td>
<td>Dyslexia</td>
<td>EDS</td>
<td>3</td>
<td>LE</td>
<td>Dyslexia Education - Special Education This introductory course will provide insight and in-depth knowledge regarding 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>
</tr>
<tr>
<td>ITR3610</td>
<td>Assess Athletic Injury I</td>
<td>ATR</td>
<td>2</td>
<td>LE</td>
<td>Assessment and skills for lower body athletic injuries/conditions of the physically active.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>LEP0120</td>
<td>Writing Workshop Level 1</td>
<td>LEAP</td>
<td>0</td>
<td>Lab</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>
</tr>
<tr>
<td>EE3320</td>
<td>Digital System Design</td>
<td>EE</td>
<td>4</td>
<td>LE</td>
<td>Electrical Engineering 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>
</tr>
<tr>
<td>BIO105OL</td>
<td>Biology of Food Lab</td>
<td>BIO</td>
<td>0</td>
<td>Lab</td>
<td>Required laboratory for BIO 1050.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>COM3490</td>
<td>Survey of Com Research</td>
<td>COM</td>
<td>3</td>
<td>LE</td>
<td>Communication Introduction to the behavioral approach and current theories and experiments in communications research. Integrated Writing course.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>KNEI760B</td>
<td>Walk-Jog-Run</td>
<td>KNEH</td>
<td>1</td>
<td>GR</td>
<td>Kinesiology &amp; Health Fundamental skills and knowledge of Walk-Jog-Run. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>IE5990</td>
<td>Special Topics in IHE 1</td>
<td>BHE</td>
<td>1</td>
<td>LE</td>
<td>Industrial &amp; Hum Fac Engr Graduate special topics in advanced industrial and human factors engineering. Topics vary.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>FAS2040</td>
<td>Intro Agronomy</td>
<td>FAS</td>
<td>3</td>
<td>GR</td>
<td>Food and Agricultural Systems Fundamentals of agronomic crop production, including crop biology and management, soils and soil-water management, tillage seeding, plant breeding, seed and grain quality, and pest management.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>SCM7870</td>
<td>SC Pr Mgt &amp; Transform</td>
<td>SCM</td>
<td>3</td>
<td>SE</td>
<td>Supply Chain Management 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>
</tr>
<tr>
<td>KNEI670</td>
<td>Swimming Intermediate</td>
<td>KNEH</td>
<td>1</td>
<td>LE</td>
<td>Kinesiology &amp; Health Intermediate level of skills and knowledge in Swimming: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>CEG6110</td>
<td>Intro to Software Engr</td>
<td>CEG</td>
<td>3</td>
<td>LE</td>
<td>Computer Engineering 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>
</tr>
<tr>
<td>PLS4420</td>
<td>Criminal Justice System</td>
<td>PLS</td>
<td>3</td>
<td>LE</td>
<td>Political Science 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>
</tr>
<tr>
<td>ME6010</td>
<td>Comp Meth for Mech Engr</td>
<td>ME</td>
<td>3</td>
<td>LE</td>
<td>Mechanical and Materials Engineering Combines material learned in statics, dynamics, thermodynamics, fluid mechanics, and heat transfer and apply them to the design of mechanical systems using numerical methods.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>GER4250</td>
<td>19th Cntr German Prose</td>
<td>GER</td>
<td>3</td>
<td>LE</td>
<td>German Readings and reports in 19th-century literature. Representative works of Eckerdorf, Hoffmann, Kellner, Meyer, Storm, Fontane, and others. Department Managed Prerequisite(s) Graduate level ME 5360 Minimum Grade of D and Graduate level ME 5210 Minimum Grade of D- or above.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>SIT3860</td>
<td>Ind Read Stat and Prob</td>
<td>SIT</td>
<td>3</td>
<td>IS</td>
<td>Statistics Topics vary.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>CHI5230</td>
<td>Business Chinese</td>
<td>CHI</td>
<td>3</td>
<td>LE</td>
<td>Chinese Introduces the language of business Chinese and explores China's place in the global economy. Department Managed Prerequisite(s) Undergraduate level CHI 2020 Minimum Grade of D or AP Chinese Language &amp; Culture 4+ or above.</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PHY5710</td>
<td>Mechanics</td>
<td>PHY</td>
<td>3</td>
<td>LE</td>
<td>Physics 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>
</tr>
<tr>
<td>EDT8150</td>
<td>Digital PD</td>
<td>EDT</td>
<td>3</td>
<td>LE</td>
<td>Educational Technology 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>
</tr>
<tr>
<td>MBA5200</td>
<td>Survey of Economics</td>
<td>MBA</td>
<td>3</td>
<td>LE</td>
<td>MBA An introduction to economics. Provides students with modes 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>
</tr>
<tr>
<td>MUE4950</td>
<td>University Men's Chorale</td>
<td>MUE</td>
<td>3</td>
<td>LE</td>
<td>Music: Ensembles 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>
</tr>
</tbody>
</table>
Fall 2020  IDL7210  7210  Applied Learning Theory  IDL  Instructional Design & Learning  3  Introduction to multimedia learning theory and how theory can be integrated into instructional design.  GR  LE  Lecture

Fall 2020  FIN7250  7250  Semi Intern Fin Mgmt.  FIN  Finance  3  Advanced treatment of the concepts and techniques of international financial management.  GR  SE  Seminar

Fall 2020  SOC4830  4830  Sex, Drugs & HIV  SOC  Sociology  3  Examines sexual behavior, substance abuse, stress, stressful life events and stigma associated with HIV/AIDS. Integrated Writing course<br/>(UG) Department Managed Prerequisite(s): Undergraduate level SOC 3000 Minimum Grade of D and Undergraduate level SOC 3620 Minimum Grade of D-/C.

Fall 2020  HST4050  6050  The Middle Ages  HST  History  3  Examines the period following the decline of the Roman Empire to ca. 1450 and can include European, Islamic, and Byzantine civilizations. Topics vary.  GR  LE  Lecture

Fall 2020  MUA2120  2120  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.  US  IS  Independent Study

Fall 2020  REL3480  3480  Hindu Mythology  REL  Religion  3  Examines relationships of Hindu sacred narratives and Hindu beliefs and practices. Addresses myth, its significance for the study of religion, and the intellectual issues at stake in reading mythology across cultures.  GR  LE  Lecture

Fall 2020  SW6170  6170  HBSE I  SW  Social Work  0  Employs social systems approach as the primary foundation for understanding individuals, families, and groups. Utilizes theories about human behavior to develop foundation to learn effective social work practice.  GR  LE  Lecture

Fall 2020  MUS7720  7720  Assessment in Music Education  MUS  Music  3  Assessment in Music Education is designed to evaluate and develop assessment practices. Students will work with assessment data to evaluate teaching effectiveness, student learning, and assessment validation.  GR  LE  Lecture

Fall 2020  P&N6690  6690  Quant Ascp-Mam Trans  P&N  Physiology & Neuroscience  2  Emphasizes a quantitative approach to the properties of solutes, water, bio-electrical phenomena, the properties of transport systems and how they 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.  GR  LE  Lecture

Fall 2020  PHY2410L  2410L  General Physics II Lab  PHY  Physics  1  Introductory physics laboratory problems in electricity, magnetism, and optics.  GR  LB  Lab

Fall 2020  ENG4560  4560  ILA Capstone  ENG  English  3  Integration and pedagogy of reading, writing, listening, speaking, viewing, and visually representing with an emphasis on literary response and analysis. Integrated Writing course<br/>(UG) Department Managed Prerequisite(s): Undergraduate level ENG 3520 Minimum Grade of C and Undergraduate level ENG 3550 Minimum Grade of C or Undergraduate level ENG 3650 Minimum Grade of C or Undergraduate level ENG 3570 Minimum Grade of C-

Fall 2020  WGS4990  4990  Independent Study  WGS  Women, Gender, and Sexuality  1  Supervised individual research on selected topics. Limited to students with minimum 3.0 GPA. 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. Integrated Writing course<br/>(UG) Department Managed Prerequisite(s): Undergraduate level WGS 3600 Minimum Grade of C-

Fall 2020  CS1150L  1150L  Intro to Comp Sci Lab  CS  Computer Science  0  Required laboratory for CS 1150.  US  LB  Lab

Fall 2020  SLI4040  4040  K-12 Education Practicum  SLI  Sign Language Interpreting  3  Supervised practicum experience in a K-12 educational setting. 50 hours minimum on-site placement hours.  GR  BR  Practicum

Fall 2020  PSY4940  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.  GR  LE  Lecture

Fall 2020  PHY6320  6320  Lasers  PHY  Physics  3  Introduction to the physics of lasers including emission and absorption processes in lasing, the factors controlling laser gain, the properties of optical resonators, and a survey of salient features for principal types of lasers.  GR  LL  Lecture/Lab Combination

Fall 2020  REL5760  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, reconstruct their communities, and reflect on the meaning of their presentations of Jesus. Some attention to the problem of the Historical Jesus.  GR  LE  Lecture

Fall 2020  SOC3610  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.  GR  LE  Lecture

Fall 2020  ITT2450  2450  Concepts Environ Design  IT  Information Technology  3  Intro to environmental design and how design works cohesively with the environment.  GR  LE  Lecture

Fall 2020  MUS6650  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 coursework design.  GR  LE  Lecture

Fall 2020  RHB640  6400  Community Accessibility  RHB  Rehabilitation  3  Physical accessibility requirements and issues in the community based on title III of the Americans with Disabilities Act.  GR  LE  Lecture

Fall 2020  EDL9870  9870  Admin Leadership in Comm  EDL  Educational Leadership  3  Focuses on the development of leadership skills in relationship to individual and organizational communications, group processes, conflict management, decision making, and problem solving. Participants study and practice the principles of change.  GR  LE  Lecture

Fall 2020  SOC2200  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.  GR  LE  Lecture

Fall 2020  KNH4088  4088  Independent Study  KNH  Kinesiology & Health  1  Independent reading, writing, and/or reporting in areas related to health, physical education, or recreation. Topics vary.  US  IS  Independent Study

Fall 2020  DAN4120  4120  Modern Dance IV  DAN  Dance  3  Advanced work in various modern dance techniques and styles.  GR  ST  Studio
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>ME7250</td>
<td>7350</td>
<td>Advanced Dynamics ME Mechanical and Materials Engr</td>
</tr>
<tr>
<td>ECO5690</td>
<td>5690</td>
<td>Insurance Basics Teachers ECO Center for Economic Educ.</td>
</tr>
<tr>
<td>CEG3120</td>
<td>3120</td>
<td>Design of Info Tech Sys CEG Computer Engineering</td>
</tr>
<tr>
<td>CLS3300</td>
<td>3300</td>
<td>Ancient Literature CLS Classics</td>
</tr>
<tr>
<td>ED3430</td>
<td>3430</td>
<td>Soc Stds Meths for MCE ED Education</td>
</tr>
<tr>
<td>PHL7900</td>
<td>7900</td>
<td>Topics in Phil of Relig PHL Philosophy</td>
</tr>
<tr>
<td>BHE7910</td>
<td>7910</td>
<td>MEIE Team Project I BHE Industrial &amp; Hum Fac Engr</td>
</tr>
<tr>
<td>ENG6620</td>
<td>6620</td>
<td>Document Design ENG English</td>
</tr>
<tr>
<td>MKT7900</td>
<td>7900</td>
<td>Internship in Marketing MKT Marketing</td>
</tr>
<tr>
<td>GEO4410</td>
<td>4410</td>
<td>Cartography GEO Geography</td>
</tr>
<tr>
<td>EE6550L</td>
<td>6550L</td>
<td>IC Hardware Security &amp; Trust Lab EE Electrical Engineering</td>
</tr>
<tr>
<td>BME2940</td>
<td>2940</td>
<td>BME Biomedical Engineering</td>
</tr>
<tr>
<td>ME4250</td>
<td>4250</td>
<td>Kinematics &amp; Design-Math ME Mechanical and Materials Engr</td>
</tr>
<tr>
<td>RUS1020</td>
<td>1020</td>
<td>Beginning Russian II RUS Russian</td>
</tr>
<tr>
<td>TH1440</td>
<td>1440</td>
<td>Acting I TH Theatre</td>
</tr>
<tr>
<td>CHM1210L</td>
<td>1210L</td>
<td>General Chemistry Lab I CHM Chemistry</td>
</tr>
<tr>
<td>ED0100</td>
<td>0100</td>
<td>Math Inst for Ed ED Education</td>
</tr>
<tr>
<td>MKT7850</td>
<td>7850</td>
<td>Special Topics in Mkt MKT Marketing</td>
</tr>
<tr>
<td>REL5640</td>
<td>5640</td>
<td>Religion &amp; Polit in Amer REL Religion</td>
</tr>
<tr>
<td>TH4570</td>
<td>4570</td>
<td>Singing Mus Theatre VII TH Theatre</td>
</tr>
<tr>
<td>REL5900</td>
<td>5900</td>
<td>Topics in Phil of Relig REL Religion</td>
</tr>
<tr>
<td>EES5620</td>
<td>5620</td>
<td>General Environ Health EES Environmental Sciences</td>
</tr>
<tr>
<td>HST7450</td>
<td>7450</td>
<td>Seminar Gender History HST History</td>
</tr>
<tr>
<td>ECE4030</td>
<td>4030</td>
<td>ECE-Gen Effic Sci Instr ECE Education - Early Childhood</td>
</tr>
<tr>
<td>URS7220</td>
<td>7220</td>
<td>MPA Directed Study URS Urban Affairs</td>
</tr>
</tbody>
</table>
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 writer's practice of their craft. Includes practice in the creation of original work. GR LE Lecture

Fall 2020 PSY8320 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 PSYS353OL 353OL Social Psychology Mth Lab PSY Psychology 0 Required laboratory for PSY 3530. Integrated Writing course.

UG Lab

Fall 2020 SLIS4560 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 PHY1110 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 PSY9330 6330 Personal Psych Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on personality, including theory, research, and application. GR SE Seminar

Fall 2020 RBHS3010 3010 Med Aspect Disabilities RBH 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 psychosocial 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 tests of assumptions of each analysis and multiple and logistic regression. GR LE Lecture

Fall 2020 CHM351OL 351OL Physical Chm 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 wares 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 EE86400 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 Fingerlakes region of central New York. GR LL Lecture/Lab Combination

Fall 2020 MGT7720 7720 Project Contract Mgt MGT Management 3 In today's complex world, large projects are typically carried out 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. (<b>Department Managed Prerequisite(s):</b> Undergraduate level EE 3210 Minimum Grade of C or Undergraduate level ME 3210 Minimum Grade of C or Undergraduate level ECE 3210 Minimum Grade of C or Undergraduate level ME 3210 Minimum Grade of C or Undergraduate level ECE 3210 Minimum Grade of C and Undergraduate level MTH 2240 Minimum Grade of D) or (Undergraduate level EE 3310 Minimum Grade of C and Undergraduate level MTH 2240 Minimum Grade of D)<b>or</b>:

UG LL Lecture/Lab Combination

Fall 2020 CS8940 8940 Res Research in Comp Sci CS Computer Science 1 Research on the Ph.D. dissertation topic taken in residence. UG 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 exponents, radicals, and quadratic equations. Grade of D in DEV 0970 and MFL of 23 or 24 Grade of C) and Undergraduate level MTH 2310 Minimum Grade of D)) or (Undergraduate level EE 3510 Minimum Grade of C and Undergraduate level MTH 2240 Minimum Grade of D)<b>or</b>:

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 KNH1560B 1560B Soccer: Indoor KNH 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 KNH1000A 1000A Special Topics KNH Kinesiology & Health 1 Activity course for a variety of content areas UG LB Lab

Fall 2020 LEP030 0300 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 SOC5740 5740 Penology and Corrections SOC Sociology 3 Historical development and critical assessment of penal institutions. Field visits to select institutions. GR LE Lecture

Fall 2020 MDS340 3400 Biological Safety MI Microbiology & Immunology 2 Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA. GR LE Lecture

Fall 2020 BI07300 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 Electrophysical Chem CHM Chemistry 2 Fundamental principles of electrochemistry and the application of electrochemical methods to chemistry and chemical analysis. GR LE Lecture

Fall 2020 URS8060 8060 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 advisor 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 source. (<b>Department Managed Prerequisite(s):</b> Undergraduate level FR 2020 Minimum Grade of D or AP French Language 4)<b>or</b>:

UG LE Lecture

Fall 2020 HST2120 2120 American Hist 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. UG 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 PLS6819 6819 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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
<th>Grade</th>
<th>Level</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTE6450</td>
<td>Geometry Mid Schtl Chrn</td>
<td>MTE</td>
<td>3</td>
<td>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.</td>
<td>GR</td>
<td>LL</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>ABS7300</td>
<td>Studies in Spec Topics</td>
<td>ABS</td>
<td>3</td>
<td>Study of specialized topics in the areas of criminal justice or social problems. Topics vary.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>KNH1270A</td>
<td>H2O Kickboxing</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of H2O Kickboxing. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>BIO4460</td>
<td>Advanced Cell Biology</td>
<td>BIO</td>
<td>3</td>
<td>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.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ME4770</td>
<td>Mech. Behavior of Metals</td>
<td>ME</td>
<td>3</td>
<td>Crystal plasticity and single crystal behavior. Introduction to dislocation theory. Strengthening mechanisms and polycrystalline behavior. Introduction to fracture, fatigue, and snap of materials.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>CEC3000</td>
<td>Dev Effective Phil &amp; App</td>
<td>ECE</td>
<td>3</td>
<td>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.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ME4121</td>
<td>Industrial Controls</td>
<td>ME</td>
<td>3</td>
<td>Working diagram creation, hardware selection, and programmable logic controller design and operation.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MIL1022</td>
<td>Intro Tact Ldrship Lab</td>
<td>MIL</td>
<td>3</td>
<td>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.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>KNH1570</td>
<td>Soccer: Outdoor</td>
<td>KNH</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>
</tr>
<tr>
<td>STT4640</td>
<td>Machine Learning</td>
<td>STT</td>
<td>3</td>
<td>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.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY6110</td>
<td>Positive Psy Cap</td>
<td>PSY</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge within Positive Psychology.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>SOC4400</td>
<td>Qualitative Methods</td>
<td>SOC</td>
<td>3</td>
<td>Provides students with an appreciation of a variety of qualitative research techniques including interviews, focus groups, case studies, and observational research.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ME2120B</td>
<td>Statics Rucitation</td>
<td>ME</td>
<td>0</td>
<td>Required recitation for ME 3120. 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= or greater.</td>
<td>UG</td>
<td>RE</td>
<td>Recitation</td>
</tr>
<tr>
<td>BIO1060</td>
<td>Global Eco and Diversity</td>
<td>BIO</td>
<td>4</td>
<td>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 speciation, macroevolution, adaptive radiation, symbiosis, biogeography, and the scientific management of modern biological resources. Three hours lecture, two hours lab.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EDS5660</td>
<td>Practicum: JS M I</td>
<td>EDS</td>
<td>2</td>
<td>Candidates, under the direct supervision of an experienced Intervention Specialist, are assigned to a school for field experience in grades K-12 special education.</td>
<td>GR</td>
<td>IN</td>
<td>Internship</td>
</tr>
<tr>
<td>PTX1100</td>
<td>Med CLM/RAD NEC Defense</td>
<td>PTX</td>
<td>3</td>
<td>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.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ACC4420</td>
<td>Govt Not Profit Account</td>
<td>ACC</td>
<td>3</td>
<td>Application of fund accounting concepts to governmental and not-for-profit entities. Includes accounting procedures and preparation of financial statements.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>NUR7114</td>
<td>Nursing Elective</td>
<td>NUR</td>
<td>1</td>
<td>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.</td>
<td>GR</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>EDS5481</td>
<td>Professional Seminar: MI</td>
<td>EDS</td>
<td>0.5</td>
<td>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.</td>
<td>GR</td>
<td>SE</td>
<td>Seminar</td>
</tr>
<tr>
<td>KNH1080B</td>
<td>Basketball</td>
<td>KNH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Basketball. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG</td>
<td>LB</td>
<td>Lab</td>
</tr>
<tr>
<td>BMS7500</td>
<td>Molecular Biochemistry</td>
<td>BMS</td>
<td>3</td>
<td>Survey course emphasizing experimental and problem-solving approaches to understanding amino acids, protein structure, enzymes, nucleic acid structure and DNA replication.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>ME4360</td>
<td>Pre-Internal Combustion</td>
<td>ME</td>
<td>3</td>
<td>Thermodynamics of internal combustion engines, combustion thermodynamics, friction, heat and mass losses, and computer control of the modern fuel-injected internal combustion engine. Department Managed Prerequisite(s): Undergraduate level MTH 2330 Minimum Grade of D or Undergraduate level MTH 2550 Minimum Grade of D and Undergraduate level ME 1040 Minimum Grade of D and Undergraduate level ME 3350 Minimum Grade of D= or greater.</td>
<td>UG</td>
<td>LE</td>
<td>Lecture</td>
</tr>
<tr>
<td>MUE2500</td>
<td>Symphonic Band</td>
<td>MUE</td>
<td>1</td>
<td>Performs band music of all styles. Open to all students, each semester, with intermediate to advanced experience. Audition required.</td>
<td>UG</td>
<td>LL</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>CS8990</td>
<td>Dissertation Defense</td>
<td>CS</td>
<td>1</td>
<td>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.</td>
<td>GR</td>
<td>IS</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>
Fall 2020  BME4421  4421  Biobehavioral Science  BME  Biomedical Engineering 3  Behavior of fluids as encountered in everyday life, general engineering and biomedical engineering applications. Properties of body fluids, solute mass transport in biological systems, fluid mechanics of blood and other fluids, oxygen mass transport.  UG  LE  Lecture

Fall 2020  PSY1620  9720  Program Evaluation  PSI  Professional Psychology 3  The goal for the course is to make students familiar with basic concepts and practice in program evaluation. The objectives of this course are to teach students about key concepts in program evaluation including program logic models and to provide students with an opportunity to apply their skills by working on a program evaluation.  GR  LE  Lecture

Fall 2020  PTE1023  7012  Introduction to Research  PTX  Pharmacology/Toxicology 1  Three practical laboratory experiences in three week rotations each. The students will spend 3 weeks in laboratories 17 will be rotation will be concluded with a 2-page summary, signed by the laboratory PI. Upon completion of the Pharm & Tox student should have a laboratory project to complete this work.  GR  LB  Lab

Fall 2020  TH4250  4250  Adv Design Studio II  TH  Theatre 3  Continued intensive study of theatrical costume, scenery, lighting, and/or 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.  UG  ST  Studio

Fall 2020  CHM8960  8960  Early Start Research  CHM  Chemistry 2  A short-term research project as an introduction to Masters-level chemistry research  GR  IS  Independent Study

Fall 2020  PSE1310  8130  Intro to Projective Ause  PSI  Professional Psychology 3  Overview of the administration, scoring, and interpretation of several projective techniques including projective drawings, Incomplete Sentence Blanks, the Thematic Apperception Test (TAT), the Children's Apperception Test (CAT), and other storytelling techniques.  GR  LE  Lecture

Fall 2020  RBH1700  3700  Independent Study Rehab  RBH  Rehabilitation 1  Independent study.  LG  IS  Independent Study

Fall 2020  NUR6440  4440  Public Health Nursing  NUR  Nursing 1  Integrates nursing and public health concepts to assess community health needs. Stressors primary, secondary, and tertiary prevention for health of individuals, families, and groups, including lifestyle and genetic factors affecting population health. Examines global aspects of the social, political, legal/ethical and environmental issues influencing health care and health policy.  UG  LE  Lecture

Fall 2020  SOC4410  4100  Political Anthropology  SOC  Sociology 3  Cross-cultural focus on the anthropological study of political life. 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.  UG  LE  Lecture

Fall 2020  KNS1480A  1480A  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  LEP0556  0560  American Culture and Com  LEP  LEAP 0  This course focuses on developing the fluency and communication skills of intermediate to advanced non-native English speakers in common everyday settings. Students will improve their understanding of American culture by communicating in individual and group discussions, preparing and giving presentations, and by engaging with a variety of guest speakers. Cultural themes covered in the course will include American traditions, values, and behavior in the workplace and informal social settings.  UG  LE  Lecture


Fall 2020  BIO6420  6420  Adv Molecular Biology  BIO  Biology 3  Emphasizes gene organization and genome organization focusing on the molecular anatomy, expression, and regulation of eukaryotic genes. Includes a thorough discussion of recombinant DNA technology.  GR  LE  Lecture

Fall 2020  PHL6140  6140  Philosophy of Law  PHL  Philosophy 3  Survey of the important theories concerning the nature and justification of law, liberty, justice, responsibility, and punishment.  UG  LE  Lecture

Fall 2020  BME4704L  4704L  Adv Med Imag Lab  BME  Biomedical Engineering 0  Lab for BME 4704.  UG  LB  Lab

Fall 2020  CHI5020  5020  Advanced Chinese II  CHI  Chinese 3  Further development of advanced linguistic proficiency and complex conversation skills with emphasis on cultural aspects of communication. Taught in Chinese.  GR  LE  Lecture

Fall 2020  YMG2040  2040  Fund of Management  YMG  Technical Management 3  Management skills, global management skills, organizational behavior, communication and technology management skills.  UG  LE  Lecture

Fall 2020  ART5110  5110  Study Ancient/Classical  ART  Art 3  General surveys and intensive studies of the period, major movements, and artists of the time. Titles vary.  GR  LE  Lecture

Fall 2020  FR3320  3320  Francophone African Sile  FR  French 3  Introduction to the culture and literature from French-speaking Africa. Taught in French. Integrated Writing course.  GR  LE  Lecture

Fall 2020  EDL6260  8620  Principal Prog: Midpoint  EDL  Educational Leadership 1  Candidates explore various educational leadership topics/issue and their relationship to praxis.  GR  SE  Seminar

Fall 2020  FAS5310  2510  Food Chem Analysis Lab  FAS  Food and Agricultural Systems 1  Scientific measurements of food components and important chemical reactions in foods.  UG  LB  Lab

Fall 2020  HST7825  7825  Exhibit Design Technology  HST  History 3  Teaches principles of museum exhibit design using design software and culminating in the development of small-scale exhibit plans.  GR  LE  Lecture

Fall 2020  FIN7500  7500  Fin Mgt Health Care Org  FIN  Finance 3  Overview of the financial management function in health care organizations. Topics include budgeting, control, capital expenditure analysis, and rate settings.  GR  LE  Lecture

Fall 2020  MGT4440  3440  Black Lit & Culture  ENG  English 3  Representative works in English from the Black diaspora.  UG  LE  Lecture

Fall 2020  MP2820  2820  Intermediate MP Prod II  MP  Motion Picture 3  Production of short motion picture and audio projects under faculty supervision. Further instruction in the technique and aesthetics of motion pictures. Includes an introduction to sync-sound.  UG  LL  Lecture/Lab Combination

Fall 2020  PHY4099  6990  Spec. Top. Phy Teachers  PHY  Physics 1  Physical science topics for teachers. Topics vary by year. Applicable to grades 3-12 teachers or to the MST capstone experience according to section.  GR  LL  Lecture/Lab Combination

Fall 2020  PL84520  4520  Intl Human Rights  PLS  Political Science 3  Examines the role of human rights in international relations and considers contending definitions of human rights and debates over policy by focusing on thematic issues and case studies. Integrated Writing course.  GR  LE  Lecture

Fall 2020  PHL5780  5780  Bioethics  PHL  Philosophy 3  Study of 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  DAN4220  4220  Jazz/Theatre Dance IV  DAN  Dance 2  Diversified styles and techniques of advanced jazz/musical theatre dancing. Emphasis on the continued development of advanced rhythms, syncopation, coordination, musicality, and variation of style.  UG  ST  Studio
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 one-time course basis. Subject matter and titles vary. UG LE Lecture

Fall 2020 MGT4250 4250 Comp & Benefits MGT Management 3 Application of compensation and benefits theory to local small businesses, job analyses, job descriptions, wage and benefit surveys, market pricing, factor-pot interviews, 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 LE Lecture

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. UG 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. UG 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 PSS8110L 8110L Cognitive Assessment Lab PSS 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

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

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. 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. UG IS Independent Study

Fall 2020 BMES6740 6740 Advanced Stat Methods BMES 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. UG LE Lecture

Fall 2020 URS6300 6300 Nonprofit Administration URS Urban Affairs 3 Explores classes on the nature and mission of nonprofit organizations, strategies for achieving the mission, roles involved, evaluating performance, resource development/fundraising, and managing volunteers. TG 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 RBH7000 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. GR LB Lab

Fall 2020 EE4470 4470 Antenna Theory & Design EE Electrical Engineering 3 Linear dipole antennas, antenna arrays, thin-film antennas, moment method analysis examples (ver 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 RBH8700 8700 Biopsychosoc 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&H4260 4260 Immunology M&H 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. 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 experience 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. UG 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. Subject matter and titles vary. UG LE Lecture
Multidirectional interactions between the nervous and immune systems have been documented in homeostasis and physiological mechanisms of behavior. Basic neuroanatomy and neurophysiology, neuronal development 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.
Fall 2020
MIL3010 3010  Adaptive Team Leadership  MIL  Military Science 3  Application of fundamentals of Army leadership, officerhip, 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  LE  Lecture
Fall 2020
DEVO450 0450  Found Quant Reasoning  DEV  Developmental Education 3  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  LE  Lecture
Fall 2020
SOC5320 3320  Sociology of Work  SOC  Sociology 3  Investigation, analysis, and discussion of contemporary issues focusing on the relationship of the individual to work.
UG  LE  Lecture
Fall 2020
MTH3320 3320  Complex Variables  MTH  Mathematics 3  Operations with complex numbers, derivatives, holomorphic functions and the Cauchy-Riemann equations. Integrals, Cauchy's Theorem, the Cauchy Integral Formula, and consequences. Definitions and properties of elementary functions. Power series, conformal maps, the calculus of residues.
UG  LE  Lecture
Fall 2020
ME4850 4850  Nano-scale Sci and Engr  ME  Mechanical and Materials Engr 3  Introduction to Nano-scale science and engineering in terms of the nano-scale building blocks (emphasizing carbon based nano-specials), the characterization techniques (emphasizing Raman Spectroscopy), and the nano-phenomena such as thermal, optical, electrical, chemical, and mechanical phenomena observed on the nano-scale. 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)
UG  LE  Lecture
Fall 2020
CNL7230 7230  Asans & Evol in Counsel  CNL  Counseling 3  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  LE  Lecture
Fall 2020
CEG5320L 5320L  Digital System Design Lab  CEG  Computer Engineering 0  Required laboratory for CEG 5320.
GR  LB  Lab
Fall 2020
EES4320 4320  Environ Microbiology  EES  Earth & Environmental Sciences 3  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, ecology, geology, and biochemistry. Department Managed Prerequisite(s): Undergraduate level CHM 1220 Minimum Grade of D and Undergraduate level BIOS 1150 Minimum Grade of D
UG  LE  Lecture
Fall 2020
BIO2110 2110  Molecular Bio & Genetics  BIO  Biology 3  Transmission, molecular and population genetics. Gene structure, allelic segregation, genic interactions, the regulation of gene expression and the genetic structure of populations.
UG  LE  Lecture
Fall 2020
COM1520 1520  Mass Comm  COM  Communication 3  Study of mass media functions, industries, and effects to help students become more critical mass media consumers and contributors.
UG  LR  Lecture/Recitation
Fall 2020
ACC5320 5320  Intermed Acc II  ACC  Accountancy 3  Financial accounting concepts applied to complex measurement problems and the preparation of financial statements.
UG  LE  Lecture
Fall 2020
EDL930 930  Adv Tchr Ldr Seminar  EDL  Educational Leadership 3  Advanced studies regarding critical topics and current issues relevant to the development of classroom teachers as school leaders.
GR  SE  Seminar
Fall 2020
ITL7890 7890  Infl Contin Registration  ITL  Intl Contin Registration 0  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  LE  Lecture
Fall 2020
DAN1250 1250  Jazz Dance for Actor II  DAN  Dance 3  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. Designed for non-dance majors.
UG  ST  Studio
Fall 2020
ENG6560 6560  ILA Capstone  ENG  English 3  Study of the integration and pedagogy of reading, writing, listening, speaking, viewing, and visually representing. Emphasis on responding to literature and introduction to interdisciplinary and thematic units. Department Managed Prerequisite(s): (Undergraduate level ENG 3520 Minimum Grade of C) and Undergraduate level ENG 6520 Minimum Grade of C and (Undergraduate level ENG 3530 Minimum Grade of C) and Undergraduate level ENG 6530 Minimum Grade of C and (Undergraduate level ENG 3560 Minimum Grade of C) and (Undergraduate level ENG 3570 Minimum Grade of C or Undergraduate level ENG 6570 Minimum Grade of C)
GR  LE  Lecture
Fall 2020
DAN3320 3320  Musical Theatre Dance II  DAN  Dance 3  Group class applies ballet, jazz, and modern dance techniques to Musical Theatre dance.
UG  ST  Studio
Fall 2020
BHE3771 3771  Fail Analysis Med Device  BHE  Industrial & Hum Fac Engr 3  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  LE  Lecture
Fall 2020
MKT7870 7870  Ind. Studies in Marketin  MKT  Marketing 3  A research project in marketing supervised by a faculty member in the Department of Marketing.
GR  IS  Independent Study
Fall 2020
UG  ST  Studio
Fall 2020
ANT3100 3100  Human Structure Funct I  ANT  Anatomy 4  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.
UG  LE  Lecture
Fall 2020
MTH4240 4240  Coding Theory  MTH  Mathematics 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
Fall 2020
SOC3660 3660  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.
UG  LE  Lecture
Fall 2020
ISE4330 4330  Eng in Occup Sfty & Hlth  ISE  Industrial & Systems Engr 3  Discusses 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.
UG  LE  Lecture
Fall 2020
CHM8450 8450  Sel Topics in Organic  CHM  Chemistry 1  Selected topics in the field of organic chemistry, such as organic spectroscopy, heterocyclic chemistry, organometallic chemistry, and the chemistry of natural products.
GR  LE  Lecture
Fall 2020
EC3260 3260  Econ Poverty & Discrim  EC  Economics 3  Analysis of economic causes, effects, and cures for poverty and discrimination. Study of trends, economic implications, and current programs and legislation.
UG  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Type</th>
<th>Title/Description</th>
<th>Credits</th>
<th>Department</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES6530</td>
<td>6530</td>
<td>Diagenesis of Sed Rocks</td>
<td>EES - Earth &amp; Environmental Sciences</td>
<td>4</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>PN7760</td>
<td>7760</td>
<td>Intercellular Comm</td>
<td>PN - Physiology &amp; Neuroscience</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>SOM4706</td>
<td>706</td>
<td>Year 1 Medical Study</td>
<td>SOM - School of Medicine</td>
<td>24</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ART2480</td>
<td>2580</td>
<td>Intro to Digital Photo</td>
<td>ART - Art</td>
<td>3</td>
<td>Lecture</td>
<td>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. Course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>PSY3020L</td>
<td>3020L</td>
<td>Research Methods Psych I Lab</td>
<td>PSY - Psychology</td>
<td>0</td>
<td>Lecture</td>
<td>Required laboratory for PSY 3020L.</td>
</tr>
<tr>
<td>SPN3250</td>
<td>3250</td>
<td>Business Spanish I</td>
<td>SPN - Spanish</td>
<td>3</td>
<td>Lecture</td>
<td>An introduction to the language of business Spanish with insight into Spain and Latin America within the global economy. Integrated writing course. Department Managed Prerequisite(s): Undergraduate level SPN 2020 Minimum Grade of D or Undergraduate level SPN 2120 Minimum Grade of D or higher.</td>
</tr>
<tr>
<td>KNH1770</td>
<td>1770</td>
<td>Water Safety Instruction</td>
<td>KNH - Kinesiology &amp; Health</td>
<td>1</td>
<td>Lecture</td>
<td>National American Red Cross standards training for teaching American Red Cross Swimming and Diving and Water Safety courses.</td>
</tr>
<tr>
<td>ECE4650</td>
<td>4650</td>
<td>Support Struggling Eds</td>
<td>ECE - Education - Early Childhood</td>
<td>3</td>
<td>Lecture</td>
<td>Study of assessments, reading strategies, reading materials and techniques needed to assist struggling readers.</td>
</tr>
<tr>
<td>URS4500</td>
<td>4500</td>
<td>Issues in City, Reg, &amp; Org Plan</td>
<td>URS - Urban Affairs</td>
<td>3</td>
<td>Lecture</td>
<td>Issues related to planning city, regional, and organizational environments. Topics include housing, growth and regionalism.</td>
</tr>
<tr>
<td>ANT7550</td>
<td>7550</td>
<td>Practicum Literature Review</td>
<td>ANT - Anatomy</td>
<td>3</td>
<td>Lecture</td>
<td>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 for 1 rewrite, after which the committee may grade the final document.</td>
</tr>
<tr>
<td>CS8300</td>
<td>3800</td>
<td>Web Development II</td>
<td>CS - Computer Science</td>
<td>3</td>
<td>Lecture</td>
<td>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 and more English-based signing vocabulary to increase vocabulary use, comprehension and communication fluency.</td>
</tr>
<tr>
<td>PTX8140</td>
<td>8140</td>
<td>Human Studies Research</td>
<td>PTX - Pharmacology/Toxicology</td>
<td>3</td>
<td>Lecture</td>
<td>All research projects that involve human subjects require review and approval at the institutional level for both Federal and Graduate level ED 6660 Minimum Grade of C. This course can be taken concurrently.</td>
</tr>
<tr>
<td>MUS4160</td>
<td>4160</td>
<td>Piano Pedagogy</td>
<td>MUS - Music</td>
<td>3</td>
<td>Lecture</td>
<td>Offers a historical overview of keyboard pedagogy and examines anthologies, collections, and studies written for piano students at various performance levels.</td>
</tr>
<tr>
<td>DAN3420</td>
<td>3420</td>
<td>Choreography II</td>
<td>DAN - Dance</td>
<td>2</td>
<td>Lecture</td>
<td>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 course of creating dance.</td>
</tr>
<tr>
<td>EES3990</td>
<td>3990</td>
<td>Problems Earth &amp; Env Sci</td>
<td>EES - Earth &amp; Environmental Sciences</td>
<td>0.5</td>
<td>Lecture</td>
<td>0.5 Research and problems designed for undergraduate students at the junior level. May be taken for a letter grade or pass/satisfactory.</td>
</tr>
<tr>
<td>ASL3200</td>
<td>3200</td>
<td>Advanced ASL II</td>
<td>ASL - American Sign Language</td>
<td>4</td>
<td>Lecture</td>
<td>Continual vocabulary and sentence structure acquisition, and comparing ASL and more English-based signing vocabulary to increase vocabulary use, comprehension and communication fluency.</td>
</tr>
<tr>
<td>NUR7302</td>
<td>7302</td>
<td>Hum Res Mgmt Nurs Admin</td>
<td>NUR - Nursing</td>
<td>3</td>
<td>Lecture</td>
<td>Analysis of human resource management in health care organizations. Specific applications is made to the nurse administrator role.</td>
</tr>
<tr>
<td>ED7020</td>
<td>7020</td>
<td>Prac/Pract/Learn - 4-5</td>
<td>ED - Education</td>
<td>3</td>
<td>Lecture</td>
<td>This course expands the Early Childhood educator's understanding of the development of the young child in pre-adolescence and adapts developmentally appropriate pedagogical strategies and practices for effective teaching and learning.</td>
</tr>
<tr>
<td>MUE6460</td>
<td>6460</td>
<td>Univ Saxophone Quartet</td>
<td>MUE - Music: Ensembles</td>
<td>1</td>
<td>Lecture</td>
<td>Performs saxophone quartet repertoire ranging from classic to jazz to contemporary. Audition required.</td>
</tr>
<tr>
<td>FR6530</td>
<td>6530</td>
<td>Post Revolution Poetry</td>
<td>FR - French</td>
<td>3</td>
<td>Lecture</td>
<td>Romantics, symbolists, decadents, and surrealists, including Baudelaire, Rimbaud, Verlaine, Mallarmé, Apollinaire and Prévert. Taught in French. Department Managed Prerequisite(s): Graduate level FR 5110 Minimum Grade of D or Graduate level FR 5120 Minimum Grade of D or Graduate level FR 5220 Minimum Grade of D or Graduate level FR 5210 Minimum Grade of D or higher.</td>
</tr>
<tr>
<td>PLS4170</td>
<td>4170</td>
<td>Moot Court</td>
<td>PLS - Political Science</td>
<td>3</td>
<td>Lecture</td>
<td>Politics in the appellate courts and simulated appellate arguments in a moot court setting. Integrated Writing course.</td>
</tr>
<tr>
<td>ED6740</td>
<td>7470</td>
<td>Reading Recovery I</td>
<td>ED - Education</td>
<td>6</td>
<td>Lecture</td>
<td>Teaches laser 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.</td>
</tr>
<tr>
<td>MUE8020</td>
<td>8020</td>
<td>Vocal Jazz Ensemble</td>
<td>MUE - Music: Ensembles</td>
<td>1</td>
<td>Lecture</td>
<td>Development of performance skills in vocal jazz. Emphasis on jazz style and techniques, improvisation, and jazz theory. Audition required.</td>
</tr>
<tr>
<td>FIN6120</td>
<td>6120</td>
<td>Fixed Income Sec. Analysis</td>
<td>FIN - Finance</td>
<td>3</td>
<td>Lecture</td>
<td>Introduction to the valuation of fixed income securities and the management of fixed income investment portfolios.</td>
</tr>
<tr>
<td>ME5600L</td>
<td>5600L</td>
<td>Exp. Maj. and Instr. Lab</td>
<td>ME - Mechanical and Materials Eng</td>
<td>0</td>
<td>Lecture</td>
<td>Requires laboratory for ME 5600.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Department</td>
<td>College</td>
<td>Type</td>
<td></td>
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<tr>
<td>STT6660</td>
<td>Self Defense for Women</td>
<td>4</td>
<td>Kinesiology &amp; Health</td>
<td>Theatre</td>
<td>Lecture/Lab Combination</td>
<td></td>
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<tr>
<td>ALS4819</td>
<td>PL5 Internship</td>
<td>3</td>
<td>PLS</td>
<td>Political Science</td>
<td>Internship</td>
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<tr>
<td>TH2190</td>
<td>Stage Lighting I</td>
<td>3</td>
<td>LE</td>
<td>Theatre</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>ELD740</td>
<td>Context of Education</td>
<td>3</td>
<td>EEDL</td>
<td>Educational Leadership</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>TH2220</td>
<td>Theatre Production</td>
<td>1</td>
<td>LE</td>
<td>Theatre</td>
<td>Practical experience</td>
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<tr>
<td>DVM9999</td>
<td>For Administrative Use Only</td>
<td>0</td>
<td>DMV</td>
<td>DMV Consortium</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>LAT2020</td>
<td>Intermediate Latin II</td>
<td>3</td>
<td>LAT</td>
<td>Latin</td>
<td>Lecture</td>
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<tr>
<td>KHN3154A</td>
<td>Self Defense for Women</td>
<td>1</td>
<td>KHN</td>
<td>Kinesiology &amp; Health</td>
<td>Lecture</td>
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<tr>
<td>EE5320</td>
<td>Digital System Design</td>
<td>4</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>DAN3210</td>
<td>Jazz/Theatre Dance III</td>
<td>2</td>
<td>DAN</td>
<td>Dance</td>
<td>Lecture/Lab Combination</td>
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<tr>
<td>ENG4980</td>
<td>English Honors Tutorial</td>
<td>1</td>
<td>ENG</td>
<td>English</td>
<td>Independent Study</td>
<td></td>
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<tr>
<td>MUE4920</td>
<td>Vocal Jazz Ensemble</td>
<td>4</td>
<td>MUE</td>
<td>Music: Ensembles</td>
<td>Lecture/Lab Combination</td>
<td></td>
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<tr>
<td>SLH700</td>
<td>Specialized Interpret II</td>
<td>3</td>
<td>SLI</td>
<td>Sign Language Interpreting</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>ENG7990</td>
<td>Thesis</td>
<td>3</td>
<td>ENG</td>
<td>English</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>MKT3100</td>
<td>Con &amp; Org Buyer Behavior</td>
<td>3</td>
<td>MKT</td>
<td>Marketing</td>
<td>Lecture</td>
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<tr>
<td>PSY6040</td>
<td>Independent Reading</td>
<td>6</td>
<td>PSY</td>
<td>Psychology</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>PSY4960</td>
<td>Fetal Behavior Captions</td>
<td>4</td>
<td>PSY</td>
<td>Psychology</td>
<td>Lecture</td>
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<tr>
<td>PLC2120</td>
<td>American National Govern</td>
<td>2</td>
<td>PLC</td>
<td>Political Science</td>
<td>Lecture</td>
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<tr>
<td>KHN2500</td>
<td>Basic Anatomy Physiology</td>
<td>2</td>
<td>KHN</td>
<td>Kinesiology &amp; Health</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BMB7890</td>
<td>Continuing Registration</td>
<td>1</td>
<td>BMB</td>
<td>Biochem &amp; Molecular Biology</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>PPH7420</td>
<td>Health Program Plan &amp; E</td>
<td>3</td>
<td>PPH</td>
<td>Population &amp; Public Health</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>GER4420</td>
<td>Hat German Lang</td>
<td>4</td>
<td>GER</td>
<td>German</td>
<td>Lecture</td>
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<tr>
<td>NUR835</td>
<td>Sys App &amp; Asly Meth DNP</td>
<td>3</td>
<td>NUR</td>
<td>Nursing</td>
<td>Lecture</td>
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<tr>
<td>MGT7510</td>
<td>Applied Lif Dev</td>
<td>3</td>
<td>MGT</td>
<td>Management</td>
<td>Lecture</td>
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<tr>
<td>CEG3410</td>
<td>Intro Digital Forensics</td>
<td>3</td>
<td>CEG</td>
<td>Computer Engineering</td>
<td>Lecture</td>
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</tr>
<tr>
<td>BMB4700</td>
<td>Molecular Biology of RNA</td>
<td>3</td>
<td>BMB</td>
<td>Biochem &amp; Molecular Biology</td>
<td>Lecture</td>
<td></td>
</tr>
</tbody>
</table>
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  PPHR110  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  4920  Free Occup Engagement  FR  French  3  Analysis of films made during and after the Occupation of France, such as L'Ordre de Vie, La Demoiselle Mitro, Lachon, L'Aventure 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).

Fall 2020  PSY2130  2130  Psy Principles in Films  PSY  Psychology  3  Studies principles of psychology and their application through commercial films. UG LE Lecture

Fall 2020  KNSH960A  1900A  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. Department Managed Prerequisite(s): Graduate level SW 3750 Minimum Grade of D-.

Fall 2020  PSY6720  6720  Select Visual Art Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on selective visual attention. UG LE Lecture

Fall 2020  ASL4020  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  CHM440  7490  Elements Org Reaction  CHM  Chemistry  2  Discussion of the more important organic reactions including their scope, limitations, and mechanisms. UG LE Lecture

Fall 2020  EDL7930  7930  Building-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.

Fall 2020  BME7980  7980  Special Topics in BME  BME  Biomedical Engineering  1  Graduate special topics in advanced biomedical engineering. Topics vary. GR LE Lecture

Fall 2020  PLS6700  6700  Topics in IR  PLS  Political Science  3  Readings, research, reports, and discussion on selected topics and problems in international relations. Topics vary. GR SE Seminar

Fall 2020  CS1010  1010  Intro Comps & Office  CS  Computer Science  3  Microsoft Office software applications including intermediate word processing, spreadsheets, database and presentation graphics using a case study approach requiring critical thinking and problem solving skills. UG LL Lecture/Lab Combination

Fall 2020  DOO1010  9100  Doc Inapt Study in Lifesph  DOS  Doctor Of Study  1  For doctoral students interested in a guided exploration of a specific topic in organizational studies.

Fall 2020  CS4950  4950  Special Topics in Comp Sci  CS  Computer Science  1  Special Topics in Computer Science.

Fall 2020  DAN1020  1020  Ballet I  DAN  Dance  3  Introduction to vocabulary, techniques, and theories of intermediate ballet. Emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet training.

Fall 2020  BBO4030  4030  Topics in Modern Biology  BIO  Biology  1  Advanced topics of current interest. Topics vary. UG LE Lecture

Fall 2020  ENG4450  4450  Studies in Lit Theory  ENG  English  3  Intensive study of literary theory in order to develop an understanding of critical questions and approaches. Integrated Writing course.

Fall 2020  ATH3400  3400  Special Topics Arch  ATH  Anthropology  3  Survey of various specialized aspects of archaeology. UG LE Lecture

Fall 2020  EES5450  6450  Petroleum GeoIology  EES  Earth & Environmental Sciences  3  The course will cover background issues such as the history and legal aspects of the business (lease acquisition, assignment of working interests, overriding royalties). Most of the course will focus on the basics of petroleum geology, including oil and gas exploration techniques, geology of oil producing regions, well drilling, completion, well-log interpretation, enhanced oil and gas recovery, CO2 sequestration, production equipment, oil and gas sales, and marketing.

Fall 2020  PTH7200  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-related actions with emphasis on their observed effects.

Fall 2020  MBA5300  5300  Survey of Finance  MBA  MBA  3  Theories, concepts, and techniques of financial management. Designed for student with previous coursework 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 the 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&N5100  7100  Sel Topics 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. GR LL Lecture/Lab Combination

Fall 2020  BMBM020  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 Biochemistry and Molecular Biology program.

Fall 2020  ED7950  7950  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  BIE6950  8950  Non-Dist Resch in BIE  BIE  Industrial & Hum Fac Eng  1  Ph.D. Non-Dissertation Research in Industrial and Human Factors Engineering.

Fall 2020  ETD2220  7220  SLM Resources for Child  ETD  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  DEY6960  6960  Found for Stat Concepts  DEY  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 STT 1600.

Fall 2020  REL240  2400  Bible, Qur'an & West Cul  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. GR LE Lecture

Fall 2020  P&N5100  7100  Sel Topics 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. GR LL Lecture/Lab Combination

Fall 2020  BMBM020  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 Biochemistry and Molecular Biology program.

Fall 2020  ED7950  7950  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  BIE6950  8950  Non-Dist Resch in BIE  BIE  Industrial & Hum Fac Eng  1  Ph.D. Non-Dissertation Research in Industrial and Human Factors Engineering.

Fall 2020  ETD2220  7220  SLM Resources for Child  ETD  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  DEY6960  6960  Found for Stat Concepts  DEY  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 STT 1600.

Fall 2020  REL240  2400  Bible, Qur'an & West Cul  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. GR LE Lecture
Fall 2020  
EE5400  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.

Fall 2020  
EDS3490  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. (b) Department Managed Prerequisite(s): Graduate level EDS 6610 Minimum Grade of D and (Graduate level EDS 6420 Minimum Grade of D or Graduate level EDS 6420 Minimum Grade of D) and Graduate level EDS 6900 Minimum Grade of D.

Fall 2020  
EDS330  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.

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.

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

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

Fall 2020  
ISM5500  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.

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.

Fall 2020  
SOC5320  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.

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 benefits, labor, and customer service issues.

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. (b) Department Managed Prerequisite(s): Undergraduate level SOC 2300 Minimum Grade of D or Undergraduate level SOC 2200 Minimum Grade of D.

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.

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 filtration, Protocol scrubbing and Honeytokens. Lab work uses tools such as Metasploit.

Fall 2020  
IT3450  3450  Alttr 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.

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.

Fall 2020  
MUE4700  4700  Univ Symphony Orchestra  
MUE  Music: Ensembles  1  
Performs orchestral music of all styles and periods.

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.

Fall 2020  
MTH6810  6810  Applied Mathematics I  
MTH  Mathematics  3  
Solution methods for ordinary differential equations commonly arising in physics and engineering. Systems of equations, stability theory, Lapunov's methods, autonomous systems, existence and uniqueness of solutions, and Poincare phase plane. (b) Department Managed Prerequisite(s): Undergraduate level MTH 2320 Minimum Grade of D and Undergraduate level MTH 2330 Minimum Grade of D.

Fall 2020  
ECE3250  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.

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.

Fall 2020  
EE2011L  2011L  Analog Circuits 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.

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

Fall 2020  
ECE7500  7500  Dee App Assessment  
ECE  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
GR  SE  Seminar
UG  LE  Lecture
UG  LE  Lecture
UG  LE  Lecture
| Fall 2020 | ME5600 | 5600 | Exp. Meas. andInstr. | ME | Mechanical and Materials Eng | 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. <br> 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.<br> | GR | LE | Lecture |
| Fall 2020 | ED4340 | 4340 | Lang Arts Meth for MCE | ED | Education | 3 | A developmental and integrated approach to teaching language arts (reading, writing, speaking & listening, and language) for middle level classrooms, grades 4-9. Includes development of appropriate objectives, planning, resources and facilities, evaluation, and trends. | UG | LE | Lecture |
| Fall 2020 | KINP6960 | 7600 | Adv Athletic Training Tec | KIN | Kinesiology & Health | 3 | Examination of trauma, contusions, hematomas, strains, sprains, fractures, open wounds, and dislocations. | GR | LE | Lecture |
| Fall 2020 | ED6510 | 6510 | Fid Exp II: Meth MA/CIS | KIN | Kinestyology & Health | 3 | 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 | RST2710 | 2710 | Regional Studies: Africa | RST | Regional Studies | 3 | Introduction to African environments; diversity of cultural heritages; changes due to modernization; colonialism, slavery, independence; a brief survey of the relations of Africa to other non-Western regions; and the contribution of Africa to world civilization. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 | PSY7050 | 7050 | Cognition | PSY | Psychology | 3 | Phenomena, principles, and problems of human cognition and learning. | GR | LE | Lecture |
| Fall 2020 | TTTW6460 | 6460 | Voc Eval/Job Placement | TTT | Transition to Work | 3 | Theoretical orientation, development and utilization of data for hypothesis testing and communicating vocational data. Includes career development theories and job placement strategies and techniques to facilitate employment of people with disabilities. | GR | LE | Lecture |
| Fall 2020 | SLI4600 | 4600 | Transliteration | SLI | Sign Language Interpreting | 4 | Enhancement of ability to produce an equivalent message, working simultaneously between the source and target languages of signed and spoken English, focusing on team interpreting, working lengthy segments of discourse, and settings with multiple consumers. | UG | LE | Lecture |
| Fall 2020 | FAS3520 | 3520 | Livestock Breed Reproduc | FAS | Food and Agricultural Systems | 3 | Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | LAT6510 | 6510 | Roman Didactic Lit | LAT | Latin | 3 | Study of Roman didactic literature: Lucretius, Vergil's Georgics, Cicero's philosophical works, Senea, and Quintillian. Titles vary. | GR | LE | Lecture |
| Fall 2020 | PL6710 | 6710 | International Law | PLS | Political Science | 3 | Examines the nature of international law; international courts and subjects; diplomacy; the use of force; law of war, and international environmental law. | GR | LE | Lecture |
| Fall 2020 | EDL6610 | 6610 | Principal Prog: 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 others. | GR | SE | Seminar |
| Fall 2020 | IDL7140 | 7140 | Learning Mgmt Systems & Eval | IDL | Instructional Design & Learning | 3 | Examine integrating curriculum with educational technology such as learning management systems and the knowledge and skills necessary to evaluate the quality of online courses. | GR | LE | Lecture |
| Fall 2020 | CHM4210L | 4210L | Adv Inorganic Syn Lab | CHM | Chemistry | 2 | Advanced synthesis and characterization of representative inorganic compounds. | UG | LB | Lab |
| Fall 2020 | PHL3900 | 3900 | Topics in Phil of Rel | PHL | Philosophy | 3 | Selected topics. | IG | LE | Lecture |
| Fall 2020 | SPN5900 | 5900 | Foreign Lang Institute | SPN | Spanish | 1 | For teachers of Spanish. Intensive experience designed, through total immersion, to improve language skills (conversation and composition) and increase awareness of Spanish civilization and contemporary culture. | GR | LE | Lecture |
| Fall 2020 | BIO2310 | 2310 | Evolution and Ecology | BIO | Biology | 4 | Overview of concepts of evolution and ecology. Examines the major reasons that populations of organisms change genetically over time, the basis of speciation and influences on organisms, and what determines the direction of those changes including interactions with the physical environment and other organisms. Community and ecosystems processes will be discussed. Labs will explore approaches including modeling and analysis of data. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 | MUE2400 | 2440 | University Brass Choir | MUE | Music: Ensembles | 1 | A performance-oriented group which provides the student 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 | ATH5000 | 5000 | Culture/Native North Am | ATH | Anthropology | 3 | 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. Includes their past, their cultures and their place in current North American political and social contexts. | GR | LE | Lecture |
| Fall 2020 | URS6450 | 6450 | Community Development | URS | Urban Affairs | 3 | Explores evolution of community development theory and practice in the U.S. and examines the process of community building and asset-based community development. Topics include how to help community members define community needs and identify community assets, analyze and present qualitative data, and develop critical thinking and problem-solving skills as they relate to community development. | GR | LE | Lecture |
| Fall 2020 | ME3610 | 3610 | Mech Test & Metal Lab | ME | Mechanical and Materials Eng | 2 | This course covers the experimental methods necessary to perform mechanical testing and micrographic analysis, and the relationships between the microstructure, processing and mechanical properties of materials. Formal lab reports will be written. | UG | LL | Lecture/Lab Combination |
| 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 | LE | Lecture |
| Fall 2020 | BHE7810 | 7810 | Engr Health Sys | BHE | Industrial & Hum Fac Engr | 3 | Applications of quality improvement, reliability and human factors techniques in modern, technology-driven health-care systems. Focuses on issues related to patient safety and overall system performance. | GR | LE | Lecture |
| Fall 2020 | KINH3670B | 1670B | Swimming: Intermediate | KIN | 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  EES6990  6990  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.

Fall 2020  PSY6420  6420  Organizational Psy Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on Organizational Psychology.

Fall 2020  CSD2870  2870  CSD Practicum I  CSD  Community Services Development  1  Application of theory and practice in Community Development/Services settings. Individual supervised learning experiences and on-site seminars under the direction of instructor and site staff.

Fall 2020  PSY2160  2160  Counseling Psychology  PSY  Psychology  3  This course offers a background in the scientific theory and practice of counseling from a psychology background. Students develop basic interviewing and counseling skills and self-awareness that promotes appropriate counsellor-client relationship.

Fall 2020  BME4440  4440  Biomaterials  BME  Biomedical Engineering  4  Application of materials in different biomedical fields. Design and analysis.

Fall 2020  CSD3240  3240  Strategic Mgt Health Adm  CSD  Community Services Development  3  Strategic planning responsibilities of administrators in the health care industry. Includes business and functional plans, performance audits, organizational culture, gap analysis, values clarification, and decision making.

Fall 2020  MUA2210  2210  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.

Fall 2020  URS6480  6480  Public Works  URS  Urban Affairs  3  Examines the community’s infrastructure with an emphasis on capital improvements programming. Reviews the community’s development of the street system, water and sewer systems, solid waste management, and code enforcement.

Fall 2020  CS1900  1900  Internship  CS  Computer Science  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  EDL7100  7100  Tchr Ldr Mstr Sem Entry  EDL  Educational Leadership  1  Examining belief systems, teaching styles, teachers as learners; intra- and interpersonal communication skills needed in leadership roles; and functioning in a multicultural/pluralistic society.

Fall 2020  BIO4200  4200  Designing Biological Exp  BIO  Biology  3  Principles of effective sampling design for biological studies, reconcile the peculiarities of biological data with the assumptions of statistical methods.

Fall 2020  MUA4420  4420  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  ES7140  7140  Environmental Statistics  ES  Environmental Sciences  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.

Fall 2020  ED56710  6710  Practicum: IS M/M  EDS  Education - Special Education  2  Candidates with prior teaching licensure(s), under the direct supervision of an experienced intervention specialist, are assigned to a school for field experience in K-12 special education for students with mild/moderate needs.

Fall 2020  ECO5170  5170  Eco Applica Internet I  ECO  Center for Economic Educ.  2  Course 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 greater expertise. This course has a fee that is non-refundable once the term begins.

Fall 2020  GEO4500  4500  Sem in Urban Geography  GEO  Geography  3  Geographic perspectives of urban development. Topics vary from current issues to advances in theory and methods.

Fall 2020  BMS7770  7770  Gene Therapy  BMS  Biomedical Sciences  3  (Also listed as Mde 7770.) 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.

Fall 2020  PN6550  6550  Neuro-Glia Biology & Disease  PN  Physiology & Neuroscience  3  The nervous system is comprised of two primary cell types, neurons and glial cells. The glial cells, which can be divided into several types (e.g. astrocyte, microglia, oligodendrocyte, Schwann cell), support neurons structurally and functionally, and neurons regulate glial cell behavior. This course focuses on how these cells communicate with each other to perform important tasks in the nervous system.

Fall 2020  ISE1980  1980  Special Topics in ISE I  ISE  Industrial & Systems Engr  1  Undergraduate special topics in industrial and systems engineering. Topic vary.

Fall 2020  ART3580  580  Photography  ART  Art  3  Exploration of personal concepts and aesthetic expression in photography. Intensive individual work with faculty supervision. This course has a fee that is non-refundable once the term begins.

Fall 2020  SLI3560  3560  Signing Exact English  SLI  Sign Language Interpreting  3  Signing Exact English sign system, used in many educational settings. Vocabulary, affixes, consonant skills, and fluency in both signing and sign to English.

Fall 2020  PSY8250  8250  Attention  PSY  Psychology  3  The course covers the major theoretical views of human attention in the literature, their implications on human performance in complex, dynamic systems, and their implications on human factors applications. <br>Department Managed Prerequisite(s): Undergraduate level PSY 3210 Minimum Grade of C-<br>SE, Seminar.

Fall 2020  PS9971  9971  Practicum I  PSI  Professional Psychology  1  Field experience supervised by a licensed psychologist.

Fall 2020  CEG4450  4450  Sensor Net and Systems  CEG  Computer Engineering  3  Introduction to wireless sensor networks, fundamental problems and their solutions. Focus on data aggregation, dissemination, localization, power management, security, algorithms and protocol. Students develop applications using MicaZ motes and sensors running TinyOS operating system.

Fall 2020  BHE7980  7980  Special Topics in BHE II  BHE  Industrial & Hum Fac Engr  1  Graduate special topics in advanced industrial and human factors engineering. Topics vary.

Fall 2020  FAS3510  3510  Intro Animal Health Phys  FAS  Food and Agricultural Systems  3  Introduction to basic fundamentals of animal health and physiology in livestock including terminology, disease identification, response, management, prevention, and animal care.

Fall 2020  PHA8000  8000  PhD Biomedical Research  PHA  Pharmacology SC  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 biomed research.

Fall 2020  BMB7270  7270  Proteins and Enzymes  BMB  Biochem & Molecular Biology  3  Also listed as BMS 7670. Current concepts in protein structure and function and the mechanism of enzymatic catalysis.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Division</th>
<th>Credits</th>
<th>Type</th>
<th>Prerequisites</th>
<th>Restriction</th>
<th>Instructors</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES4440</td>
<td>Well Log Analysis</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
<td></td>
<td></td>
<td>Lecture</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PHY6630</td>
<td>Intro to Sol. Stat Phys</td>
<td>PHY Physics</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Theory, application, and interpretation of geophysical logs emphasizing their use in correlation and determination of porosity, permeability, and fluid content of subsurface formations.</td>
<td>Applications of quantum mechanics to solids. 3 hours lecture.</td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>EE7810</td>
<td>Embedded Systems</td>
<td>EE Electrical Engineering</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ART2140</td>
<td>Themes in Visual Culture</td>
<td>ART Art</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>S7T440</td>
<td>Multivariate Analysis</td>
<td>S7T Statistics</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>SAA4100</td>
<td>Spec Topics: Res Life</td>
<td>SAA Student Affairs in Higher Ed</td>
<td>LE</td>
<td>1</td>
<td>Lecture</td>
<td>Topics related to the training of Residence Life staff and student leaders.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>M&amp;57310</td>
<td>Virology</td>
<td>M&amp; I Microbiology &amp; Immunology</td>
<td>GR</td>
<td>3</td>
<td>Lecture</td>
<td>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>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>URS2000</td>
<td>Citizens of the World</td>
<td>URS Urban Affairs</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Interdisciplinary view of growth and change in urban societies around the globe. Case studies illustrate how urbanization, technology development and the administrative state intertwine and affect economic and population growth and change.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>BBO3120L</td>
<td>General Microbiology</td>
<td>BIO Biology</td>
<td>LE</td>
<td>0</td>
<td>Lecture</td>
<td>Required laboratory for BIO 3120.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>SW7240</td>
<td>Agency Administration</td>
<td>SW Social Work</td>
<td>LE</td>
<td>0</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PLS4620</td>
<td>26120 US-India-Pak-Afghan Rel</td>
<td>PLS Political Science</td>
<td>UG</td>
<td>3</td>
<td>Lecture</td>
<td>United States relations with India, Pakistan and Afghanistan. Integrated Writing course.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>CHM2110R</td>
<td>Organic Chemistry I Rechain</td>
<td>CHM Chemistry</td>
<td>UG</td>
<td>3</td>
<td>Recitation</td>
<td>Only required recitation for CHM 2110.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ARA3210</td>
<td>Arab ARA Syntax &amp; Gramm I</td>
<td>ARA Arabic</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>A course based in western approaches to Arabic morphology and grammar, designed to prepare students to engage primary texts, both modern and classical.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PLS6510</td>
<td>Contemp African Politics</td>
<td>PLS Political Science</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>EES4460</td>
<td>Sequence Stratigraphy</td>
<td>EES Earth &amp; Environmental Sciences</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ATH3910</td>
<td>Internship-Antropology</td>
<td>ATH Anthropology</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Directed and supervised experience in an employment setting relevant to one of the major subdisciplines in anthropology. Must be prearranged with student's faculty advisor, a minimum GPA of 3.0, and Junior or Senior standing required.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ED2510</td>
<td>Text Analysis of Lit for MCE</td>
<td>ED Education</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Understanding strategies for reading, interpreting, and analyzing informational, persuasive, and literary texts.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>TH2200</td>
<td>Stagecraft</td>
<td>TH Theatre</td>
<td>LE</td>
<td>3</td>
<td>Lecture/Lab Combination</td>
<td>In-depth study of scenery technology and its techniques. Advanced scenery construction and materials; metalworking; motorized scenery; stage rigging and its equipment; and First Aid and CPR.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ATH5710</td>
<td>Ethnographic Methods</td>
<td>ATH Anthropology</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Explores the meaning, scope and dilemma of ethnography using both a hands-on ethnographic project and a wide array of readings.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ED6130</td>
<td>Reading Recovery I</td>
<td>ED Education</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PSY7900</td>
<td>Independent Research</td>
<td>PSY Psychology</td>
<td>IS</td>
<td>3</td>
<td>Independent Study</td>
<td>Research conducted under faculty supervision. Student must not have defended their Master's thesis yet.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>S7T3960</td>
<td>Topics in Stat and Prob</td>
<td>S7T Statistics</td>
<td>IS</td>
<td>3</td>
<td>Independent Study</td>
<td>Topics vary.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PHL2040</td>
<td>Great Books: Philosophy</td>
<td>PHL Philosophy</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Selected great books in the history of Western philosophy chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined within their respective historical frameworks and as an exercise in critical thinking.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>ART3120</td>
<td>Studies in Medieval Art</td>
<td>ART Art</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>CHM4680</td>
<td>Experimental Nanoscale</td>
<td>CHM Chemistry</td>
<td>LB</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>PLS4570</td>
<td>Pol. Developing Nations</td>
<td>PLS Political Science</td>
<td>SE</td>
<td>3</td>
<td>Seminar</td>
<td>Politics, economy, society and international relations of developing nations. Integrated Writing course.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>BMB4630</td>
<td>Principles of NMR</td>
<td>BMB Biochem &amp; Molecular Biology</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>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.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>MUS6360</td>
<td>Counterpoint</td>
<td>MUS Music</td>
<td>LE</td>
<td>3</td>
<td>Lecture</td>
<td>Exercises in species counterpoint, imitation and fugal devices. Analysis of examples from Renaissance to the 20th-century.</td>
<td></td>
<td>University</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Department</td>
<td>Credits</td>
<td>Description</td>
<td>Instructor</td>
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<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 hours lecture, 2 hours lab.</td>
<td>GR</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>
<td>UB</td>
<td></td>
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<tr>
<td>EE6400</td>
<td>Nanosci. and Nanotech</td>
<td>EE</td>
<td>3</td>
<td>Introduction to nanotechnology. Topics include introduction to quantum mechanics, fabrication, characterization, materials, electronic properties, optical properties, magnetic properties, devices, MEMS, NEMS.</td>
<td>GR</td>
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<tr>
<td>PLS3100</td>
<td>Quant Method Polysci</td>
<td>PLS</td>
<td>3</td>
<td>Uses of quantitative data with emphasis on current research applications in the social sciences. Analysis and interpretation of data.</td>
<td>LE</td>
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<tr>
<td>DAN1080</td>
<td>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>
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<tr>
<td>PHL3100</td>
<td>American Philosophy</td>
<td>PHL</td>
<td>3</td>
<td>A look at the American Pragmatist tradition from Peirce, James and Dewey to more recent American philosophers such as Quinn, Davidson, Putnam and Rorty.</td>
<td>LE</td>
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<tr>
<td>CEG4750</td>
<td>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>
<td>LE</td>
<td></td>
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<tr>
<td>ATH3210</td>
<td>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>
<td>LE</td>
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</tr>
<tr>
<td>MUE6990</td>
<td>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>
<td>LE</td>
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<tr>
<td>CHM6650</td>
<td>Chem/Microscopy w/ App</td>
<td>CHM</td>
<td>2</td>
<td>Examination of microscopy instrumentation and its applications to the study of surface and interface chemistry.</td>
<td>LE</td>
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<tr>
<td>ATH3310</td>
<td>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>
<td>LB</td>
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<tr>
<td>BIEE6010</td>
<td>Ethics in Engineering</td>
<td>BIE</td>
<td>3</td>
<td>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.</td>
<td>LE</td>
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<tr>
<td>IT2050</td>
<td>Presentation Skills</td>
<td>IT</td>
<td>3</td>
<td>Professional speaking and electronic presentation skills.</td>
<td>LE</td>
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<tr>
<td>MTH2330</td>
<td>Differential Equations</td>
<td>MTH</td>
<td>3</td>
<td>Elementary first order equations, linear equations, existence and uniqueness, phase line and plane, linear systems, Laplace transform, and applications.</td>
<td>LE</td>
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<tr>
<td>URS7090</td>
<td>MPA Thesis</td>
<td>URS</td>
<td>1</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>
<td>IS</td>
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<tr>
<td>SPS8080</td>
<td>Practice Tutorial</td>
<td>PSI</td>
<td>1</td>
<td>Exposure to a variety of clinical case materials using a vertical team format.</td>
<td>LE</td>
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</tr>
<tr>
<td>SPN5810</td>
<td>Applied Elem Spin Inst</td>
<td>SPN</td>
<td>3</td>
<td>Assistance for elementary course instructors in conducting classes.</td>
<td>LE</td>
<td></td>
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</tr>
<tr>
<td>BID4700L</td>
<td>General Entomology Lab</td>
<td>BIO</td>
<td>0</td>
<td>Required laboratory for BIO 4700.</td>
<td>LB</td>
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<tr>
<td>CRT1000</td>
<td>Intro to Corrections</td>
<td>CRT</td>
<td>1</td>
<td>Trends and developments in all elements of a modern correctional system for the treatment of juvenile and adult offenders.</td>
<td>LE</td>
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<tr>
<td>BMS9570</td>
<td>Computed Tomography</td>
<td>BMS</td>
<td>1</td>
<td>Principles of generating images from projections. Discussion of specific problems like brain hardening, scatter, metal artifacts, etc. Focus on quantitative imaging in medical applications.</td>
<td>LE</td>
<td></td>
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<tr>
<td>BMS8030</td>
<td>Pathogenic Microbiology</td>
<td>BMS</td>
<td>4</td>
<td>(Also listed as BME 7270.) Microorganisms pathogenic for humans and animals using the organ systems 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.</td>
<td>LE</td>
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<tr>
<td>CHM7630</td>
<td>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 discussed with emphasis in column technology, inlet systems and detection devices.</td>
<td>LE</td>
<td></td>
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<tr>
<td>MUS2510</td>
<td>Musicianship III</td>
<td>MUS</td>
<td>1</td>
<td>Continuation of MUS 1520.</td>
<td>LE</td>
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<tr>
<td>EDL7770</td>
<td>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>
<td>IN</td>
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</tr>
<tr>
<td>KNH1240B</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.</td>
<td>LB</td>
<td></td>
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</tr>
<tr>
<td>KNH1060B</td>
<td>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>
<td>LB</td>
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<tr>
<td>ENG3420</td>
<td>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>
<td>LE</td>
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</tr>
<tr>
<td>ESS880</td>
<td>Internship Option</td>
<td>ES</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>
<td>IN</td>
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<tr>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Units</td>
<td>Instructor(s)</td>
<td>Description</td>
<td>Method(s)</td>
<td>Grade</td>
<td>Notes</td>
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<tr>
<td>TH4200</td>
<td>Applied Theatre Tech II</td>
<td>2</td>
<td>3600</td>
<td>TH Theatre</td>
<td>Advanced study in technical execution. Emphasis on daily operation of theatre production facilities and shops. Participation in all major department productions required.</td>
<td>Lecture</td>
<td>LB</td>
<td>Lab</td>
<td></td>
</tr>
<tr>
<td>BMST7480</td>
<td>Rehab Eng Intro Clinical</td>
<td>3</td>
<td>7480</td>
<td>BMS Biomedical Sciences</td>
<td>Introduces clinical practices and interdisciplinary services provided to individuals with disabilities receiving services from various rehabilitation service delivery systems. Focuses on testing, evaluation, and training in multiple disability specialty areas.</td>
<td>Lecture</td>
<td>GR</td>
<td>GE</td>
<td></td>
</tr>
<tr>
<td>ABS7240</td>
<td>Social Problems ABS Applied Behavioral Science</td>
<td>3</td>
<td>7240</td>
<td>ABS</td>
<td>Analyzes how social problems are identified, legitimated and addressed in contemporary society. Considers the impact of social structure on generating social problems and the role of social movements in constructing and resolving social problems.</td>
<td>Lecture</td>
<td>GE</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>EGB6940</td>
<td>Internship</td>
<td>1</td>
<td>6940</td>
<td>EGR Engineering</td>
<td>Graduate internship.</td>
<td>Internship</td>
<td>GR</td>
<td>IN</td>
<td></td>
</tr>
<tr>
<td>ECE3300</td>
<td>Intro Child Development ECE Education - Early Childhood</td>
<td>3</td>
<td>3300</td>
<td>ECE</td>
<td>The physical, cognitive, language, social and emotional development (typical and atypical) of children birth through age eight.</td>
<td>Lecture</td>
<td>UG</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>ART2090</td>
<td>2D Foundations ART Art</td>
<td>3</td>
<td>2090</td>
<td>ART</td>
<td>Basics of visual organization including repetition, rhythm, progression, and harmony. Identification and use of two-dimensional visual elements of line, shape, texture, and color properties and relationships.</td>
<td>Lecture</td>
<td>UB</td>
<td>Lab</td>
<td></td>
</tr>
<tr>
<td>ATR7700</td>
<td>Clinical Reasoning ATR Athletic Training</td>
<td>3</td>
<td>7700</td>
<td>ATR</td>
<td>Case study approach emphasizing the critical appraisal of health-related research within the athletic training profession. Students will demonstrate critical and reflective thinking as future health care clinicians who provide evidence-based care.</td>
<td>Lecture</td>
<td>GR</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>ENG7350</td>
<td>Study of World Englishs ENG English</td>
<td>3</td>
<td>7350</td>
<td>ENG</td>
<td>Reading, research, reports, and discussion on topics dealing with the spread of World Englishes. Emphasis placed on studying the various forms English is taking throughout the world and the importance of English in international communication.</td>
<td>Seminar</td>
<td>GR</td>
<td>SE</td>
<td></td>
</tr>
<tr>
<td>EDL8760</td>
<td>Supervising Instr &amp; Prov EDL Educational Leadership</td>
<td>3</td>
<td>8760</td>
<td>EDL</td>
<td>The course content focuses on supervising and assessing curriculum, instruction, and personnel.</td>
<td>Lecture/Lab Combination</td>
<td>GR</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>PLS4430</td>
<td>Campaigns and Elections PLS Political Science</td>
<td>3</td>
<td>4430</td>
<td>PLS</td>
<td>American political electoral institutions and processes, and campaigns. Emphasis on readings, discussion, and research. Integrated Writing course.</td>
<td>Lecture</td>
<td>UG</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>CHM5350L</td>
<td>Instr Analysis Lab CHM Chemistry</td>
<td>3</td>
<td>5350L</td>
<td>CHM</td>
<td>Introduction to experimental instrumental analysis. Practical experience in the operation of chemical instrumentation; emphasizes applications of the material presented in CHM 5350.</td>
<td>Lecture</td>
<td>GR</td>
<td>LB</td>
<td></td>
</tr>
<tr>
<td>ED56500</td>
<td>Spec Studies in Spec Ed EDS Education - Special Education</td>
<td>0.5</td>
<td>56500</td>
<td>EDS</td>
<td>Independent Study in a selected area of special education.</td>
<td>Lecture/Lab Combination</td>
<td>GR</td>
<td>IS</td>
<td></td>
</tr>
<tr>
<td>MIS7400</td>
<td>Outsourcing Partnerships MIS Management Information Systems</td>
<td>3</td>
<td>7400</td>
<td>MIS</td>
<td>This course introduces the fundamentals of outsourcing information technology and business process activities. The course incorporates the outsourcing lifecycle including identifying needs, mapping activities and processes, establishing metrics and service levels, crafting the statement of work and contract, identifying and selecting vendors, conducting negotiations and finalizing contracts, managing and governing outsourcing relationships, and monitoring services and vendor performance. This course has a fee that is non-refundable once the term begins.</td>
<td>Lecture/Lab Combination</td>
<td>GR</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>FR6910</td>
<td>History of French Film FR French</td>
<td>3</td>
<td>6910</td>
<td>FR</td>
<td>Survey of the main movements of French cinema from 1895 to the present, featuring works by directors such as Vigo, Renoir, Cocteau, Tati, Breton, Tati, Bracall, Truffaut, Resnais, Godard, Varda, etc. Taught in French.</td>
<td>Lecture</td>
<td>GR</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>ART4690</td>
<td>Adv Printing/Screening ART Art</td>
<td>3</td>
<td>4690</td>
<td>ART</td>
<td>Development of personalized concepts and individual aesthetic expression in printmaking. This course has a fee that is non-refundable once the term begins.</td>
<td>Lecture</td>
<td>UG</td>
<td>LB</td>
<td></td>
</tr>
<tr>
<td>DAN2120</td>
<td>Modern Dance II DAN Dance</td>
<td>3</td>
<td>2120</td>
<td>DAN</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>Lecture</td>
<td>UG</td>
<td>ST</td>
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<tr>
<td>HST4600</td>
<td>Early American History HST History</td>
<td>3</td>
<td>4600</td>
<td>HST</td>
<td>Examine Colonial, Revolutionary, and early Republic periods of American history. Topics vary. Integrated Writing course.</td>
<td>Lecture</td>
<td>UG</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>NUR7522</td>
<td>Pediatric CNS I NUR Nursing</td>
<td>5</td>
<td>7522</td>
<td>NUR</td>
<td>Application and analysis of advanced practice nursing concepts as a pediatric clinical nurse specialist in care of infants, children and adolescents and their families with acute and chronic health problems including acute physiologic exacerbations, symptom management and health restoration.</td>
<td>Lecture</td>
<td>GR</td>
<td>LE</td>
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</tr>
<tr>
<td>NUR7353</td>
<td>Instr Methods Nur Ed NUR Nursing</td>
<td>3</td>
<td>7353</td>
<td>NUR</td>
<td>Examination and application of the art, principles, theories, models, and strategies of teaching in nursing education. Role of nurse educator in classroom and clinical is explored.</td>
<td>Lecture</td>
<td>GR</td>
<td>LE</td>
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</tr>
<tr>
<td>EES6500</td>
<td>Carbonate Sed &amp; Petrolog EES Earth &amp; Environmental Sciences</td>
<td>4</td>
<td>6500</td>
<td>EES</td>
<td>An introduction to the origin, composition, and diagenesis of ancient and modern carbonate rocks. Topics include the macroscopic and microscopic identification of rock constituents and a survey of depositional models for modern carbonate environments, with an emphasis on Floridian and Bahamian carbonate facies. Four hours lecture/lab combination.</td>
<td>Lecture/Lab Combination</td>
<td>GR</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>EDS6195</td>
<td>Pract II Dyslexia MhdAltmnt EDS Education - Special Education</td>
<td>1</td>
<td>6195</td>
<td>EDS</td>
<td>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 field experience required.</td>
<td>Lecture/Lab Combination</td>
<td>GR</td>
<td>PB</td>
<td></td>
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<tr>
<td>CS1200</td>
<td>Intro to Disc Struct CS Computer Science</td>
<td>4</td>
<td>1200</td>
<td>CS</td>
<td>Introduction to discrete structures for computer science. Emphasis of basic mathematical notation and manipulation with discrete structures.</td>
<td>Lecture</td>
<td>UG</td>
<td>LE</td>
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<tr>
<td>PSI9420</td>
<td>Brief Psychotherapy PSI Professional Psychology</td>
<td>3</td>
<td>9420</td>
<td>PSI</td>
<td>Study and discussion of problem-focused, time-limited interventions. Study of concepts and techniques; use of programmatic and group methods.</td>
<td>Lecture</td>
<td>GR</td>
<td>LE</td>
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<tr>
<td>MUS3300L</td>
<td>Adv Choral Cond Lab I MUS Music</td>
<td>1</td>
<td>3300L</td>
<td>MUS</td>
<td>Builds upon the previously gained conducting experiences and knowledge.</td>
<td>Lecture/Lab Combination</td>
<td>UG</td>
<td>LL</td>
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<tr>
<td>EES4750</td>
<td>Biological Safety EES Earth &amp; Environmental Sciences</td>
<td>2</td>
<td>4750</td>
<td>EES</td>
<td>Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.</td>
<td>Lecture</td>
<td>UG</td>
<td>LE</td>
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<tr>
<td>Course</td>
<td>Title</td>
<td>Code</td>
<td>Credits</td>
<td>Department</td>
<td>Prerequisites</td>
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<tr>
<td>CHI3810</td>
<td>Elem-Chinese Instruct</td>
<td>CHI</td>
<td>3</td>
<td>Chinese</td>
<td>CHI 3020 Minimum Grade of B or (Undergraduate level CHI 3110 Minimum Grade of B and Undergraduate level CBI 3210 Minimum Grade of B)</td>
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<tr>
<td>GER3700</td>
<td>Internship in German</td>
<td>GER</td>
<td>3</td>
<td>German</td>
<td>GER 3110 Minimum Grade of D and Undergraduate level GER 3120 Minimum Grade of D and Undergraduate level GER 3210 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D</td>
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<tr>
<td>GER4150</td>
<td>German Lit 18th Cent</td>
<td>GER</td>
<td>3</td>
<td>German</td>
<td>GER 3110 Minimum Grade of D or Undergraduate level GER 3210 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</td>
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<tr>
<td>PSY2510</td>
<td>Stereotyping &amp; Prejudice</td>
<td>PSY</td>
<td>3</td>
<td>Psychology</td>
<td>Current topics in stereotyping and prejudice. Lectures are organized around discussions, videos, demonstrations, and experimental findings.</td>
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<tr>
<td>URS4230</td>
<td>Public Budgeting</td>
<td>URS</td>
<td>3</td>
<td>Urban Affairs</td>
<td>Local fiscal institutions and analytical tools for designing and evaluating fiscal policies. Restores financial reporting and accounting, the municipal bond market, pension systems, state and local taxes, user charges, and intergovernmental relations.</td>
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<tr>
<td>MGT4820</td>
<td>Independent Readings</td>
<td>MGT</td>
<td>3</td>
<td>Management</td>
<td>Classic and/or contemporary readings in management or international business.</td>
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<tr>
<td>GEO6000</td>
<td>Climate Meteorology</td>
<td>GEO</td>
<td>3</td>
<td>Geography</td>
<td>This is a basic course in meteorology that covers clouds, humidity, precipitation, winds, fronts, forecasting, and climate. The desired outcome is to understand the complex processes that lead to severe weather and climate change.</td>
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<tr>
<td>CEG9900</td>
<td>Selected Topics in CEG</td>
<td>CEG</td>
<td>3</td>
<td>Computer Engineering</td>
<td>Selected topics in computer engineering</td>
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<tr>
<td>MKT1500</td>
<td>Personal Marketing</td>
<td>MKT</td>
<td>3</td>
<td>Marketing</td>
<td>This course is designed to help students to understand the branding process and to apply it to themselves in order to achieve career success in whatever field they choose.</td>
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<tr>
<td>HST3600</td>
<td>Surveys of American Hist</td>
<td>HST</td>
<td>3</td>
<td>History</td>
<td>Studies in American history, for example a survey of a sub-field or a specific topic. Topics vary.</td>
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<tr>
<td>MLB4310</td>
<td>Basic Hematology</td>
<td>MLB</td>
<td>3</td>
<td>Medical Laboratory Science</td>
<td>Theory and 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.</td>
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<tr>
<td>CHM5330</td>
<td>Instrumental Analysis</td>
<td>CHM</td>
<td>3</td>
<td>Chemistry</td>
<td>Introduction to the theory and practice of modern chemical instrumentation. Topics include elementary electronics, spectrophotometry, atomic absorption, electrochemical techniques, chromatography, and other instrumental techniques.</td>
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<tr>
<td>CEG7040</td>
<td>VLSI Testing Design</td>
<td>CEG</td>
<td>3</td>
<td>Computer Engineering</td>
<td>Design for testability of VLSI circuits. Topics include importance of testing, conventional test methods, built-in test, CAD tools for evaluating testability, test pattern generators and compressors, and test for mixed-signal systems and systems-on-a-chip (SOC).</td>
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<tr>
<td>ENG6700</td>
<td>TEFL Theory and Culture</td>
<td>ENG</td>
<td>3</td>
<td>English</td>
<td>Builds awareness of cultural similarities and differences and addresses the impact of cultural and personal variables on English language learning in an international setting. Provides an understanding of the language acquisition process.</td>
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<tr>
<td>PL3750</td>
<td>Human Rights in USA</td>
<td>PLS</td>
<td>3</td>
<td>Political Science</td>
<td>Examines controversies over human rights in the United States and considers defining conceptions of human rights and debates over policy by focusing on a range of issues including immigration, pornography, gay rights, race relations, and poverty. Integrated Writing course.</td>
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<tr>
<td>PPH7910</td>
<td>Independent Study</td>
<td>PPH</td>
<td>3</td>
<td>Population &amp; Public Health</td>
<td>Independent study of topics in community health.</td>
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<tr>
<td>ED6280</td>
<td>Library Lessons Certification</td>
<td>ED</td>
<td>3</td>
<td>Education</td>
<td>Teachers certified/licensed in special education, ESL, or bilingual education apply Clay’s literacy processing model to elementary course instructors in conducting classes. Taught in Chinese.</td>
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<tr>
<td>BME4704</td>
<td>Advanced Medical Imaging</td>
<td>BME</td>
<td>4</td>
<td>Biomedical Engineering</td>
<td>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.</td>
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<tr>
<td>PL6535</td>
<td>Sem - Political Corrupt</td>
<td>PLS</td>
<td>3</td>
<td>Political Science</td>
<td>Analysis of political corruption, including campaigns and elections, graft, the executive branch, congressional ethics, corruption in law enforcement, organized crime, and abuse of authority.</td>
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<tr>
<td>ACC4390</td>
<td>AdvancedGovmt/Not Prof Acc</td>
<td>ACC</td>
<td>3</td>
<td>Accountancy</td>
<td>Accounting for business consolidations. In addition, the course will introduce fund accounting along with accounting for not-for-profit and governmental entities.</td>
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<tr>
<td>LDR7050</td>
<td>Moral Leadership</td>
<td>LDR</td>
<td>3</td>
<td>Leadership</td>
<td>This course focuses on the foundations of moral leadership including ethics, social justice and authenticity.</td>
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<tr>
<td>MTH7920</td>
<td>Special Problems</td>
<td>MTH</td>
<td>3</td>
<td>Mathematics</td>
<td>Examines a specific problem in advanced mathematics.</td>
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<tr>
<td>HST6970</td>
<td>Special Topics in Hist</td>
<td>HST</td>
<td>3</td>
<td>History</td>
<td>Examines special topics in the advanced study of history. Topics vary.</td>
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<td>Course Code</td>
<td>Title</td>
<td>Department</td>
<td>Credits</td>
<td>Lecture</td>
<td>UG</td>
<td>GR</td>
<td>LE</td>
<td>Description</td>
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<tr>
<td>MTE6100</td>
<td>Math Modeling Behav Sci</td>
<td>MTE</td>
<td>4</td>
<td>Lecture</td>
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<td>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.</td>
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<tr>
<td>MGT6770</td>
<td>Train,Develop/Performance Mgt</td>
<td>MGT</td>
<td>3</td>
<td>Lecture</td>
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<td>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.</td>
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<tr>
<td>STT3630</td>
<td>3630 Engineering Statistics</td>
<td>STT</td>
<td>3</td>
<td>Lecture</td>
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<td>Introduction to probability, distributions, and statistical methods; using calculus to develop the necessary theory. Use of computer software package (e.g., Matlab) for statistical analysis.</td>
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<tr>
<td>LEP0150</td>
<td>List &amp; Speak - Level 1</td>
<td>LEP</td>
<td>0</td>
<td>Lecture</td>
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<td>Listening, speaking and pronunciation for beginning level ESL students. This course has a fee that is non-refundable once the term begins.</td>
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<tr>
<td>MGT6680</td>
<td>Special Topics in Mgt</td>
<td>MGT</td>
<td>1</td>
<td>Seminar</td>
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<td>Seminar in a management topic of current and timely interest. Topics and prerequisites vary.</td>
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<tr>
<td>HPR2000</td>
<td>Educational Psychology</td>
<td>HPR</td>
<td>3</td>
<td>Lecture</td>
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<td>Understand how people learn, how to motivate, and assess pre-k-12 students based on theoretical principles from field of educational psychology.</td>
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<td>EDS5490</td>
<td>Professional Seminar IS</td>
<td>EDS</td>
<td>4</td>
<td>Lecture</td>
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<td>Seminar accompanying IS Student Teaching focusing on pedagogical content knowledge and the completion of and submission of the edTPA and final portfolio.</td>
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<tr>
<td>ES7650</td>
<td>Comp Tools/Strategies Environmental Sciences</td>
<td>ES</td>
<td>4</td>
<td>Lecture</td>
<td></td>
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<td>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 &quot;laboratory&quot; experience with key software and strategies.</td>
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<tr>
<td>WGS5200</td>
<td>Women Multi. Persp.</td>
<td>WGS</td>
<td>3</td>
<td>Lecture</td>
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<td>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.</td>
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</table>
| EC7240      | 7240 Debrief of Ec Thought                | EC         | 3       | Lecture |    |    |    | Historical development of economic thought and philosophies. <br> Department Managed Prerequisite(s): Graduate level EC 5090 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.  |
| ENG4200     | 4200 Studies in British Lit               | ENG        | 3       | Lecture |    |    |    | 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.                                                                                                             |
| FAS3870     | 3870 Practicum II                         | FAS        | 1       | Lecture |    |    |    | 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.  |
| CEG4410     | 4410 Mobile Computing                     | CEG        | 3       | Lecture |    |    |    | Study networking protocol and system design in mobile computing. Focus on concepts, architecture, design, and performance evaluation of mobile computing protocols, principles, and applications, including: wireless TCP, Mobile IP, 802.11, agent techniques, etc.                                                                                                                        |
| MUA4220     | 4220 Applied Music                        | MUA        | 2       | Lecture |    |    |    | Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.  
**Department Managed Prerequisite(s):** Undergraduate level FAS 2870 Minimum Grade of D.  |
| IT2350      | 2350 Branding Experience                  | IT         | 2       | Lecture |    |    |    | Techniques and strategies used in brand creation applied to graphic design.                                                                                                                                                                                                                                                                                                                                                       |
| PHY3510     | 3510 Advanced Physics Lab II              | PHY        | 2       | Lecture |    |    |    | 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.                                                                                             |
| CHM4350L    | 4350L Instrumental Analy Lab              | CHM        | 3       | Lecture |    |    |    | Instrumental techniques and analysis giving practical experience in the operation of chemical instrumentation.                                                                                                                                                                                                                                                                                                                   |
| BME6601     | 6601 Ethics in Engineering                | BME        | 1       | Lecture |    |    |    | 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.                                                                                                    |
| KHN1160     | 1160 Dance: Latin                        | KHN        | 1       | Lecture |    |    |    | Fundamental skills and knowledge of Dance: Latin. Competency-based approach. Course may accommodate disabled students when appropriate.                                                                                                                                                                                                                                                                                      |
| EE7410      | 7410 Power Electronics I                  | EE         | 3       | Lecture |    |    |    | 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.  |
| ATH4900     | 4900 Ind Research in Anthro               | ATH        | 3       | Lecture |    |    |    | Independent research and reading under the supervision of a faculty member in the department of anthropology.                                                                                                                                                                                                                                                                                                                     |
| PTX5400     | 5400 Xenonapharmacology                   | PTX        | 3       | Lecture |    |    |    | The aim of this course is to give an overview of xenonapharmacology that includes basic principles of drug action in neurons, a description of major neurotransmitter systems in the brain and 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.  
**Department Managed Prerequisite(s):** Undergraduate level EE 5090 Minimum Grade of D.  |
| EC4120      | 4120 Economic Forecasting                 | EC         | 3       | Lecture |    |    |    | Techniques and theories used in forecasting. Stresses practical methods and problems.                                                                                                                                                                                                                                                                                                                                                   |
| MUA2410     | 2410 Applied Music                        | MUA        | 4       | Lecture |    |    |    | Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.  
**Department Managed Prerequisite(s):** Undergraduate level FAS 2870 Minimum Grade of D.  |
| ATH3730     | 3730 Methods in Hum Ontology              | ATH        | 3       | Lecture |    |    |    | This course will explore the anthropological methodology of human osteology, or the study of human skeletal materials.                                                                                                                                                                                                                                                                                                                  |
| MTH4920     | 4920 Mathematics Seminar                  | MTH        | 3       | Lecture |    |    |    | Detailed study of a single mathematics topic chosen by the student with the approval of the instructor. Integrated Writing course.                                                                                                                                                                                                                                                                                          |
Fall 2020 IHE7712 7712 Disc Ev Mod & Analy IHE 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 data using statistical techniques. <b>GR Department Managed Prerequisite(s): Graduate level IHE 6120 Minimum Grade of C-;</b> C<b>GR</b> LE Lecture

Fall 2020 MTE6420 6420 Prob Stat Mid Schl Tchr 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> LL Lecture/Lab Combination

Fall 2020 BMW5712 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> LE Lecture

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/performace of dance work in Festival Playhouse and writing a thesis. UG ST Studio

Fall 2020 SOC4081 4081 Independent Study SOC Sociology 1 Research project in an area of specialized interest in sociology. Integrated Writing course. UG 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> LL Lecture/Lab Combination

Fall 2020 DEV9920 0920 Found of Col Rgd & Wgt 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. Graded pass/unsatisfactory. UG 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) UG 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>GR Department Managed Prerequisite(s): Undergraduate level GER 1010 Minimum Grade of C-;</b> UG LE Lecture

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 interpretative issues will be addressed as well as musical styles and interpretation. UG 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 community. <b>GR</b> LE Lecture

Fall 2020 MIT260 7260 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 microbial pathogens, as well as mechanisms of immunopathology, and on the characteristics and molecular biology of virus pathogens. <b>GR LR Lecture/Recitation Combination</b>

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>GR Department Managed Prerequisite(s): Undergraduate level ENG 4730 Minimum Grade of C-;</b> UG LE Lecture

Fall 2020 PTX4950 4950 Honors Pharmacology Res PTX Pharmacology/Toxicology 1 Experimental learning for honors program students interested in basic biomedical research. Tutorial with laboratory. UG 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. UG 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. UG 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, generalizad 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>GR Department Managed Prerequisite(s): Graduate level STT 6670 Minimum Grade of C-;</b> UG LE Lecture

Fall 2020 BIB4430L 4430L Vertebrate Histology Lab BIB Biology 0 Required laboratory for BIB 4430. UG 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>GR</b> LE Lecture

Fall 2020 PSI9920 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. GR PR Practicum


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. GR 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. GR LE Lecture
Fall 2020
NUR3200 3200  Health Wellness Family  NUR  Nursing  3  Foundation course in culture and family nursing. Emphasizes concepts, models, theories and strategies consistent with a philosophy of health in the context of human diversity for individuals and families. Integrated Writing course.

UG  LE  Lecture

Fall 2020
EE7550 7550  Trust Integ Ckt Design  EE  Electrical Engineering  3  This course will cover topics in "Trust for Integrated Circuit Design." 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. (Pre: Department Managed Prerequisite(s): Graduate level EE 6620 Minimum Grade of D and Graduate level EE 4620, Minimum Grade of D) (or Undergraduate level EE 4620 Minimum Grade of D and Undergraduate level EE 4620, Minimum Grade of D) (or Undergraduate level CEG 3210 Minimum Grade of D).

GR  LE  Lecture

Fall 2020
PHIL150 3150  Philosophy of Language  PHL  Philosophy  3  Major issues such as sense and reference, theories of meaning and truth, language games, syntax, language and thought. Integrated Writing course.

UG  LE  Lecture

Fall 2020
M&I6990 6990  Special Problems in M&I  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
BMS8650 8650  Intro Neurophysiology  BMS  Biomedical Sciences  3  (Also listed as P&N 6420.) Physiological mechanisms that subserve the functions of the nervous system. Topics include the biophysics of neuronal information, intercellular communications, motor control, sensory systems, and development neurobiology.

GR  LE  Lecture

Fall 2020
FIN4130 4130  Financial Derivatives  FIN  Finance  3  Provide students with an understanding of futures, options, and swaps.

UG  LE  Lecture

Fall 2020
PHYS710 3710  Analytical Mechanics  PHYS  Physics  3  Problems in the dynamics of motion in one, two and three dimensions. Mathematical and computational approaches are applied to systems with non-constant forces, central forces, and oscillations.

UG  LE  Lecture

Fall 2020
BIO4060 4060  Evolutionary Biology  BIO  Biology  3  Critically examines modern evolutionary research, with focus on recent theoretical and empirical developments. Topics include speciation and speciation definitions, phylogeny, phylogenetic biology, molecular evolution, adaptation and natural selection, and sexual selection. Integrated Writing course.

UG  LE  Lecture

Fall 2020
ATR4850 4850  Surgical Applications  ATR  Athletic Training  3  Surgical procedures, rehabilitation protocols and research as they pertain to athletic training. Prepares Athletic Training students to counsel regarding patient treatment options and to research current trends in medical procedures. Integrated Writing course.

UG  LL  Lecture/Lab Combination

Fall 2020
HST7950 7950  Thesis  HST  History  1  Independent work leading to a master's thesis.

GR  IS  Independent Study

Fall 2020
BME6550L 6550L  Bioinstrumentation Lab  BME  Biomedical Engineering  0  Required laboratory for BME 6550.

GR  LB  Lab

Fall 2020
REL3140 3140  Religion & Pol in Amer  REL  Religion  3  Examination of both the historical and the contemporary relation between religion and politics in the United States, with special reference to the legal principle of church/state separation. Integrated Writing course.

UG  LE  Lecture

Fall 2020
SLI2800 2800  Interpreting  SLI  Sign Language Interpreting  3  Fundamentals of the ability to interpret between the source and target languages of ASL and spoken English beginning with consecutive interpreting and advancing to simultaneous interpreting. Continued work in Demand Control Schema.

UG  LE  Lecture

Fall 2020
ED6920 6920  Prof Sem: AYA/MA  ED  Education  1  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.

GR  SE  Seminar

Fall 2020
TH3840 3840  Intro to Dramatic Wrtg  TH  Theatre  3  Theory and practice of techniques of dramatic writing emphasizing writing of original plays.

UG  LE  Lecture

Fall 2020
NUR3100 3100  Patho Across Lifespan  NUR  Nursing  3  Focuses on physiological, pathological change, clinical manifestations, and diagnostic criteria of a variety of disease processes across the lifespan that are fundamental to the development of critical reasoning and planning of nursing care. (3 didactic hrs)

UG  LE  Lecture

Fall 2020
MKT4700 4700  Marketing Challenges  MKT  Marketing  3  Application of marketing tools to local businesses. Students teams use marketing tools (e.g., SWOT, target market, competitive analysis, positioning, 4Ps, milestones, metrics) to develop recommendations to address core issues in the challenge.

UG  LE  Lecture

Fall 2020
PSY9070 9070  Multilevel Modeling Pys  PSY  Psychology  4  At the conclusion of the course, students will have a working knowledge of the basics of multilevel modeling. They will be able to estimate and interpret basic two-level models, growth models, and multilevel mediation models using specialized software. Students will be able to critically examine recent using multilevel modeling. (Pre: Department Managed Prerequisite(s): Graduate level PSY 7010 Minimum Grade of D and Graduate level PSY 7020 Minimum Grade of D)

GR  LE  Lecture

Fall 2020
CHM2120 2120  Organic Chemistry II  CHM  Chemistry  3  Principles, theories, and applications of the chemistry of carbon compounds.

UG  LE  Lecture

Fall 2020
CEG6324 6324  Dig Integ Ckt 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 lab portion of the course. Topics include registers, counters, memory devices, register-level design, microcomputer system organization. Students must show competency in the design of digital systems.

GR  LE  Lecture

Fall 2020
MUE930 930  University Men's Chorale  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.

GR  LL  Lecture/Lab Combination

Fall 2020
REL790 5790  Topics in Greco-Rom Relks  REL  Religion  3  Examination of selected topics related to the practice of religion in the Greco-Roman world.

GR  LE  Lecture

Fall 2020
NUR7103 7103  Applied Pharm Lifespan  NUR  Nursing  3  Focuses on prescriptive knowledge of pharmacologic agents used in treatment of common primary health care problems, stable chronic disease states and acute care diseases across the lifespan. Emphasis on indications, mechanisms of action, drug interactions, side effects, and client education.

GR  LE  Lecture

Fall 2020
P&N8000 8000  Physiology Seminar  P&N  Physiology & Neuroscience  1  Two seminars (Physiology Seminar I and II) run concurrent with the Department of Neuroscience; Cell Biology and Physiology Seminar Series.

GR  SE  Seminar
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL3400</td>
<td>Topics in Asian Religion</td>
</tr>
<tr>
<td>PSI9210</td>
<td>Diversity Integration II</td>
</tr>
<tr>
<td>BMS9090</td>
<td>Continuing Registration</td>
</tr>
<tr>
<td>HST2110</td>
<td>American History to 1877</td>
</tr>
<tr>
<td>BBO3120</td>
<td>General Microbiology</td>
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<tr>
<td>BBO3450</td>
<td>Concepts Bio I ECE/MCE</td>
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<tr>
<td>MIL4020</td>
<td>Ldrship in Complex World</td>
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<tr>
<td>HED3400</td>
<td>Health Behaviors</td>
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<tr>
<td>FAS2002</td>
<td>Intro Food Science Lab</td>
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<tr>
<td>PHY7800</td>
<td>Plasma Physics</td>
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<tr>
<td>SOC5620</td>
<td>Race and Ethnicity</td>
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<tr>
<td>ABS7600</td>
<td>Graduate Seminar in ABS</td>
</tr>
<tr>
<td>MUS7990</td>
<td>Thesis in Music</td>
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<tr>
<td>URS4950</td>
<td>Urban Affairs Internship</td>
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<tr>
<td>CEG4120</td>
<td>Managing Softw Dev Proc</td>
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<tr>
<td>MTH8990</td>
<td>Graduate Research</td>
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<tr>
<td>NUR7115</td>
<td>Independent Study</td>
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<tr>
<td>GER4340</td>
<td>Thomas Mann</td>
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<tr>
<td>ECO5550</td>
<td>Teach Econ Use Child Lit</td>
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<tr>
<td>BME7521</td>
<td>Advanced Biortransport</td>
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<tr>
<td>BOI0105</td>
<td>Biology of Food</td>
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<tr>
<td>CTE4820</td>
<td>Laws &amp; Regs in Educ</td>
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<tr>
<td>PHY3500</td>
<td>Advanced Physics Lab I</td>
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<tr>
<td>WGS4200</td>
<td>Women Inf Perspective</td>
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<tr>
<td>KIN1120</td>
<td>Canoeing</td>
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<tr>
<td>GEO6410</td>
<td>Cartography</td>
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<tr>
<th>Details</th>
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<tbody>
<tr>
<td>Fall 2020</td>
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<td>Fall 2020</td>
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</tbody>
</table>
Fall 2020  ART3580  3580  Intermed Photo Practices  ART  Art  3  Exploration of expanded black and white photographic materials and photography techniques. Investigation of aesthetic possibilities of the media. Development of personal concepts and aesthetic expression in photography. Course has a fee that is non-refundable once the term begins. Undergraduate level ART 2070 Minimum Grade of D

Fall 2020  MUE3480  6480  Univ 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  EC4190  4190  International Economics  EC  Economics  3  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 crises.

Fall 2020  PHL3030  3030  Modern Philosophy  PHL  Philosophy  3  History of philosophy from Descartes to Kant. Topics vary. Integrated Writing course.

Fall 2020  MUA3990  3990  Junior Recital  MUA  Music: Applied Music  1  A solo concert performance on the major instrument during the junior year.

Fall 2020  ANT7150  7150  Adv Human Embryology  ANT  Anatomy  3  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.

Fall 2020  BIO4600  4600  Population Genetics  BIO  Biology  4  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.

Fall 2020  BIO6810  6810  Bioinformatic Algorithms  BIO  Biology  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 applications toward solving specific computational problems in molecular genetics.

Fall 2020  ART3130  3130  Studies Renaissance Art  ART  Art  3  General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course.

Fall 2020  ENG4950  4950  Internship in Teaching  ENG  English  3  Supervised college-level teaching or tutoring.

Fall 2020  SOC5110  5110  Sociology of Religion  SOC  Sociology  3  Explores the role of religion in society. Religion is viewed not only as a fundamental institution within our social structure, but also as a defining system (a set of symbols, values, myths, and rituals) and a belonging system (a set of social networks and emotional bonds). Examines 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.

Fall 2020  BMS7750  7750  Pathogenic Mechanisms  BMS  Biomedical Sciences  4  (Also listed as M&L 6750.) 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 hosts. 4.0-Credit hours

Fall 2020  ED6160  6160  Practicum: Amt for Ed  ED  Education  1  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.

Fall 2020  ED6440  6440  Mass & Assessment in ED  ED  Education  3  The design and integration of traditional and alternative assessment in the classroom.

Fall 2020  BMB2100  2100  Intro to Biochemistry  BMB  Biochem & Molecular Biology  2  Basic concepts in Biochemistry.

Fall 2020  MBA7600  7600  Marketing Strategy  MBA  MBA  3  Course emphasizes key elements of marketing and their importance to organizing 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-centric marketing.

Fall 2020  OLS3040  3040  Leading Teams  OL  Organizational Leadership  3  Strategies for leading effective teams, improving teamwork, and building collaboration toward commonly shared goals.

Fall 2020  MLB4611  4611  Serology Lab  MLB  Medical Laboratory Science  0.5  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. This course has a fee that is non-refundable once the term begins.

Fall 2020  ME3940  3940  Mech & Mat EGR Intern I  ME  Mechanical and Materials Engineering  3  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 36 hours a week for a total of no less than 270 hours is required.

Fall 2020  PSI9940  9940  Applied Teaching Pract  PSI  Professional Psychology  1  Students are given hands-on experience in assisting faculty in teaching a course or seminar. Issues dealt with are those common to most teaching settings: development of a syllabus, choice of teaching methods, grading/evaluation and obtaining feedback from students.

Fall 2020  DAN3410  3410  Choreography I  DAN  Dance  2  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.

Fall 2020  ED4530  4530  AYA ISS Methods  ED  Education  3  Provides developing professional educators instruction in current trends, issues and methods in adolescence and young adult social studies.

Fall 2020  EC4100  4100  Math Models for Econ  EC  Economics  3  Application of mathematical tools in the formulation of economic theory.

Fall 2020  ISE4020  4020  ISE Design II  ISE  Industrial & Systems Engr  3  Segment two of the ISE senior design sequence. Practicum results in the final engineering design and completion of the design project. Integrated Writing course.

Fall 2020  ED6550  6550  AYA Int Pr II: Std T IM  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 Mathematics.

Fall 2020  ECC3190  3190  Institutional Economics  EC  Economics  3  Focuses on 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Instructor(s)</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES6340</td>
<td>Mapping Methods</td>
<td>6340</td>
<td></td>
<td>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 &amp; compass traverse mapping, triangulation, bearing and reverse bearings, measurement of lines and plates.</td>
<td>FR, LL, Lecture/Lab</td>
</tr>
<tr>
<td>ME4820</td>
<td>Corrosion</td>
<td>4820</td>
<td></td>
<td>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.</td>
<td>GR, LL, Lecture/Lab</td>
</tr>
<tr>
<td>PSY6990</td>
<td>Meta-Analysis</td>
<td>9090</td>
<td></td>
<td>Introduction to the use of meta-analytic methods in psychology.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>KKN1680B</td>
<td>Swimming: Advanced</td>
<td>1680B</td>
<td></td>
<td>Advanced level of skills and knowledge in Swimming: Advanced. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UB, LE, Lab</td>
</tr>
<tr>
<td>FR4630</td>
<td>20th-Cent Lit: Drama</td>
<td>4630</td>
<td></td>
<td>Study of contemporary plays by playwrights such as Anouilh, Beckett, Cézaire, Duras, Genet, Ionesco and Sartre. Taught in French.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>CHM2101</td>
<td>Organic Chemistry I</td>
<td>2110</td>
<td></td>
<td>Principles, theories, and applications of the chemistry of carbon compounds.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>PSI9980</td>
<td>Ind/Org Psych Cap</td>
<td>9980</td>
<td></td>
<td>Communication-intensive seminar integrating knowledge on industrial/organizational psychology. Topics will vary.</td>
<td>GR, SE, Seminar</td>
</tr>
<tr>
<td>URS4970</td>
<td>Nonprofit Internship</td>
<td>4970</td>
<td></td>
<td>Senior-level internship in a local nonprofit agency.</td>
<td>GR, IN, Internship</td>
</tr>
<tr>
<td>HST4050</td>
<td>Medieval History</td>
<td>4050</td>
<td></td>
<td>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.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>PSY7990</td>
<td>Thesis Research</td>
<td>7990</td>
<td></td>
<td>Research conducted for the M.S. thesis. Research must be approved by supervisory committee, submitted in writing and defended by public oral examination.</td>
<td>GR, IS, Independent Study</td>
</tr>
<tr>
<td>KKN1570A</td>
<td>Soccer: Outdoor</td>
<td>1570A</td>
<td></td>
<td>Fundamental skills and knowledge of Soccer: Outdoor. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>GR, LB, Lab</td>
</tr>
<tr>
<td>PLS4010</td>
<td>Dev &amp; Con Am Civ Lb</td>
<td>4010</td>
<td></td>
<td>Birth and development of fundamental liberty in American society. Views of political philosophers, important historical events, and altered the role of the court. Integrated Writing course.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>PHL4010</td>
<td>Major Philosophers</td>
<td>4010</td>
<td></td>
<td>In-depth study of the works of a major philosopher. Topics vary.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>ABS9900</td>
<td>ABS Graduate Project</td>
<td>9900</td>
<td></td>
<td>Practical application of knowledge gained through course applied to a capstone experience.</td>
<td>GR, IS, Independent Study</td>
</tr>
<tr>
<td>ECE7600</td>
<td>Integ Lit &amp; Express Art</td>
<td>7600</td>
<td></td>
<td>Planning literacy experiences that incorporate visual arts, poetry, music, and creative movement.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>ENG5030</td>
<td>TA Practicum III</td>
<td>5030</td>
<td></td>
<td>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.</td>
<td>GR, PR, Practicum</td>
</tr>
<tr>
<td>FIN4860</td>
<td>Internship in FIN Serv.</td>
<td>4860</td>
<td></td>
<td>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 exams) or other defined schedule.</td>
<td>GR, IN, Internship</td>
</tr>
<tr>
<td>BME7310</td>
<td>Adv Ergon</td>
<td>7310</td>
<td></td>
<td>Design of experiments and exploratory 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 worker compensation costs.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>PSI9980I</td>
<td>Prof Dissertation</td>
<td>9980I</td>
<td></td>
<td>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.</td>
<td>GR, IS, Independent Study</td>
</tr>
<tr>
<td>HST5120</td>
<td>Studies Russian/Soviet</td>
<td>5120</td>
<td></td>
<td>Studies in Russian or Soviet history, for example a survey of a sub-field. Topics vary.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>TEG2950</td>
<td>Automation Systems</td>
<td>2950</td>
<td></td>
<td>Self-paced learning module applying theory to application in a working automated system. Students will construct or modify an existing system and deal with new applications and tasks added to the system operation.</td>
<td>GR, LL, Lecture/Lab</td>
</tr>
<tr>
<td>ASM3730</td>
<td>Aerospace Toxicology</td>
<td>3730</td>
<td></td>
<td>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 of theory and the practical methods of current operational Aerospace Medicine issues encountered by today's Flight Surgeons.</td>
<td>GR, SE, Seminar</td>
</tr>
<tr>
<td>ME3020</td>
<td>Engg Prog with Matlab</td>
<td>3020</td>
<td></td>
<td>Introduces a broad range of programming concepts using Matlab. Covers concepts such as functions, loops, logic control, graphical user interface generation, computer IO, and communication between disparate languages.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>ART3180</td>
<td>Art Theory and Criticism</td>
<td>3180</td>
<td></td>
<td>Historical surveys and intensive studies in art theory and criticism.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>REL4970</td>
<td>Sensor Project</td>
<td>4970</td>
<td></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.</td>
<td>GR, IS, Independent Study</td>
</tr>
<tr>
<td>SOC3800</td>
<td>Population and Society</td>
<td>3800</td>
<td></td>
<td>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.</td>
<td>GR, LE, Lecture</td>
</tr>
<tr>
<td>PHY1050L</td>
<td>How Things Work Lab</td>
<td>1050L</td>
<td></td>
<td>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.</td>
<td>GR, LB, Lab</td>
</tr>
</tbody>
</table>
Fall 2020
ME7690  7690  Vibe Test & Hllh Mon  ME  Mechanical and Materials Engineering  3  Advanced theoretical and practical aspects of vibration testing including: signal analysis, windowing, transducers, exciters, modal identification techniques, rotor dynamics, and vibration control. Includes extensive independent lab study. <b>GR</b> Department Managed Prerequisites(s): Graduate level ME 6210 Minimum Grade of D.<n>LE Lecture

Fall 2020
RELS310  5810  Anthropology of Religion  REL  Religion  3  (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. <b>GR</b> Department Managed Prerequisites(s): Graduate level REL 2350 Minimum Grade of D.<n>LE Lecture

Fall 2020
MGT4990  4990  Strategy Domestic Int'l  MGT  Management  3  Issues in international business to build an interdisciplinary strategic perspective on management in a global environment. <b>UG</b> LE Lecture

Fall 2020
CNL4600  4640  Crisis Counseling  CNL  Counseling  3  Background, theory, practice, and needs of crisis intervention within the helping professions. Explores a variety of crisis intervention models and community resources. <b>UG</b> LE Lecture

Fall 2020
ACC4780  4780  Hir: Ind Study in ACC  ACC  Accountancy  2  Research in accounting for fulfillment of the Honors Program project requirement. <b>UG</b> IS Independent Study

Fall 2020
EGR8950  8950  Dissertation  EGR  Engineering  1  Graded pass/unsatisfactory. <b>GR</b> IS Independent Study

Fall 2020
PSY2430  2430  Psy Issues in Aging  PSY  Psychology  3  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, fragility, and disability, with a 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. <b>UG</b> LE Lecture

Fall 2020
HED3320  3320  Diverse Needs in Health  HED  Health Education  3  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. <b>UG</b> LE Lecture

Fall 2020
BBIO6200  6200  Current Lit in Biology  BBIO  Biology  3  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. <b>GR</b> LE Lecture

Fall 2020
CHI3100  3100  Advanced Chinese I  CHI  Chinese  3  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.  <b>GR</b> Department Managed Prerequisites(s): Undergraduate level CHI 2020 Minimum Grade of D or AP Chinese Language & Culture C+<n>UG Lecture/Lab Combination

Fall 2020
BIS6712L  6712L  Sim & Stock Models Lab  BIS  Industrial & Hum Fas Engr  0  Required laboratory for BIS 6712.  <b>GR</b> LB Lab

Fall 2020
KNH1450  1450  Rape Def Strat Basic  KNH  Kiniesiology & Health  1  Fundamental skills and knowledge of Rape Defense Strategies: Basic. Competency-based approach. Course may accommodate disabled students when appropriate.  <b>UG</b> LB Lab

Fall 2020
ISE4711  4711  Optimization Methods  ISE  Industrial & Systems Engr  4  Introductory course on deterministic models in operation research and their applications in Industrial and Systems Engineering. Students will formulate appropriate models, and obtain and interpret results in the context of ISL problems. <b>UG</b> LE Lecture

Fall 2020
URS6390  6390  Issues-Nonprofit Admin  URS  Urban Affairs  3  Exploration of issues and topics related to the administration of nonprofit organizations. <b>GR</b> LE Lecture

Fall 2020
CEG4550  4550  Op Sys Concepts & Usage  CEG  Computer Engineering  4  Provides introduction to Linux and Windows operating systems and system administration, Cores files and directories, ownership and sharing, programs and processes, system calls, libraries, dynamic linking, command line shells, scripting, regular expressions and secure network protocols.  <b>GR</b> Department Managed Prerequisites(s): Undergraduate level CS 1161 Minimum Grade of D or Undergraduate level CS 1181 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D<.<n>UG Lecture

Fall 2020
MUS4550  4550  Vocal Literature I  MUS  Music  2  Survey of vocal literature from the 18th through the 20th century emphasizing German liedert, French melodies, and English and American art songs.  <b>UG</b> LE Lecture

Fall 2020
RHIB3660  3660  Wellness for Helpers  RHIB  Rehabilitation  3  Importance of wellness and stress management to maximize their career potential in the social service field. Physiological, psychological, and social elements associated with stress. Various approaches to enhance overall wellness and lessen life stress. <b>UG</b> LE Lecture

Fall 2020
RELS3100  3100  Topics in Judaism  REL  Religion  3  Topics vary.  <b>UG</b> LE Lecture

Fall 2020
FAS2730  2730  Nutrient Management  FAS  Food and Agricultural Systems  3  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.  <b>UG</b> LL Lecture/Lab Combination

Fall 2020
MKT4600  4600  Advanced Retailing  MKT  Marketing  3  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 key topics as retail formats, multichannel retailing, store layout and location, and the retail and services communications mix.  <b>UG</b> LE Lecture

Fall 2020
MBLB4510  4510  Basic Clinical Chemistry  MLB  Medical Laboratory Science  2  Theory and application of human biochemistry and principles of chemistry techniques used in the analysis of blood and other body fluids. <b>UG</b> LE Lecture

Fall 2020
PLS5400  5400  Law and Society  PLS  Political Science  3  Examines the judicial process, civil litigation (torts, contracts, family law) and pertinent constitutional issues.  <b>GR</b> LE Lecture

Fall 2020
MKT7950  7950  Mkt Analytics: Big Data  MKT  Marketing  3  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.  <b>GR</b> Department Managed Prerequisites(s): Graduate level MBA 7600 Minimum Grade of C and Graduate level MBA 7800 Minimum Grade of C. (MBA 7800 can be taken concurrently). <b>GR</b> IS Independent Study

Fall 2020
BMB8990  8990  Biochemistry Research  BMB  Biochem & Molecular Biology  0.5  Original research in a BMB faculty laboratory. Variable credit hours. 5 - 15.  <b>UG</b> IS Independent Study

Fall 2020
GER3220  3220  Adv. Writing in German  GER  German  3  Oral and written composition in German; translations from English into German.  <b>GR</b> LE Lecture

Fall 2020
PSY9570  9570  Trauma Theor Asmt Interv  PSI  Professional Psychology  3  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.  <b>GR</b> LE Lecture
Seminar

LEP0210

BIO

NUR2400C

Presents an overview of the major theoretical approaches to counseling. Key concepts, therapeutic processes, and

Fall 2020

BMS9590

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

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

SL

Seminar

Fall 2020

TH4330

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

CNI6010

CNI Theory and Practice

CNI

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

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.

UG

LE

Lecture

Fall 2020

REL5770

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

Wildtrals 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

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

LEP0100

Writing - Level 2

LEP

LEAP

0

Writing for lower-level students. Development of writing skills in support of general education and major course requirements.

UG

LE

Lecture

Fall 2020

MGT0730

Sem 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

SE

Seminar

Fall 2020

ISE4712

Sim & Stock Models

ISE

Industrial & Systems Engr

4

Study of quantitative techniques to analyze and predict system performance. Topics include queuing models, system simulation, model validation, data collection, quantitative analysis of system performance, and system design evaluation.

UG

LE

Lecture

Fall 2020

EDT4490

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

ME5310

Thermodynamics 1

ME

Mechanical and Materials Engr

3

This course covers 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.

GR

LE

Lecture

Fall 2020

URS0900

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

Intro Clin Nursing Clinical

NUR

Nursing

0

Required clinical for NUR 2400.

UG

CL

Clinical

Fall 2020

ART1470

Adv Printking 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.

UG

LB

Lab

Fall 2020

EDS6400

Child w/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/intense needs required.

GR

LE

Lecture

Fall 2020

BIO4530L

Respiratory Physiology Lab

BIO

Biology

0

Required laboratory for BIO 4530.

UG

LB

Lab

Fall 2020

MIS7600

Bus Data Visualizztn

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

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 warehouse.

UG

LE

Lecture

Fall 2020

PPH7210

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
Fall 2020 PTX7005 7005 MD/MS Capstone PTX Pharmacology/Toxicology 1 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. GR LE Lecture

Fall 2020 EES3460 4360 Environ Field Techniques EES Earth & Environmental Sciences 2 Principles of monitoring environmental water quality, including lake, river, groundwater, and related issues. Field experiences, include monitoring systems design, well design for various monitoring purposes, sampling protocol, sample preservation, and monitoring and sampling at field sites. UG LL Lecture/Lab Combination

Fall 2020 ME4210L 4210L Mechanical Vibration Lab ME Mechanical and Materials Engr 0 Required laboratory for ME 4210. UG LB Lab

Fall 2020 TTD6450 6450 Intro Transition TTD Transition to Work 3 Overview of the impact of Career Technical Education and Special Education processes on the transition of students with exceptionalities from high school to adulthood, particularly in the area of employment. GR LE Lecture

Fall 2020 MUS7180 7180 Music and the Humanities MUS Music 3 This course explores relationships between music and the other arts, especially visual art and literature. GR LE Lecture

Fall 2020 HST4550 4150 Studies in Modern Europe HST History 3 Examines a variety of countries, topics and periods in European history from the Enlightenment to the present. Topics vary. GR LE Lecture

Fall 2020 ICN1000 1000 Special Topics ICN Kinesiology & Health 1 Activity course for a variety of content areas. UB LB Lab

Fall 2020 ED4750 4750 MA Prof Seminar ED Education 3 Seminar accompanying Multi-Age Student Teaching focusing on pedagogical content knowledge and completion of and submission of the edPFA. GE SE Seminar

Fall 2020 ASM3782 7872 Space Medicine II ASM Aerospace Medicine 2 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. GR SE Seminar

Fall 2020 GER4100 4100 Baroque German Lit. GER German 3 Representatives German authors of the period <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 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. GR LE Lecture

Fall 2020 ISM0101 8010 Research & Career Dev. 2 ISM Interdisc. Appl. Sci. and Math 3 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 research proposal. GR LE Lecture

Fall 2020 BME4350 4350 Comp Neuroeng & Hlth App BME Biomedical Engineering 3 Principles and application of computational methods and technologies in 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 ME6820 6820 Corrosion ME Mechanical and Materials Engr 3 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]<br>[Department Managed Prerequisite(s): Undergraduate level ME 3550 Minimum Grade of D or Graduate level ME 3550 Minimum Grade of D]. GR LE Lecture

Fall 2020 ME7300 7300 Advanced Fluid Dynamics ME Mechanical and Materials Engr 3 Theory and application of conservation equations for fluid mechanics. Develops boundary layer equations for laminar and turbulent flows. Topics include incompressible, viscous, supercritical, and subsonic flows. [Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D or Graduate level ME 3550 Minimum Grade of D]. GR LE Lecture

Fall 2020 CHH3510 3510 Physical Chemistry I CHH Chemistry 3 Thermodynamics applied to chemical systems: solids, liquids, gases, and mixtures thereof. Kinetic rates and mechanisms of chemical reactions in the gas phase and in solutions. UG LE Lecture

Fall 2020 DAN2070 2070 Beginning Tap Dance I DAN Dance 1 Group class introduces students to fundamentals of tap dance technique. UG ST Studio

Fall 2020 MUS2810 2810 Jazz Improvisation MUS Music 1 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. UG LE Lecture

Fall 2020 ESI7120 7120 Env Bio Genes Org & Eco ESI Environmental Sciences 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. GR LE Lecture

Fall 2020 ENG1610 3610 Technical Writing ENG English 3 Concepts and skills used in scientific and technical writing. UG LE Lecture

Fall 2020 CTE4830 4830 Integrating Academ CTE CTE Career and Technical Education 3 Per state requirements, CTE educators must know how to incorporate academic standards into every day lessons. Includes techniques on integrating core academics into technical programming and instruction. UG LE Lecture

Fall 2020 CRT1010 1010 Intro Community Corr CRT Corrections 3 Origins, organization and trends in current traditional and non-traditional (e.g., electronic monitoring, house arrest, day-treatment, boot-camp, fines) community corrections. UG LE Lecture

Fall 2020 SCM9703 7930 SC Ops and Control SCM Supply Chain Management 3 Advanced topics in manufacturing and service operations, including process planning and design; inventory systems, scheduling and queuing. This course has a fee that is non-refundable once the term begins. GR LE Lecture

Fall 2020 ET2150 2150 Design Integration IT Information Technology 4 Skills needed to integrate essential software into projects that conform to design principles and client expectations. UG LE Lecture

Fall 2020 MLB4711 4711 Basic Diag Micro Lab MLB Medical Laboratory Science 1.5 Study of media composition and selection, biochemical techniques used to identify bacteria and related physiology, antibiotic susceptibility of bacteria, and diagnosis and identification of parasites. This course has a fee that is non-refundable once the term begins. UG LB Lab

Fall 2020 MUS3240 3240 Instrumental Conducting MUS Music 2 Practical applications of conducting, teaching, and rehearsing in actual conducting situations with live instrumental performers. UG LE Lecture

Fall 2020 CHM5990 5990 Special Problems in Chem CHM Chemistry 1

Fall 2020 HST3000 3000 Intro Hist Analysis HST History 3 Explores the historian's craft by studying different historical approaches and genres. Integrated Writing course. UG LE Lecture

Fall 2020 SOC8830 6830 Sex, Drugs, & HIV SOC Sociology 3 Study of biology, social determinants, and social-psychological correlates of HIV/AIDS. Examines sexual behavior, substance abuse, stress, stressful life events and stigma associated with HIV/AIDS. GR LE Lecture
This page contains a list of courses and their descriptions. Here is a plain text representation:

- **Fall 2020**
  - **ECE5030 5030** ECEG Effective Sci Instr
  - **ECE** Education - Early Childhood
  - **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** Lecture
  - **LE** Lecture

- **Fall 2020**
  - **BOE6470 6470** Pop & Comm Ecology
  - **BIO** Biology
  - **Derivation and use of deterministic and stochastic population models, methods of analyzing community structure, composition, and dynamics.**
  - **GR** Lecture
  - **LE** Lecture

- **Fall 2020**
  - **SW7170 7170** SW Capstone
  - **SW** Social Work
  - **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.**
  - **GR** Lecture

- **Fall 2020**
  - **NUR2100L 2100L** Hlth Pro & Assess Adults Lab
  - **NUR** Nursing
  - **Required laboratory for NUR 2100.**
  - **UG** LB Lab

- **Fall 2020**
  - **PHL4810 4810** Independent Study
  - **PHIL** Philosophy
  - **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**
  - **HST3650 3650** Ohio History
  - **HIST** History
  - **Survey of Ohio history from its Native-American origins to Ohio in the Post-Industrial Age.**
  - **UG** LE Lecture

- **Fall 2020**
  - **URS4490 4490** Issue in City&Commnty Devlpment
  - **URS** Urban Affairs
  - **3 Explores issues that impact city and community development as well as the impact of development. Topics include pollution, international development, housing and transportation.**
  - **UG** LE Lecture

- **Fall 2020**
  - **SPN2120 2120** InterSpell: LawEnfergSocWl
  - **SPN** Spanish
  - **Continued study of intermediate Spanish with emphasis on law enforcement and social work contexts. Taught in Spanish.**
  - **UG** LE Lecture

- **Fall 2020**
  - **EES6160 6610** Near-Surface Geophysics
  - **EES** Earth & Environmental Sciences
  - **3 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.**
  - **GR** LL Lecture/Lab Combination

- **Fall 2020**
  - **BMB4020 4020** Research Perspectives
  - **BMB** Biochem & Molecular Biology
  - **1 Acquaints students with the research being carried out by faculty in the Biochemistry and Molecular Biology program.**
  - **UG** LE Lecture

- **Fall 2020**
  - **DEV0415 0415** Fundn Elc Math Crxpt for Tchr
  - **DEV** 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-requisite for those students who do not have at least an MPL of 23.**
  - **UG** LE Lecture

- **Fall 2020**
  - **ART4120 4120** Adv Studs Medieval Art
  - **ART** Art
  - **3 Intensive studies of the period, major movements, and artists of the time.**
  - **UG** LE Lecture

- **Fall 2020**
  - **ED4850 4850** AYA Int 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 grades 7-12 in Integrated Language Arts, Social Studies, Science, or Mathematics. Students conducting research may present their work in progress.**
  - **UG** IN Internship

- **Fall 2020**
  - **PLS4660 4660** Politics in South Asia
  - **PLS** Political Science
  - **3 Political institutions and political, economic, security and international relations issues in India, Pakistan, Sri Lanka, Bangladesh and Nepal. Integrated Writing course.**
  - **UG** SE Seminar

- **Fall 2020**
  - **PSY6270 6270** Cop Neuro-Capstone
  - **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**
  - **RHB7000 7000** Foundations of Rehab
  - **RHB** Rehabilitation
  - **3 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.**
  - **GR** LE Lecture

- **Fall 2020**
  - **EES6260 6260** EES Seminar
  - **EES** Earth & Environmental Sciences
  - **0.5 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.**
  - **GR** SE Seminar

- **Fall 2020**
  - **ENG2110 2110** Research and Argument
  - **ENG** English
  - **3 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.**
  - **UG** LE Lecture

- **Fall 2020**
  - **MIS2150 2150** IS Apps Development
  - **MIS** Management Information Systems
  - **3 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.**
  - **UG** LL Lecture/Lab Combination

- **Fall 2020**
  - **GEO4990 4900** Honors Project in Geo
  - **GEO** Geography
  - **3 Independent advanced work on an approved honors project.**
  - **UG** IS Independent Study

- **Fall 2020**
  - **MUA4120 4120** 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**
  - **REL5100 5100** Topics in Judaism
  - **REL** Religion
  - **3 Topics vary.**
  - **GR** LE Lecture

- **Fall 2020**
  - **FIN6220 6220** Analysis Corp. Fin. Info
  - **FIN** Finance
  - **3 This course analyzes corporate financial information from an investment analyst perspective.**
  - **GR** LE Lecture

- **Fall 2020**
  - **ED4410 4410** MCE Internship II:StuTchr
  - **ED** Education
  - **9 Teacher candidates are assigned to a school for intensive teaching experience in grades 4-9 under the direct supervision of an experienced classroom teacher.**
  - **UG** IN Internship

- **Fall 2020**
  - **KNE1080 1080** Basketball
  - **KNE** Kinesiology & Health
  - **1 Fundamental skills and knowledge of Basketball. Competency-based approach. Course may accommodate disabled students when appropriate.**
  - **UG** LB Lab

- **Fall 2020**
  - **CHM1050L 1050L** Chemistry: Living Things Lab
  - **CHM** Chemistry
  - **0 Required laboratory for CHM 1050.**
  - **UG** LB Lab
Fall 2020  ATR2620  2620  Emergency Medical Response  ATR  Athletic Training  4  Recognition and management of athletic emergencies and relationships of allied health care providers.  UG  LL  Lecture/Lab Combination

Fall 2020  PHY6600  6600  Intro to Quantum Mechanics I  PHY  Physics  3  Introduction to the ideas and methods of the quantum mechanics. Applications to selected one- and three-dimensional problems with emphasis on atomic structure. Analysis of quantum mechanical spin and angular momentum.  GR  LE  Lecture

Fall 2020  EDLD9500  9500  Dist Lea/Lic Prep: Midpt  EDL  Educational Leadership  1  Candidates explore various educational leadership topics/issue and their relationship to praxis.  GR  SE  Seminar

Fall 2020  SOC3510  3510  Individual and Society  SOC  Sociology  3  Focused upon the interaction of individual and collective realities, this course explores theoretical arguments and extract empirical research concerning how society emerges from the interactions of individuals and how individual consciousness emerges from society.  GR  LE  Lecture

Fall 2020  MUE4940  4940  University Women's Choral Ensemble  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  ISE4300  4300  Law Enforcement Academy curriculum. Intermediate policing problems and procedures. Examines  UG  LE  Lecture

Fall 2020  MKT3600  3600  Retailing & E-Commerce  MKT  Marketing  3  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.  GR  LE  Lecture

Fall 2020  MUE4490  4490  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, 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.  UG  LL  Lecture/Lab Combination

Fall 2020  SOC3620  3620  Race and Ethnicity  SOC  Sociology  3  Study of intergroup, racial, and ethnic group relations including the processes and consequences of conflict, prejudice, and discrimination.  GR  LE  Lecture

Fall 2020  PSY4030  4030  Practicum in Applied Psy  PSY  Psychology  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.  GR  PR  Practicum

Fall 2020  PHIL4970  4970  Senior Project  PHIL  Philosophy  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.  UG  IS  Independent Study

Fall 2020  ISE4300  4300  Fund of Human Fact Egr  ISE  Industrial & Systems Engr  3  Broad overview of the interdisciplinary area of human factors engineering. Students will be exposed to the analysis and design of systems and the tools used by humans in order to improve performance. Topics include task analysis, human perception and performance, interface design, and human-machine interaction.  UG  LE  Lecture

Fall 2020  EE4540  4540  VLSI Design  EE  Electrical Engineering  3  Introduction to VLSI system and subsystem design, CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processing and design rules, chip planning and layout, basic system subcomponents (addresses, subtrators, ALU's, and others), system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI.  UG  LE  Lecture

Fall 2020  ECE3730  3730  Div in EC Classrooms  ECE  Education - Early Childhood  3  Examination of sources of individual differences within the early childhood classrooms: culture/ethnicity, race, language, sex, learning style/ability, and gender.  GR  LE  Lecture

Fall 2020  ENG3750  3750  Sem Cultural Periods  ENG  English  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).<br/>-<br/>Department Managed Prerequisite(s):<br/>Graduate level ENG 7010 Minimum Grade of C or Graduate level ENG 7020 Minimum Grade of C or Graduate level ENG 7030 Minimum Grade of C or Graduate level HUM 7000 Minimum Grade of C)<br/>-<br/>GR  SE  Seminar

Fall 2020  PSY3630L  3630L  Condition & Learning Mil Lab  PSY  Psychology  0  Required laboratory for PSY 3630.  UG  LB  Lab

Fall 2020  PSY5610  5610  Conditioning & Learning  PSY  Psychology  3  Introduction to experimental findings and contemporary theories of conditioning, learning, and motivation.  GR  LE  Lecture

Fall 2020  NUR7106  7106  Adv Fam Nag  NUR  Nursing  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 multi disciplinary approaches.  GR  LE  Lecture

Fall 2020  PLS4050  4050  Political Polar in 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. Integrated Writing course.  GR  LE  Lecture

Fall 2020  EES3680  3680  Hazardous Waste  EES  Earth & Environmental Sciences  3  Managing hazardous materials and emergency response in the workplace, at spills, or at hazardous waste sites. Satisfies OSHA training requirement 29 CFR 1910.120.  UG  LE  Lecture

Fall 2020  PSY9140  9140  Educational Assessment  PSI  Professional Psychology  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.  GR  LE  Lecture

Fall 2020  LE1140  1140  Police Academy 5  LE  Law Enforcement  3  Ohio Police Training Academy curriculum. Intermediate policing problems and procedures. Examines procedures in traffic and criminal investigations, including report writing. Requires admission to Grand Lake Law Enforcement Academy.  UG  LL  Lecture/Lab Combination

Fall 2020  NUR7550  7550  Peds Minor Ill/Injuries  NUR  Nursing  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.  GR  LE  Lecture

Fall 2020  EDLD9330  9330  Instructional Leadership  EDL  Educational Leadership  3  Provides opportunities to explore the topic of instruction in depth and to apply knowledge and strategies to the process of instructional improvement.  GR  LE  Lecture

Fall 2020  PLSS260  2620  Black Women and Politics  PLS  Political Science  3  Examines the role of race and gender in the study of the political behavior of black women in the US, Africa and the diaspora.  GR  LE  Lecture

Fall 2020  IT2020  2020  Photoshop II  IT  Information Technology  3  Advanced tools and techniques; topics include color harmonies, color value and saturation, color studies, various illusions created by contrast, value and saturation.<br/>-<br/>Department Managed Prerequisite(s): Undergraduate level IT 2010 Minimum Grade of D)<br/>-<br/>UG  LL  Lecture/Lab Combination
This course is designed to be an intensive investigation into measurement models used in psychology. The main goals of this course are to (a) 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.

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Fall 2020  ATR7200  Emergent & Acute Care  ATR  Athletic Training  3  Preparation for, recognition of, and management of emergency medical conditions utilizing current evidence-based clinical best practices.  GR  LE  Lecture
Fall 2020  SPN2220  Inter Sp. II 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.  UG  LE  Lecture
Fall 2020  EDT9102  Insit Design Digital Lrng  EDT  Educational Technology  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 courses design focus on the big ideas.  GR  LE  Lecture
Fall 2020  ENG6940  TESOL. Internship  ENG  English  3  Supervision of students teaching English to speakers of other languages.  GR  IN  Internship
Fall 2020  HST7130  Seminar US Foreign Rel  HST  History  3  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.  GR  SE  Seminar
Fall 2020  EC6440  Prob in Ec Development  EC  Economics  3  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.  GR  LE  Lecture
Fall 2020  WGS6200  Women Intl Persp.  WGS  Women, Gender, and Sexuality  3  Issues, approaches and topics in women and gender studies, with focus on race, ethnic, cultural, and other differences among women outside of the U.S. Titles and topics vary.  GR  LE  Lecture
Fall 2020  EGR1010R  1010R Instr Math for Egr Apps Rec  EGR  Engineering  0  Required recitation for EGR 1010. Integrated Writing course.  UG  RE  Recitation
Fall 2020  SOM1718  718 Year 2 Medical Study Part Time  SOM  School of Medicine  1  
Fall 2020  EE3000  3000 Solid State EE Materials  EE  Electrical Engineering  3  Essential physical parameters of solids: 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 functionality in ferroelectrics or electron mobility in semiconductors).  UG  LE  Lecture
Fall 2020  EGR4800  4800 UG Special Topics in EE  EE  Electrical Engineering  1  Undergraduate special topics in electrical engineering. Topics vary.  UG  LE  Lecture
Fall 2020  CHM6640H  6640 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, terahertz spectroscopy, electrochemical analyses etc; and 3) computational modeling of nanoscale physical phenomena.  GR  PKG  Combination
Fall 2020  MGT7260  7260 Staffing  MGT  Management  3  Coverage of the staffing process. Topics include human resource planning, recruitment, selection, measurement in staffing, job analysis, decision making, and retention management.  GR  LE  Lecture
Fall 2020  ED6660  6660 AYA: Int Sciece C&M  ED  Education  3  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.  GR  LE  Lecture
Fall 2020  BMS6170  8170 Biological Safety  BMS  Biomedical Sciences  2  Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.  GR  LE  Lecture
Fall 2020  EE4460  4460 Microwave Egr II  EE  Electrical Engineering  3  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.  UG  LE  Lecture
Fall 2020  HST6220  6220 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.  GR  LE  Lecture
Fall 2020  BST7422  7422 Rehab Eng Systems II  BMS  Biomedical Sciences  3  Design and application of assistive devices used in rehabilitation of people with disability in various systems. Provides an understanding of the problems faced by people with disabilities, and the variety of possible solutions to these problems.  GR  LE  Lecture
Fall 2020  PSYW75  9075 Prediction Models  PSY  Psychology  4  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 use 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.  GR  LE  Lecture
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<tr>
<th>Course Code</th>
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<td>3</td>
<td>Machine Learning</td>
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</tbody>
</table>
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.aida Department Managed Prerequisite(s): Undergraduate level ISE 2211 Minimum Grade of D/-.000

Students will explore their values/bases 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.

This course provides a sex-positive, interdisciplinary, feminist approach to diverse sexualities (orientations, identities and behaviors), and influences on sexual well-being as well as foundational concepts in serving transgender and gender diverse populations. Students will explore their values/bases 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.

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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 Cmmn Aera  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  PHL4110  4110  Ethics Seminar  PHL  Philosophy  3  Ethical problem, theories, and methods. Topics vary. Integrated Writing course.  UG  SE  Seminar

Fall 2020  EES670  670  Coastal Processes  EES  Earth & Environmental Sciences  2  The course is primarily designed for in-service educators. It serves as an introduction to the shoreline and ocean system, and the range of possibilities for teaching inquiry-based science that this venue offers. 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  LB  Lab

Fall 2020  ED7810  7810  Literary Research 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  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  RHIB320  3280  Disability Justice  RHJ  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  EE5010  5010  Circuit Analysis I  EE  Electrical Engineering  3  The student will have the ability to apply Kirchhoff's laws, an understanding and ability to apply Thvenin 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.  GR  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  ME6350  6350  Mechanics Viscous Fluids  ME  Mechanical and Materials Eng  3  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 Graduate level ME 5350 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  PL6340  6340  Political Leadership  PLP  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  SLJ480  480  R&D Certification Prep  SLJ  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  HPR3030  3030  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  SOM7004  704  Year 3 Medical Study  SOM  School of Medicine  24  MD  CL  Clinical

Fall 2020  DAG5020  5020  DAGSI Registration  DAGI  DAGSI  0.5  DAGSI projects culminating in a seminar paper. Titles vary.  GR  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  EGR7030  7030  Computation Egr 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  MIS790  7900  Info Secr & Assurance  MIS  Management Information Systems  3  This survey 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.  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).  GR  LE  Lecture

Fall 2020  ED6040  6040  Word St & Phon: Int Spec  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 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
<p>| Fall 2020 | CHM4200 4200 | Inorganic Chemistry I | CHM Chemistry | 3 | Principles and concepts of inorganic chemistry including the periodic table, atomic structure, chemical bonding, coordination compounds, and an introduction to group theory. | UG | LE | Lecture |
| Fall 2020 | BIO6060 6060 | Evolutionary Biology | BIO Biology | 3 | 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. | GR | LE | Lecture |
| Fall 2020 | EDT2800 2800 | Educational Technology | EDT Educational Technology | 3 | Use of computer-based technology in K-12 instruction. Focus is on selecting courseware and integrating it into lessons. | UG | LE | Lecture |
| Fall 2020 | NUR8680 8680 | Data Driven Bus &amp; Orgs | NUR Nursing | 3 | This course explores the foundations of population health informatics as a basis for assessment, planning, and implementation of evidence-based practices to improve health care systems. | GR | LE | Lecture |
| Fall 2020 | ART2060 2060 | Drawing I | ART Art | 3 | Introduction to materials, techniques, and concepts of drawing. This course has a fee that is non-refundable once the term begins. | UG | LB | Lab |
| Fall 2020 | GER4050 4050 | Early German Lit | GER German | 3 | German literature from the earliest times to the Reformation. 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. ( &lt;b &gt; ) | UG | LE | Lecture |
| Fall 2020 | ISE4410 4410 | Tech Based Ventures | ISE Industrial &amp; Systems 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. | UG | LE | Lecture |
| Fall 2020 | CS7920 7920 | Independent Study in CS | CS Computer Science | 1 | Independent study in computer science. | GR | IS | Independent Study |
| Fall 2020 | DAN1240 1240 | Jazz for the Actor I | DAN Dance | 1 | 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. | UG | ST | Studio |
| Fall 2020 | EES1450 1450 | Concepts EES I ECE/MCE | EES Earth &amp; Environmental Sciences | 4 | 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 to provide the students with ideas for teaching their own classes. Students will develop lesson plans on several topics. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | EDL8350 8350 | Data Driven Decisions | EDL Educational Leadership | 1 | 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 | CNL6670 6670 | Internship | CNL Counseling | 1 | 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 or Graduate level CNL 6050 Minimum Grades of B and Graduate level CNL 6220 Minimum Grade of B and Graduate level CNL 6220 Minimum Grade of B or Graduate level CNL 7220 Minimum Grade 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 6200 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. ( &lt;b &gt; ) | GR | IN | Internship |
| Fall 2020 | AES2500 2500 | GMC Lead Lab | AES Aerospace Studies | 0 | 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. | UG | LB | Lab |
| Fall 2020 | CEG4900 4900 | Special Topics | CEG Computer Engineering | 1 | Special topics in computer engineering. | UG | LE | Lecture |
| Fall 2020 | EC4450 4450 | 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. | UG | LE | Lecture |
| Fall 2020 | FR3980 3980 | Studies in SeleC Subj | FR French | 1 | Individual research project approved and supervised by a full-time faculty member. Taught in French. Department Managed Prerequisite(s): Undergraduate level FR 3110 Minimum Grade of D or Undergraduate level FR 3120 Minimum Grade of D or Undergraduate level FR 3210 Minimum Grade of D or Undergraduate level FR 3220 Minimum Grade of D. ( &lt;b &gt; ) | UG | LE | Lecture |
| Fall 2020 | PHIL3140 3140 | Theories of Knowledge | PHIL Philosophy | 3 | 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; Pettit and Williamson: Integrated Writing course. | GR | LE | Lecture |
| Fall 2020 | FR1020 1020 | Beginning French II | FR French | 3 | Communicative introduction to French structures and vocabulary and to French and Francophone cultures. Practice in speaking, listening, reading and writing. Taught in French. Department Managed Prerequisite(s): Undergraduate level FR 1010 Minimum Grade of C-. ( &lt;b &gt; ) | UG | LE | Lecture |
| Fall 2020 | MUS6020 6020 | Intro Res In Music Ed | MUS Music | 3 | 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. | GR | LE | Lecture |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>School</th>
<th>Type</th>
<th>Level</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO6800</td>
<td>Conservation Biology</td>
<td>BIO</td>
<td>LE</td>
<td>UG</td>
<td>3</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 zoology, genetics, statistics, botany, zoogeography, 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 makers 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.</td>
</tr>
<tr>
<td>MUS3560</td>
<td>Keyboard Musicanship</td>
<td>MUS</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>Provides vocal performance education majors with functional and technical keyboard skills.</td>
</tr>
<tr>
<td>SLI4930</td>
<td>Practicum II</td>
<td>SLI</td>
<td>PR</td>
<td>UG</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>MBA7500</td>
<td>Leadership and Ethics</td>
<td>MBA</td>
<td>LE</td>
<td>GR</td>
<td>3</td>
<td>To understand and develop leadership skills as well as ethical behavior and the importance of both within an organization.</td>
</tr>
<tr>
<td>PHY7300</td>
<td>Solid State - Structure</td>
<td>PHY</td>
<td>LE</td>
<td>GR</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CEG4324</td>
<td>Digital Circuit Design</td>
<td>CEG</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>Digital design with behavioral level VHDL, application of VHDL to the design, analysis, and synthesis of digital integrated circuits; field programable 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.</td>
</tr>
<tr>
<td>CS8730</td>
<td>Machine Learning</td>
<td>CS</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>Reviews the development of machine learning paradigms. Introductory topics include parameter adjustment methods, signature tables, and the application of genetic algorithms to artificial intelligence problems domains. (b) Department Managed Prerequisite(s): Undergraduate level CS 4850 Minimum Grade of D or Graduate level CS 6850 Minimum Grade of D or 6850 Minimum Grade of D or</td>
</tr>
<tr>
<td>DO9050L</td>
<td>Adv Rearch Methods I</td>
<td>DOS</td>
<td>LE</td>
<td>LB</td>
<td>3</td>
<td>Individual and group study of ongoing social sciences research.</td>
</tr>
<tr>
<td>ME4750L</td>
<td>Mat. Characterization Lab</td>
<td>ME</td>
<td>LE</td>
<td>LB</td>
<td>0</td>
<td>Required laboratory for ME 4750.</td>
</tr>
<tr>
<td>NUR7306</td>
<td>Info Tech Nrg &amp; Hll Sys</td>
<td>NUR</td>
<td>LE</td>
<td>GR</td>
<td>2</td>
<td>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.</td>
</tr>
<tr>
<td>KNH1460B</td>
<td>Rape Def Strat: Intermed</td>
<td>KNH</td>
<td>LE</td>
<td>UG</td>
<td>1</td>
<td>Intermediate level of skills and knowledge in Rape Defense Strategies: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>ED3650</td>
<td>Music Ed Methods Field Exp</td>
<td>ED</td>
<td>LE</td>
<td>IN</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>ENG6760</td>
<td>TESOL Assessment</td>
<td>ENG</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>RHB030</td>
<td>Employ People Disability</td>
<td>RHB</td>
<td>LE</td>
<td>GR</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>AN340</td>
<td>Biological Safety</td>
<td>ANT</td>
<td>LE</td>
<td>GR</td>
<td>2</td>
<td>Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.</td>
</tr>
<tr>
<td>ED8830</td>
<td>Theoretic Views Ed Psych</td>
<td>ED</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>Focuses on the principal theoretical frameworks that guide learning and motivation as well as the measurement and assessment processes in educational settings.</td>
</tr>
<tr>
<td>CEG4130</td>
<td>Pers Softw Dev Process</td>
<td>CEG</td>
<td>LE</td>
<td>UG</td>
<td>3</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.</td>
</tr>
<tr>
<td>PL56825</td>
<td>Washington DC Internship</td>
<td>PLS</td>
<td>LE</td>
<td>GR</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>TH2500</td>
<td>Script Analysis</td>
<td>TH</td>
<td>LE</td>
<td>IN</td>
<td>3</td>
<td>Introduces students to a variety of methods for examining theatrical texts.</td>
</tr>
<tr>
<td>ISE4990</td>
<td>Indep Stdy in ISE II</td>
<td>ISE</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>Undergraduate independent studies in advanced Industrial and Systems Engineering. Topics vary.</td>
</tr>
<tr>
<td>FR6640</td>
<td>FR Canadian Lit &amp; Film</td>
<td>FR</td>
<td>LE</td>
<td>UG</td>
<td>3</td>
<td>French Canadian literature and film in its socio-historical context, with focus on works of Acadian and Quebecois poets, novelists and playwrights (such as Maillet, Tremblay, Thériault) and filmmakers (such as Forest, Chasson, Bélanger, Mitrani, Saia and Filiatrault). Taught in French. (b) Department Managed Prerequisite(s): Graduate level FR 5110 Minimum Grade of D or Graduate level FR 5120 Minimum Grade of D or Graduate level FR 5210 Minimum Grade of D or GR 5220 Minimum Grade of D or</td>
</tr>
<tr>
<td>Course Code</td>
<td>Credits</td>
<td>Title</td>
<td>Description</td>
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<tr>
<td>TH4360</td>
<td>4.5</td>
<td>Graphics II Rendering</td>
<td>Further development of skills used in creating theatrical renderings, costume plates and lighting sketches.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY3920</td>
<td>3.0</td>
<td>Behavioral Neurosci II</td>
<td>Learning and memory, reinforcement systems, ingestive behavior, sensory and motor systems, psychotherapy, and addictive processes.</td>
<td>GG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL4230</td>
<td>4.5</td>
<td>Clinical Pathology Spokane</td>
<td>Discussion of clinical findings through case studies. 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.</td>
<td>URG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC7100</td>
<td>7.5</td>
<td>Math Methods for Econ</td>
<td>Economics</td>
<td>GR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNH1180A</td>
<td>1.0</td>
<td>Dance: Swing</td>
<td>Provides undergraduate physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY1010</td>
<td>1.0</td>
<td>Undergrad Phy Seminar II</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSY8750</td>
<td>3.0</td>
<td>Job Attitudes</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY2000</td>
<td>2.0</td>
<td>Acting/Tech Practicum</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY7040</td>
<td>7.0</td>
<td>Philosophy of Physics</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TH2310</td>
<td>3.0</td>
<td>Scene Painting</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGR1980R</td>
<td>1.0</td>
<td>Special Topics in EGR Res</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW6950</td>
<td>3.0</td>
<td>SW Foundation Topics</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR3810</td>
<td>2.0</td>
<td>Dept Read for Grad Student</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ME6840</td>
<td>3.0</td>
<td>Mater Sci for Mech Design</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BME4960</td>
<td>4.5</td>
<td>Dept Honors Research BME</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW4750</td>
<td>3.0</td>
<td>Child Welfare I</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RH2010</td>
<td>3.0</td>
<td>Intro to Rehab Services</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS7070</td>
<td>4.0</td>
<td>Numerical Analysis II</td>
<td>Provides physics majors with an introduction to the course load, faculty, resources, and expectations associated with the Wright State University undergraduate physics program.</td>
<td>UG</td>
<td></td>
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</tr>
</tbody>
</table>
Fall 2020 CS6100 6100 Grad Research Prog Prac CS Computer Science 3 This course teaches the fundamentals of practical research concepts to prepare graduate students for developing simulations for computer science and computer engineering research. This class is a project-intensive boot camp for graduate students who come from non-ABET accredited programs, bachelor’s programs outside of computer science/computer engineering, or who otherwise need preparation in practical programming at the graduate level.
GR LL Lecture/Lab Combination

Fall 2020 CEG6550 6550 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 integrated projects to design a three-dimensional hierarchical model, manipulate, and view it. <br> b> Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D or Undergraduate level MTH 2530 Minimum Grade of D/<br>GR LE Lecture

Fall 2020 CEG6260 6260 Matrix Computations CEG Computer Engineering 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. <br> b> Department Managed Prerequisite(s): Undergraduate level MTH 2550 Minimum Grade of D and 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/<br>GR LE Lecture

Fall 2020 ED4090 4090 Lit Assess Intervention ED Education 3 Candidates will learn to use a range of literacy assessment instruments to assess student reading and writing performance and to determine best practices and interventions in order to meet student needs. UG LL Lecture/Lab Combination

Fall 2020 BMB4100 4100 Senior Reflection BMB Biochem & Molecular Biology 1 Preparing students to enter the workforce: Reflections on the BMB program and courses. Self-evaluations and a culminating senior project. This course is Integrated Writing. UG SI Seminar

Fall 2020 EES6560 6560 Groundwater Contam EES Earth & Environmental Sciences 3 Common anthropogenic contaminant distribution in the groundwater as investigated in recent decades. Emphasizes contaminant degradation mechanisms in detail by physical, chemical and microbial processes, which directly affects the mobility and fate of the contaminants in soil and water. GR LL Lecture/Lab Combination

Fall 2020 WGS2000 2000 Intro Women & Gender WGS Women, Gender, and Sexuality 3 Introduces students to feminist thought and activism. Explores the importance of gender as a category of analysis to understand social, cultural, political, and economic forces. Credit will not be given for WGS 2000 to students who have completed WMS 2000. Integrated Writing course. UG LE Lecture

Fall 2020 EE7350 7350 Wireless Comm Techniques EE Electrical Engineering 3 The goal of this course is to provide students with a comprehensive and in-depth understanding of the frontier of modern wireless communication technology. Topics include: uniqueness and difficulty of wireless communication system design, wireless communication channel and propagation model, modulation and demodulation techniques for mobile communication, multiple access technologies, wireless communication system simulation, etc. <br> b> Department Managed Prerequisite(s): Undergraduate level EE 7610 Minimum Grade of D and Undergraduate level EE 4210 Minimum Grade of D and Undergraduate level EE 4210L Minimum Grade of D or Graduate level EE 6210 Minimum Grade of D and Graduate level EE 6210L Minimum Grade of D/<br>GR LE Lecture

Fall 2020 CEGB940 8940 Res Research in Comp Egr CEG Computer Engineering 1 Research on the Ph.D. dissertation topic taken in residence. UG IS Independent Study

Fall 2020 SOC4640 4640 Gender and Sexuality SOC Sociology 3 Explores gender and sexuality constructions from a global perspective. Topics include the effects of globalization, colonization and imperialism, as well as transnational feminist and LGBTQI activism. <br> b> Department Managed Prerequisite(s): Undergraduate level SOC 3610 Minimum Grade of C or Undergraduate level SOC 4600 Minimum Grade of C or Undergraduate level WGS 2000 Minimum Grade of C/<br>GR LE Lecture

Fall 2020 CEGA360 4360 Dutch Computing & Sys CEG Computer Engineering 3 Study of process communication, core distributed systems, distributed file systems, cloud computing, and massive scale data-parallel processing. UG LE Lecture

Fall 2020 HUM7300 7300 Humanities Project HUM Humanities 1 Capstone project under the direction of a three-member faculty committee. UG IS Independent Study

Fall 2020 ISIT4750 4750 21st Century History HST History 3 Examines particular stages of the 21st-century American experience or selected topics. Integrated Writing course. UG LE Lecture

Fall 2020 URS6270 6270 Public Policy Analysis URS Urban Affairs 3 Study of the policy development process and its relationship to past and current urban issues. Focuses on a current urban issue through discussion, reading, and research. UG LE Lecture

Fall 2020 PHY5510 5510 Advanced Physics Lab - 2 PHY Physics 2 Laboratory projects designed to introduce the participant to modern physics laboratory techniques by doing standard measurements or reproducing historic experiments. BR LB Lab

Fall 2020 ED6340 6340 MCE LA Methods ED Education 3 A developmental and integrated approach to teaching language arts (reading, writing, speaking & listening and language) in a middle level, grades 4-9 classroom. UG LE Lecture

Fall 2020 FR4500 4500 Senior Honors Project FR French 1 Capstone project for French majors involving independent research, service learning, or a creative project. Topics vary. Taught in French. UG IS Independent Study

Fall 2020 FAS2790 2790 Ag Business Topics FAS Food and Agricultural Systems 1 Focused study in an area of interest in Agricultural Business. UG LL Lecture/Lab Combination

Fall 2020 HST4000 4000 Ancient History HST History 3 Selected problems in Greek or Roman history to the death of Constantine in A.D. 337. Integrated Writing course. UG LE Lecture

Fall 2020 ME6570 6570 Energy Materials ME Mechanical and Materials Engr 3 Students will understand the principles and the materials of advanced electrochemical energy storage systems, including batteries, fuel cells, and supercapacitors. In this course, students will gain an understanding of material structures, material composition, and material morphologies in relation to applicable properties for electrochemical energy storage and conversion systems. Students will also be introduced to state-of-the-art materials research and development in these systems. <br> b> Department Managed Prerequisite(s): Undergraduate level ME 3750 Minimum Grade of D or Undergraduate level ME 3310 Minimum Grade of D or Undergraduate level ME 3510 Minimum Grade of D or Undergraduate level ME 3750 Minimum Grade of D or Undergraduate level ME 5750 Minimum Grade of D/<br>GR LE Lecture

Fall 2020 REL5820 5820 Sociology of Religion REL Religion 3 (Also listed as SOC 5110 ) Treatment of religion as a social institution. Examines the influence of religious ideas and organizations on other social institutions, and the influence of society on religion. UG 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 5200 Minimum Grade of C or Undergraduate level EC 2040 Minimum Grade of D and Undergraduate level EC 205B Minimum Grade of D-yr.<br/>

Fall 2020  CNU7261  7261  Systems Theory  CNL  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  PTX4990  4990  Undergraduate Research  PTX  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 variety of clinical and research fields. UG  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  CNU6030  6030  Stats Res for Counseling  CNL  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  Gavo 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-yr.<br/>

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, commercialization, 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-yr.<br/>

Fall 2020  ME4730  4730  Engineering Ceramics  ME  Mechanical and Materials Engin  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-yr.<br/>

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. UG  SE  Seminar

Fall 2020  CTE6250  6250  Curriculum & Assessment  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. 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  DAN3080  3080  Interned Tap Dance II  DAN  Dance  1  Group classes exploring Tap Dance technique. UG  ST  Studio

Fall 2020  HED7360  7360  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  EE4440  4440  Electronic Integ Systems  EE  Electrical Engineering  3  Theory and applications of integrated circuits. Bipolar and field effect transistor amplifier analysis and design, multi-stage and feedback amplifiers, ideal and real operational amplifiers, frequency response and compensation, active filters, comparators, and waveforms generators. UG  LE  Lecture

Fall 2020  ENG5210  5210  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  HLM7900  7900  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 meter and style of Latin lyric, canonical 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-yr.<br/>

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 extraterrestrial planets. UG  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>EES4370</td>
<td>4.0</td>
<td>Lecture/Lab Combination</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ISM400</td>
<td>4.0</td>
<td>Lecture/Lab</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY8720</td>
<td>2.0</td>
<td>Lecture/Lab</td>
<td>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-</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUS1450</td>
<td>1.0</td>
<td>Lecture</td>
<td>An overview of vocal technique, literature, and performance for the instrumental music education major.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHM1070</td>
<td>1.0</td>
<td>Lecture</td>
<td>Examines gaseous and liquid state and thermonuclearity 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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>OIS2150</td>
<td>1.0</td>
<td>Lecture</td>
<td>Job hunting skills, resume writing, interviewing techniques, and effective employment seeking skills.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS4330</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>UR5630</td>
<td>1.0</td>
<td>Lecture</td>
<td>Examines the constitutional foundations of administrative law and the legal context of federal, state and local administrative rule making and adjudication.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>AES1990</td>
<td>1.0</td>
<td>Independent Study</td>
<td>Independent study.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EAN6100</td>
<td>3.0</td>
<td>Lecture</td>
<td>An overview of human/mammalian organ physiology. Fundamental mechanisms and the experimental basis for current understanding is emphasized. Prerequisites: Introductory biology, chemistry, physics, or permission of instructor.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EDS4080</td>
<td>1.0</td>
<td>Lecture</td>
<td>Provides insight into-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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MS2040</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EED3200</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PL5420</td>
<td>1.0</td>
<td>Lecture</td>
<td>(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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>LEP6030</td>
<td>0.5</td>
<td>Lecture</td>
<td>Grammar for beginning ESL students. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>KIN4100</td>
<td>1.0</td>
<td>Lecture</td>
<td>Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>STT4240</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY4610</td>
<td>1.0</td>
<td>Lecture</td>
<td>Communication intensive seminar integrating knowledge on human-computer interface issues. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED4370</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EC4830</td>
<td>1.0</td>
<td>Lecture</td>
<td>Independent study in economics or allied disciplines.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EDS4090</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SOC4110</td>
<td>1.0</td>
<td>Lecture</td>
<td>Advanced social research techniques. Students design and carry out a full-scale research project within a seminar-like class setting. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMB1000</td>
<td>1.0</td>
<td>Lecture</td>
<td>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).</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SCM4250</td>
<td>1.0</td>
<td>Lecture</td>
<td>Practices and technologies for managing supply chain information in organizations. Business processes supplying 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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>FAS2610</td>
<td>1.0</td>
<td>Lecture/Lab</td>
<td>Evaluation of livestock management systems based on animal welfare, environmental 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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED3060</td>
<td>1.0</td>
<td>Lecture</td>
<td>Methods for teaching 4th, 5th, and 6th grade language arts pertinent to the Ohio Learning Standards. ELA with emphasis on content, developmentally appropriate pedagogy, curricula, and materials.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GER2020</td>
<td>1.0</td>
<td>Lecture</td>
<td>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-</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ASM7073</td>
<td>1.0</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Department</td>
<td>Credits</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>HEA9230</td>
<td>Instruction in Higher Ed</td>
<td>HEA</td>
<td>9.23</td>
<td>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.</td>
</tr>
<tr>
<td>FR6110</td>
<td>FR Instruc Practicum I</td>
<td>FR</td>
<td>1.01</td>
<td>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.</td>
</tr>
<tr>
<td>NUR7355</td>
<td>Practicum in Neg Ed</td>
<td>NUR</td>
<td>1.04</td>
<td>Observation, participation, and practice in teaching nursing concepts. Application of previous learning with emphasis on the nurse educator role. Clinical practicum required.</td>
</tr>
<tr>
<td>URS5240</td>
<td>Pub. Sec. Lab. Relations</td>
<td>URS</td>
<td>1.04</td>
<td>Requires the construction of a public relations project, emphasizing the role of communication and public relations in a specific business or community setting.</td>
</tr>
<tr>
<td>ATR7150</td>
<td>Clinical Pract ice 1</td>
<td>ATR</td>
<td>1.04</td>
<td>Clinical experience with a preceptor; practice and apply a variety of entry-level skills learned in the previous semester. Evaluation will occur in both the clinical and classroom settings.</td>
</tr>
<tr>
<td>KHNH780</td>
<td>Weight Training</td>
<td>KHN</td>
<td>1.04</td>
<td>Develops skills and knowledge of Weight Training. Competency-based course. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>HST5810</td>
<td>810 African-American History</td>
<td>HST</td>
<td>1.04</td>
<td>Explores topics drawing from the African-American experience; may include basic ideologies and leadership.</td>
</tr>
<tr>
<td>EDS4670</td>
<td>Collaboration for Inclusion</td>
<td>EDS</td>
<td>1.04</td>
<td>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.</td>
</tr>
<tr>
<td>EE5101L</td>
<td>Circuit Analysis I Lab</td>
<td>EE</td>
<td>1.04</td>
<td>To assist students with learning to apply Kirchhoff's laws, to have an understanding of and an ability to analyze and design circuits, to apply linear differential equation techniques, and to have an understanding of sinusoidal steady state analysis.</td>
</tr>
<tr>
<td>PSI8420</td>
<td>Crisis Intervention</td>
<td>PSI</td>
<td>1.04</td>
<td>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.</td>
</tr>
<tr>
<td>EGR3980R</td>
<td>Special Topics In EGR Rec</td>
<td>EGR</td>
<td>1.04</td>
<td>Required recitation for EGR 3980.</td>
</tr>
<tr>
<td>MUE4500</td>
<td>Symphonic Band</td>
<td>MUE</td>
<td>1.04</td>
<td>Performs band music of all styles. Open to all students with intermediate to advanced experience. Audition required.</td>
</tr>
<tr>
<td>AF3990</td>
<td>Special Topics</td>
<td>AF</td>
<td>1.04</td>
<td>Selected topics relevant to historical and current issues in African and African American Studies.</td>
</tr>
<tr>
<td>MTH6570</td>
<td>Combinatorics and Graphs</td>
<td>MTH</td>
<td>1.04</td>
<td>Mathematical structures, 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.</td>
</tr>
<tr>
<td>MJ4990</td>
<td>Problems in Microbiology</td>
<td>MJ</td>
<td>1.04</td>
<td>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.</td>
</tr>
<tr>
<td>EES4330</td>
<td>Global Biogeochem Cycles</td>
<td>EES</td>
<td>1.04</td>
<td>Examines the interplay of atmospheric, oceanic, and continental systems and their interactions.</td>
</tr>
<tr>
<td>DMV2010</td>
<td>DMV Registration</td>
<td>DMV</td>
<td>3.0</td>
<td>Principles and concepts of inorganic chemistry, including the periodic table, atomic structure, bonding, coordination compounds, and an introduction to group theory.</td>
</tr>
<tr>
<td>CHM5200</td>
<td>Adv Inorganic Chem I</td>
<td>CHM</td>
<td>3.0</td>
<td>Principles and concepts of inorganic chemistry, including the periodic table, atomic structure, bonding, coordination compounds, and an introduction to group theory.</td>
</tr>
<tr>
<td>ME6830</td>
<td>Comp Materials Science</td>
<td>ME</td>
<td>3.0</td>
<td>This course covers basic theories, methods and algorithms of atomic computer simulations of materials, using lectures and computer labs. Classical, semi-empirical, and ab initio quantum-mechanical methods are explained.</td>
</tr>
<tr>
<td>BHE1620</td>
<td>Prob for Eng</td>
<td>BHE</td>
<td>3.0</td>
<td>Presentation of probability concepts and techniques as applied to engineering applications. Introduces and applies probability distributions, measures of association, inferences on responses, and basic experimental design.</td>
</tr>
<tr>
<td>SOC4000</td>
<td>Sociological Imagination</td>
<td>SOC</td>
<td>3.0</td>
<td>Examines the interplay of atmospheric, oceanic, and continental systems and their interactions.</td>
</tr>
<tr>
<td>SLID6000</td>
<td>Sign/ Voice Interpret II</td>
<td>SLI</td>
<td>4.0</td>
<td>Examines the interplay of atmospheric, oceanic, and continental systems and their interactions.</td>
</tr>
<tr>
<td>ANT4990</td>
<td>Selected Topics Anatomy</td>
<td>ANT</td>
<td>1.05</td>
<td>Various anatomy topics will be discussed with an assigned advisor.</td>
</tr>
<tr>
<td>HST3100</td>
<td>Survey European History</td>
<td>HST</td>
<td>3.0</td>
<td>Surveys of European history. Topics vary.</td>
</tr>
<tr>
<td>ED9450</td>
<td>Chasson Mgt &amp; Org</td>
<td>ED</td>
<td>4.0</td>
<td>Examines the interplay of atmospheric, oceanic, and continental systems and their interactions.</td>
</tr>
<tr>
<td>NUR7355</td>
<td>NNPR Practicum II</td>
<td>NUR</td>
<td>1.04</td>
<td>Provides an introduction to the interprofessional team, planning and execution of complicated discharge, and innovations in care are all essential competencies.</td>
</tr>
<tr>
<td>DAN3040</td>
<td>Ballet Musical Th III</td>
<td>DAN</td>
<td>2.0</td>
<td>Group classes continuing to introduce Musical Theatre majors to fundamentals of Ballet technique.</td>
</tr>
</tbody>
</table>

**Fall 2020**

- HEA9230: Instruction in Higher Ed
- FR6110: FR Instruc Practicum I
- NUR7355: Practicum in Neg Ed
- URS5240: Pub. Sec. Lab. Relations
- ATR7150: Clinical Pract ice 1
- KHNH780: Weight Training
- HST5810: 810 African-American History
- EDS4670: Collaboration for Inclusion
- EE5101L: Circuit Analysis I Lab
- PSI8420: Crisis Intervention
- EGR3980R: Special Topics In EGR Rec
- MUE4500: Symphonic Band
- AF3990: Special Topics
- MTH6570: Combinatorics and Graphs
- MJ4990: Problems in Microbiology
- EES4330: Global Biogeochem Cycles
- DMV2010: DMV Registration
- CHM5200: Adv Inorganic Chem I
- ME6830: Comp Materials Science
- BHE1620: Prob for Eng
- SOC4000: Sociological Imagination
- SLID6000: Sign/ Voice Interpret II
- ANT4990: Selected Topics Anatomy
- HST3100: Survey European History
- ED9450: Chasson Mgt & Org
- NUR7355: NNPR Practicum II
- DAN3040: Ballet Musical Th III
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.

Fall 2020  PSY5830  5830  Cognitive Neuro Methods  PSY  Psychology  4  This 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.

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 placement sites.

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 systems theory with electronics/mechanical systems.

Fall 2020  CS1160  1160  Intro to Comp Program  CS  Computer Science  4  Basic concepts of programming using the Python programming language.

Fall 2020  DAN2320  2320  Intermediate Jazz II  DAN  Dance  2  Second-year intermediate jazz dance technique. Focus on technical diversity, musicality, artistry, and performance and on increasing body flexibility, strength, and kinesthetic awareness.

Fall 2020  PLS4090  4090  Legal Judging  PLS  Political Science  3  Examines 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 the theoretical and empirical perspectives on legal judging. Integrated Writing course.

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 global institutional 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.

Fall 2020  EE54720  4720  Epidemic & Community Hlth  EES  Earth & Environmental Sciences  3  Communicable and occupational diseases of contemporary importance. Epidemiological investigation, environmental considerations, and control procedures.

Fall 2020  NUR7202  7202  Acute Adult HHB Prob II  NUR  Nursing  8  Focus is on inpatient management related to acute and emergent physiological alterations in endocrine, gastrointestinal, genital urinary, hemotological, immunological and neurological function. Health promotion, maintenance and restoration are emphasized, along with risk assessment and preventative strategies. Advanced practice role development is incorporated into the course through patient care management seminars, case study presentations and clinical practice.

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.

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 understanding of wiring diagram creation, hardware selection, and programmable logic controller design and operation.

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.

Fall 2020  DOO9030  9030  Systems Change Org Set  DOS  Doctor Of Studies  3  Doctoral level course in application of systems and theories of change, with a focus on leadership and policy implications in community, government, nonprofit, and educational settings.

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.

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.

Fall 2020  KNE3250  2550  Applied Ex Physiology  KHN  Kinesiology & Health  3  Practical applications in exercise physiology for the physical educator, coach, and athletic trainer. Methods of conditioning, training, implementation, and other special considerations included.

Fall 2020  NUR7104  7104  Adv HHB Asmt 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.

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, bulk-micromachining, and surface micromachining. Typical VLSI devices and selected RF MEMS are covered.

Fall 2020  CSD4790  4790  CSD Special Topics  CSD  Community Services Development  1  Focused study in an area of interest in community services and development.

Fall 2020  BMST7135  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.

Fall 2020  ED4560  4560  Science Methods for MCE  ED  Education  3  Curriculum and materials for teaching middle level science with emphasis on an integrated constructivist approach for middle level science classroom, grades 4-8. Includes development of appropriate objectives, planning, resources and facilities, evaluation, and trends.

Fall 2020  BBO3520L  3520L  Human Biomechanics Lab  BIO  Biology  0  Required laboratory for BIO 3520.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Type</th>
<th>Level</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>KNH7830 Biomechanics</td>
<td>KNH</td>
<td>3</td>
<td>Lecture</td>
<td>GR</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>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>KNH1300A Hiking</td>
<td>KNH</td>
<td>1</td>
<td>Lab</td>
<td>UG</td>
<td>Fundamental skills and knowledge of Hiking. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>KNH1800B Weight Training: Women</td>
<td>KNH</td>
<td>1</td>
<td>Lab</td>
<td>UG</td>
<td>Fundamental skills and knowledge of Weight Training: Women. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SCM4770 Special Studies in SCM</td>
<td>SCM</td>
<td>1</td>
<td>Topics vary.</td>
<td>UG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MKT1400A Lifeguard Training</td>
<td>KNH</td>
<td>1</td>
<td>Lab</td>
<td>UG</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>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ART5280 Drawing</td>
<td>ART</td>
<td>3</td>
<td>Lecture/Lab Combination</td>
<td>UG</td>
<td>Exploration of the structure and interrelationships of visual form in drawing, painting, and sculpture. Principal historical modes of drawing are examined. This course has a fee that is non-refundable once the term begins.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHI2210 Chinese</td>
<td>CHI</td>
<td>0.5</td>
<td>Lecture</td>
<td>UG</td>
<td>Advanced topics of current interest in the earth and environmental sciences presented in lecture format. Topics vary but are expected to be appropriate for graduate students. May be taken for a letter grade or pass/unsatisfactory.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SW4735 Child Welfare II</td>
<td>SW</td>
<td>3</td>
<td>Lecture</td>
<td>UG</td>
<td>Addresses the developmental and permanence needs of children in the child welfare system.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SOC6600 Sociology of Sexuality</td>
<td>SOC</td>
<td>3</td>
<td>Lecture</td>
<td>UG</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 also reviewed.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ART2000 Studies in Art</td>
<td>ART</td>
<td>3</td>
<td>Lecture</td>
<td>UG</td>
<td>Problems and approaches to art, especially for the non-art major. May include cross-disciplinary studies.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHM3120 Quantitative Analysis</td>
<td>CHM</td>
<td>2</td>
<td>Lecture</td>
<td>UG</td>
<td>Introduction to effective communication skills for the classroom, emphasizing oral proficiency, teaching skills, and culture of the American classroom. Placement based on performance on the Wright State Oral Proficiency Test for International Teaching Assistants.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMS9540 Quant Workload Analysis</td>
<td>BMS</td>
<td>3</td>
<td>Lecture</td>
<td>UG</td>
<td>Physiological and mathematical methods needed to accomplish a workload analysis as requisite to a system design or redesign of an ergonomic system.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHY1060 Astronomy</td>
<td>PHY</td>
<td>1</td>
<td>Lecture</td>
<td>UG</td>
<td>Introduction to astronomy emphasizing the solar system and the universe of stars and galaxies. Topics include the earth-moon system, other planets and their satellites, space exploration, theories for the origin of the solar system, stellar evolution, astrophysics, and cosmology.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GER4500 Senior Honors Project</td>
<td>GER</td>
<td>1</td>
<td>Lecture</td>
<td>UG</td>
<td>Capstone project for German majors involving independent research, creative projects: Department Managed Prerequisite(s): Undergraduate level GER 3210 Minimum Grade of D and Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3230 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D and Graduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D or Undergraduate level GER 3250 Minimum Grade of D.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MIL1020 Intro to Tactical Leadership</td>
<td>MIL</td>
<td>1</td>
<td>Lecture</td>
<td>UG</td>
<td>Overview of leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Explores dimensions of leadership attributes and core leader competencies in the context of practical, hands-on, and interactive exercise. Contracted students are required to participate in two-hour lab, physical fitness program and weekend training exercises.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED6610 Practicum: TESOL</td>
<td>ED</td>
<td>2</td>
<td>Internship</td>
<td>GR</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 Teaching English as a Second Language (TESOL).</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHH2210 Intro Chinese Characters</td>
<td>CHH</td>
<td>1</td>
<td>Lecture</td>
<td>UG</td>
<td>An in-depth practical introduction to the Chinese writing system. Includes history of Chinese characters, radicals, sequence of strokes, calligraphy, and dictionary use: Department Managed Prerequisite(s): Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C or Undergraduate level CHI 1020 Minimum Grade of C.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>URS7080 MPA Applied Res. Project</td>
<td>URS</td>
<td>3</td>
<td>Research</td>
<td>GR</td>
<td>Research project for the master's degree in public administration.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS6621 Pre-Law Internship</td>
<td>PLS</td>
<td>3</td>
<td>Internship</td>
<td>GR</td>
<td>Intern 12-15 hours per week in regional law offices, including prosecutors, public defenders, and private practices. Assist attorneys, participate in outreach program activities, and observe trials.</td>
<td></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>FR3810 Applied Elem Fr Instruct</td>
<td>FR</td>
<td>1</td>
<td>Lecture</td>
<td>UG</td>
<td>French majors and minors assist FR 1010 or FR 1020 course instructors in conducting classes. Taught in French: Department Managed Prerequisite(s): Undergraduate level FR 3110 Minimum Grade of D or 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 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></td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS6740 Pol of Women &amp;Terror</td>
<td>PLS</td>
<td>3</td>
<td>Seminar</td>
<td>UG</td>
<td>Examines the political behavior of women in terrorism, including an analysis of the roles females play in different groups, and differing theories to explain recent changes in the field.</td>
<td></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  MTH6880  6880  Independent Reading  MTH  Mathematics  1  Selected readings in mathematics.  GR  IS  Independent Study

Fall 2020  PHY4540  4540  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.  GR  LL  Lecture/Lab Combination

Fall 2020  ENG5150  5150  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  PHL3670  3670  Philosophy of Mind  PHL  Philosophy  3  Central issues in the philosophy of mind, including mind and brain, identity theory, nature of consciousness and qualia, intentionalität, 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  BIO4110  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  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.  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&N4440  4440  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 neurobiology.  UG  LE  Lecture

Fall 2020  RBH5220  5220  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  5101  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 Sekc Suly ML  Modern Languages  1  Individual research project approved and supervised by a full-time faculty member.  GR  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. Explores current social, ethical, legal and philosophical topics to understand how the Digital Revolution impacts society. Integrated Writing course.  UG  LL  Lecture/Lab Combination

Fall 2020  GER4270  4270  19th Cnt Ger Poetry GER  German  3  Readings and reports in 19th-century poetry. Representative works of Heine, Drotste-Hulshoff, Morike, Dehmel, Liliencron, and others.  GR  LE  Lecture

Fall 2020  EDL9740  9740  Life, Law, and Spec Pop EDL  Educational Leadership  3  Special topics in Mechanical Engineering or Materials Science and Engineering. Titles vary.  GR  SE  Seminar

Fall 2020  BIEM7110  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.  GR  LE  Lecture

Fall 2020  ME3960  3960  Special Problems in ME ME  Mechanical and Materials Eng  1  Special topics in Mechanical Engineering or Materials Science and Engineering. Titles vary.  GR  LE  Lecture

Fall 2020  CNL7220  7220  Group Process Counseling CNL  Counseling  3  Serves as an introduction to group practice. Considers interaction patterns and dynamics within small groups, and focuses on understanding of individual and group behavior as they relate to the individuals taking the course.  GR  LE  Lecture

Fall 2020  ME6360  3660  Prn Intnl Combat Engine ME  Mechanical and Materials Eng  3  Thermodynamics of I.C. engines, combustion thermodynamics, friction, heat and mass losses, and computer control of the modern fuel-injected I.C. engine.  GR  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 ROTC training, weekly two-hour labs and recruiting events. Students are expected to train, mentor, and evaluate underclass ROTC students while being mentored and evaluated by ROTC cadre.  GR  LE  Lecture

Fall 2020  ACC5740  5740  Current Topics Acctg. ACC  Accountancy  3  This course is an overview of issues directly impacting the accounting profession or issues impacting business that indirectly effect 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.  GR  LE  Lecture

Fall 2020  EGR1010L  1010L  Intr 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>Course Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLI3520</td>
<td>Sign Language Interpreting</td>
<td>SLI</td>
<td>3</td>
<td>Focus on ethical situations that arise in a sign language interpreter's work. Ethical dilemmas will be debated, while exploring the RID Code of Professional Conduct and other ethical standards. Personal decision making process will be considered.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>PHY4700</td>
<td>Topics in Physics</td>
<td>PHY</td>
<td>4</td>
<td>Selected topics in physics.</td>
<td>UG IS Independent Study</td>
</tr>
<tr>
<td>PHY5990</td>
<td>Research</td>
<td>PHY</td>
<td>3</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>
<td>GR IS Independent Study</td>
</tr>
<tr>
<td>FR4540</td>
<td>19th Century Short Story</td>
<td>FR</td>
<td>3</td>
<td>Study of short stories by such authors as Mérimée, Gautier, Balzac, Daudet, Flaubert, Stendhal, Maupassant, and Villers de l’Isle Adam. Taught in French.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>SIT3610</td>
<td>Applied Statistics II</td>
<td>SIT</td>
<td>3</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>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>CHM1010</td>
<td>Intro to Chemistry</td>
<td>CHM</td>
<td>3</td>
<td>Fundamentals of chemistry: composition and structure, properties and transformations of matter. For students who have not completed high school chemistry.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>EES2150</td>
<td>Global Change</td>
<td>EES</td>
<td>3</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>
<td>UG LL Lecture Lab Combination</td>
</tr>
<tr>
<td>FR3820</td>
<td>Applied Elem Fr Instruct</td>
<td>FR</td>
<td>3</td>
<td>French majors and minors assist FR 1010 or FR 1020 course instructors in conducting classes. Taught in French.</td>
<td>UG IS Independent Study</td>
</tr>
<tr>
<td>MGT7710</td>
<td>Fundamentals of Proj Mgt</td>
<td>MGT</td>
<td>3</td>
<td>An introduction to the management of projects, to include project selection, planning, budgeting, scheduling, execution, and control. Revives 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>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>KNIH1620A</td>
<td>Stretch &amp; Tone/Pilates</td>
<td>KNIH</td>
<td>1</td>
<td>Fundamental skills and knowledge of Stretch &amp; Tone/Pilates. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>UG LB Lab</td>
</tr>
<tr>
<td>BME7371</td>
<td>Fail Analysis Med Device</td>
<td>BME</td>
<td>3</td>
<td>Failure modes of medical devices. Common medical devices such as total joint replacement implants, fixation plates and screws, intermediary nails, pace makers, other implantable products. Procedures to conduct failure cause investigations within the guidelines developed by regulatory agencies.</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>BMS5421</td>
<td>Rehab Eng Systems I</td>
<td>BMS</td>
<td>3</td>
<td>Introduce 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>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>CEG4970</td>
<td>Independent Study</td>
<td>CEG</td>
<td>4</td>
<td>Independent study in computer engineering topics.</td>
<td>UG IS Independent Study</td>
</tr>
<tr>
<td>PSG2002</td>
<td>Prog Disc  Elective Topics</td>
<td>PSG</td>
<td>3</td>
<td>A variable elective topic in psychology. Topics vary.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>PHL3650</td>
<td>Theories Human Nature</td>
<td>PHL</td>
<td>3</td>
<td>Theories of human nature.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>CNL6210</td>
<td>Crisis Counseling</td>
<td>CNL</td>
<td>3</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>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>CEG6120</td>
<td>Managing Sofw/Dev Proces</td>
<td>CEG</td>
<td>3</td>
<td>Discusses 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>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>CEG7550</td>
<td>Computer Vision</td>
<td>CEG</td>
<td>3</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 and combined vision systems.</td>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>BIO6730</td>
<td>Marine Biology</td>
<td>BIO</td>
<td>3</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>
<td>GR LE Lecture</td>
</tr>
<tr>
<td>TH1580</td>
<td>Singing Min Theatre II</td>
<td>TH</td>
<td>3</td>
<td>Private singing lessons for musical theatre.</td>
<td>UG ST Studio</td>
</tr>
<tr>
<td>KNIH2540</td>
<td>Psychology of Sport</td>
<td>KNIH</td>
<td>3</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>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>URS4310</td>
<td>Philosophy/Grantmaking</td>
<td>URS</td>
<td>3</td>
<td>Philosophy, 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>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>PHL4100</td>
<td>Major Philosophers</td>
<td>PHL</td>
<td>3</td>
<td>In-depth examination of the works of a major philosopher. Topics vary. Integrated Writing course.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>ME6170</td>
<td>Mechanics of Composites</td>
<td>ME</td>
<td>3</td>
<td>In-depth examination of the works of a major philosopher. Topics vary. Integrated Writing course.</td>
<td>UG LE Lecture</td>
</tr>
<tr>
<td>SPN6830</td>
<td>Latin American Business</td>
<td>SPN</td>
<td>3</td>
<td>In this course, students will cover the 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>
<td>GR SE Seminar</td>
</tr>
<tr>
<td>KNIH2764A</td>
<td>Walk-Jog-Run</td>
<td>KNIH</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>UG LB Lab</td>
</tr>
</tbody>
</table>
This course will provide a series of laboratory experiments similar to the state-of-the-art R&D in nanotechnology. 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.

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.

Physical processes underlying the movement of fluids through the porous subsurface. Transport of particulates and solutes, including contaminants within ground water flow regimes, and the flow of oil, gas and brine in geosystems. Emphasis on quantitative problem solving. 5 hours lecture; 2 hours lab.

Methods of true experiments, data analysis and APA-style writing. Uses methods from representative fields of psychology, comparative psychology, and empirically-based approaches. 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 clinical work with diverse marginalized and privileged populations. We will use the ability to maintain a critical dialogue to be a foundational skill and an intervention in and of itself.

Combination
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
MUA47100  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 STT4150. 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
ARAS5110  5110  Arabic Conversation I  ARA  Arabic  3  A language practicum for intermediate students of Arabic, designed to expand conversational skills in Modern Standard Arabic. Also Department Managed Prerequisite(s): undergraduate level ARA 2020 Minimum Grade of D-/80.
GR  LE  Lecture
Fall 2020
ECO5720  5720  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. Topics covered 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 Dinosaurus Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 1030.
UG  LB  Lab
Fall 2020
ATH4600  4600  Semi 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 Research in BME  BME  Biomedical Engineering  1  PhD Non-Dissertation Research in Biomedical Engineering.
GR  IS  Independent Study
Fall 2020
MLB4330L  4330L  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 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 Fr  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  BIE  Industrial & Systems Engr  3  Introduction to the development of automated data analysis tools built on existing user-interface 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
UG  LE  Lecture
Fall 2020
PLS5450  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 Resrch in IEE  BIE  Industrial & Hum Facs Engr  1  M.S. Non-Thesis Research in Industrial and Human Factors Engineering.
GR  IS  Independent Study
Fall 2020
UG  IS  Independent Study
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
PSI9620  9620  C++ Prog for Sci & Egr Lab  PSI  Professional Psychology  3  To provide students with explicit (textbook) and tacit (experiential) knowledge of behavioral health service delivery in an integrated primary care clinic serving a low-income population of patients. This course will be a combination of text-book readings and discussions as well as a laboratory component. The lab component will involve instruct supervision of student’s shadowing and observation of primary care providers, conducting initial consultation appointments, practicing behavioral and cognitive interventions, and providing feedback to referring providers.
GR  LE  Lecture
Fall 2020
PLS4640  4640  Israel and Palestine  PLS  Political Science  3  Examines the domestic politics of Israel and Palestine, and the international politics of the conflict between them. Focuses on the causes, development, and prospects of the conflict in the form known as Israel-Palestine. 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 Capacite  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, international transportation, security issues and third party recognizers. This course has a fee that is non-refundable once the term begins.
GR  LE  Lecture
Fall 2020
MPS320  3220  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>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE7810</td>
<td>Clinical Sexuality</td>
<td>PSY</td>
<td>3</td>
<td>Curriculum overview of coagulation factors, and their use in diagnosing coagulation defects and monitoring anticoagulant therapy.</td>
</tr>
<tr>
<td>EE7800</td>
<td>Intermediate Italian II</td>
<td>ITA</td>
<td>3</td>
<td>Continual study of the Italian language. Grammar review, reading, and discussion of selected texts, with practice in speaking and writing the language.</td>
</tr>
<tr>
<td>ESL5060</td>
<td>Scientific Revolutions</td>
<td>PHI</td>
<td>3</td>
<td>Examines dramatic paradigm shifts in the history of science including Newton, Einstein, Darwin, quantum theory and beyond, including emerging scientific ideas.</td>
</tr>
<tr>
<td>NEU4400</td>
<td>Developmental Neuroscience</td>
<td>NEU</td>
<td>3</td>
<td>Overview of the processes of neural differentiation, migration, synaptic formation, and circuit refinement involved in neural development.</td>
</tr>
<tr>
<td>MGT7810</td>
<td>Independent Study</td>
<td>MG</td>
<td>1</td>
<td>Individualized graduate-level program of study, agreed to between sponsoring faculty member and student and approved by the department chair, to explore an area of particular interest, in either management or international business. Normally 3 semester hours long, the course can be tailored for a different number of credit hours, as agreed by the faculty member and department chair.</td>
</tr>
<tr>
<td>PSY4340</td>
<td>Clinical Sexuality</td>
<td>PSY</td>
<td>3</td>
<td>The ultimate end goal of this course is to enhance your personal sexual health by increasing your sexual literacy as well as your comfort and confidence as a sexual being. Integrated Writing course.</td>
</tr>
</tbody>
</table>
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. Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D-.
Fall 2020

ME4680  4600  Experimental Nanoscience  ME  Mechanical and Materials Eng  3  Laboratory experiments 1) fabrication of nanomaterials; 2) characterization of physical and chemical properties; and 3) computational modeling of nanoscale physical phenomena. 0-3 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 and Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D and Undergraduate level PHY 2410L Minimum Grade of D)<br/>UG  LB  Lab

Fall 2020

PLS3700  3700  International Theory  PLS  Political Science  3  Influential classical and contemporary contending theoretical perspectives in international relations and their critique. Integrated Writing course.<br/>UG  LE  Lecture

Fall 2020

ME7550  7550  Photovoltaics  ME  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 0-3 Department Managed Prerequisite(s): Graduate level ME: 7500 Minimum Grade of D)<br/>GR  LE  Lecture

Fall 2020

ED6260  6260  Literacy Lessons Training I  ED  Education  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. 0-3 Department Managed Prerequisite(s): Graduate level ED 4600 Minimum Grade of D<br/>GR  LE  Lecture

Fall 2020

SW4800  4800  Gerontology Practicum  SW  Social Work  3  Supervised learning under direction of the Gerontology Certificate Director and staff from a social service agency serving older adults. 0-3 Department Managed Prerequisite(s): Undergraduate level SW 4620 Minimum Grade of D or Undergraduate level SOC 4820 Minimum Grade of D<br/>UG  PR  Practicum

Fall 2020

BME4410H  4410  Biothermodynamics  BME  Biomedical Engineering  3  Application of first and second laws of thermodynamics to human, physiological and biological systems.<br/>UG  LE  Lecture

Fall 2020

ISE2211  2211  Statistics for Engineers  ISE  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.<br/>UG  LE  Lecture

Fall 2020

MBA7300  7300  Fin Analysis & Decision  MBA  MBA  3  Application of finance concepts theories, and techniques of financial management. Emphasis on case problems and decision making. 0-3 Department Managed Prerequisite(s): Graduate level BUS 6250 Minimum Grade of D<br/>GR  LE  Lecture

Fall 2020

KNH1770B  1770B  Water Safety Instruction  KNH  Kinesiology & Health  1  National American Red Cross standards training for teaching American Red Cross Swimming and Diving and Water Safety courses.<br/>UG  LL  Lecture/Lab Combination

Fall 2020

EES4600  4600  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.<br/>UG  LE  Lecture

Fall 2020

MUS3120  3120  History of Music II  MUS  Music  3  History of western art music from 1750 to the present. Integrated Writing course.<br/>UG  LL  Lecture/Lab Combination

Fall 2020

CLS6810  6810  Independent Study  CLS  Classics  1  Faculty-directed, individualized study on student-selected topics. Limited to advanced students. Permission of faculty and a minimum 3.5 GPA required.<br/>GR  IS  Independent Study

Fall 2020

PSY6630  6630  Human Error Captaine  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on human error. 0-3 Department Managed Prerequisite(s): Graduate level PSY 4630 Minimum Grade of D<br/>GR  SE  Seminar

Fall 2020

HPR3850  3850  Teaching Elementary PE  HPR  Health Phy Edu & Recreation  3  Applies teaching and management strategies that have been linked to student learning, the design of instructional materials and techniques, and strategies working with a diversity of learners in grades K-5.<br/>UG  LE  Lecture

Fall 2020

PLS3460  3460  Public Personnel Admin  PLS  Political Science  3  Methods of employment, training, compensation, and employee relations in various levels of civil service. Examines organizations of public employees. 0-3 Department Managed Prerequisite(s): Graduate level PL 6400 Minimum Grade of D<br/>UG  LE  Lecture

Fall 2020

ARTS680  680  Printmaking: Lithography  ART  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.<br/>GR  LB  Lab

Fall 2020

SAA4630  4630  Career Dev. Theory  SAA  Student Affairs in Higher Ed  2  A variety of career development theories are explored including application to specific client cases. Focus will be on developing helping skills and building effective relationships as well as technology resources available to career advisors.<br/>GR  LE  Lecture/Lab Combination

Fall 2020

MES750  6750  Mat. Characterization  ME  Mechanical and Materials Eng  4  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 0-3 Department Managed Prerequisite(s): Undergraduate level ME 2600 Minimum Grade of D and Undergraduate level ME 2700 Minimum Grade of D<br/>GR  LL  Lecture/Lab Combination

Fall 2020

EE4120L  4120L  Industrial Controls Lab  EE  Electrical Engineering  1  Hands-on experience in Industrial Controls, Automated Controls systems, plant modeling and control system performance. 0-3 Department Managed Prerequisite(s)<br/>UG  LB  Lab
Fall 2020
PLS5440  5440  Police Procedures and Op  PLS  Political Science  3  Procedures and operations of law enforcement at various levels from patrol to senior administration, emphasizing duties, responsibilities and leadership                                                                                   GR  LE  Lecture
Fall 2020
REL3700  3700  Topics in Biblical Lit  REL  Religion  3  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.                                                                                             UG  LE  Lecture
Fall 2020
ENG4790  4790  TEFL Practice & Material  ENG  English  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.                                                        UG  LE  Lecture
Fall 2020
GEO6200  6200  Remote Sensing Apps  GEO  Geography  3  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.                                    GR  LE  Lecture
Fall 2020
ME4750  4750  Mat. Characterization  ME  Mechanical and Materials Eng'g  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. Department Managed Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D (ENG 4710 can be taken concurrently).  UG  LE  Lecture
Fall 2020
CLS3300  3300  Studies in Ancient Lit  CLS  Classics  3  Drama, epic, and lyric poetry; prose; selected themes in ancient literature; and literary criticism. Integrated Writing course.                                                                                              UG  LE  Lecture
Fall 2020
NUR7612  7612  Psych MN NP Prac II  NUR  Nursing  8  The focus is on comprehension and clinical reasoning in the selection and use of a variety of therapeutic modalities used in the management of individuals and families with acute and/or chronic alterations in psychiatric/mental health status and functioning across the lifespan. Pharmacologic and non-pharmacologic treatment modalities are explored. Advanced practice role development is incorporated.                                    GR  LE  Lecture
Fall 2020
KNH1380  1380  Kayaking: Recreational  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of Kayaking: Recreational. 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
ENG5530  5530  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.                                                                                         GR  LE  Lecture
Fall 2020
BIO1120  1120  Cells and Genes  BIO  Biology  4  Introduction to basic concepts of biology. Topics include genetics and the molecular and cellular basis for the unity of life. Three hours lecture, two hours lab. Department Managed Prerequisite(s): Undergraduate level DEV 0280 Minimum Grade of P.  UG  LE  Lecture
Fall 2020
ISG7240  7240  Car & Def St Ghld Fl Nds  ISG  Intervention Specialist  Gifted  3  Understanding the various curriculum models and differentiation in gifted education. Design, delivery and evaluation of curriculum that addresses differentiated curriculum needs.                                           GR  LE  Lecture
Fall 2020
HST7210  7210  Seminar Medieval History  HST  History  3  Examines the period following the decline of the Roman Empire ca. 1450. Topics vary and may include aspects of European, Islamic, or Byzantine civilizations.                                              GR  SE  Seminar
Fall 2020
ATH3100  3100  Author of Sex & Gender  ATH  Anthropology  3  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 cross-cultural models enabling us to confront how we come to consider and express ourselves as "men," "women," or something else, the social forces constraining us to act as gendered persons, and consequences for not conforming to these norms.                   UG  LE  Lecture
Fall 2020
NEU3200  3200  How Nrv Sys Works II  NEU  Neuroscience  4  How the nervous system works among and between neural networks to elicit behavioral responses to external and internal stimuli. Topics will include 1) how the brain interacts with the world, 2) higher levels of interaction, and 3) motivated behaviors. Integrated Writing course.                                        UG  LE  Lecture
Fall 2020
URS3100  3100  The American City  URS  Urban Affairs  3  Intensive study of aspects of American urban experiences with an emphasis on qualitative research including class, gender, race, and ethnicity.                                                                                      UG  LE  Lecture
Fall 2020
EE4550L  4550L  IC Hdwr Sctcty&Tst Lab  EE  Electrical Engineering  1  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  LB  Lab
Fall 2020
P&N6500  6500  Glial Cell Physiology  P&N  Physiology & Neuroscience  2  Concepts of glial cell physiology based on analysis of current primary literature. Topics include interactions between glia and other cell types and the role of glia in pathophysiology.                                                      GR  LE  Lecture
Fall 2020
PHL3200  3200  Symbolic Logic I  PHL  Philosophy  3  Introduction to the techniques of deductive logic including truth-table analysis, the propositional calculus, and predicate logic. Students who have taken PHL 2230 cannot take PHL 3200.                                             UG  LE  Lecture
Fall 2020
SPN4320  4320  Sem in Spanish-Amer Lit  SPN  Spanish  3  Intensive study of selected topics in Spanish-American 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.  UG  SE  Seminar
Fall 2020
ED6640  6640  AYA: Int Log Art: C&M I  ED  Education  3  Focuses on theoretical issues and practical problems of teaching English at all levels, including developing media competence and teaching media literacy.                                                                    GR  LE  Lecture
Fall 2020
PHY6400  6400  Nanosci. and Nanotech.  PHY  Physics  3  Introduction to nanomaterials, nanotechnology. Topics include introduction to quantum mechanics, fabrication, characterization, materials, electronic properties, optical properties, magnetic properties, devices, MEMS, NEMS.                                                                 UG  LL  Lecture/Lab Combination
Fall 2020
CNL4630  4630  Mental Hls & Disability  CNL  Counseling  3  Factors influencing behavior of individuals and methods a rehabilitation specialist may use in observing, analyzing, and improving attitudes and behavior.                                                                     UG  LE  Lecture
Fall 2020
PLS4850  4850  Chinese Foreign Policy  PLS  Political Science  3  Examines development and current practices of Chinese foreign policy. Special attention given to China-U.S. relations, as well as China's role in international and regional organizations. Integrated Writing course.                       UG  LE  Lecture
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.  
UG  LE  Lecture  
Fall 2020  
LDR7090  7090  Org. Intent & Sustainabi  
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  
BME3770  7730  Medical Devices  
BME  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.  
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  Nur 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  
IS4320  4320  Hum-Sys Int & Usability Engg  
IIE  Industrial & Systems Engg  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  
PSY8020  8020  Stress, Cognition, Hlth  
PSY  Psychology  1  Seminars with in-depth coverage of special topics in human factors. Topcs 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  
Department Managed Prerequisite(s): Undergraduate level CHI 2010 Minimum Grade of D-  
UG  LE  Lecture  
Fall 2020  
MUS1310  1310  Beg Guitar Class I  
MUS  Music  1  Focuses on the development of good playing habits by 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  
PSY9540  9540  Dev. Behavioral Peds II  
PSY  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/tamting). 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  
KINH100  100  Bowling  
KINH  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/Fac-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.  
UG  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 sites, industrial sites, and urban sites. May include a small analysis project utilizing excavated materials from Ohio historic sites.  
GR  LE  Lecture  
Fall 2020  
TH3400  3400  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  
PS9650  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 formal 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 Lrng 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: Scrapping  
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
Elements of K-12 health education: core content; relationship to Coordinated School Health/Whole School, Whole Community. Whole Child; controversy management, and guidelines for classroom applications and practice.

Techniques of therapy applied to populations whose problems arise from unhealthy lifestyles and not from serious psychopathology. Topics include stress management, weight control, and health maintenance.

Survey of the development of classical culture from prehistoric Greece to the fall of the Roman Empire. A broad view of the philosophy, religion, mythology, literature, art, and architecture and the interrelated political, economic, and social conditions.

Relationship of power, alliances, arms races, etc. to the initiation, prosecution, and aftermath of interstate war. Effects of an increasingly globalized world on war. Integrated Writing course.

Development of an understanding of the knowledge base and values of social work practice; acquisition of basic skills through the use of role-playing and simulated interviewing process. Attention given to micro-levels systems, emphasizing the interactions of micro systems with mezzo and macro level systems.

Using positive behavior support; discussion of research, practice, classroom management innovations in field to prepare student interns to meet instructional/behavioral demands of working with those with exceptional learning needs. Field experiences required.

Reviews key historical events and personalities who have contributed significantly to psychology as a philosophy, scientific discipline and profession.

This course will examine curriculum, methods, and materials in the teaching of mathematics for grades 7-12. This includes lesson planning, assessment, differentiation, technology, and content for algebra and geometry courses.

Communication-intensive seminar integrating knowledge within Forensic Psychology.

Students in DS 7950 will conduct a research project that involves developing a contemporary research question followed by a combination of literature review; experimental design, collection, curation, and analysis of data, and critical evaluation of outcomes. The final product of the course is a thesis document of archival quality. A Master's Thesis should constitute an original contribution to the body of knowledge within the discipline.

Introduction to basic statistical methods and data analysis for research and evaluation.

Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.

This course provides the opportunity to apply, integrate, and synthesize knowledge and experience gained throughout the MPH Program to a question or problem of public health relevance. Under supervision of a faculty advisor, students conduct an integrative writing project usually developed in the form of an applied research paper, policy analysis, community assessment, program evaluation, comprehensive case analysis, or "test practices" review. A full report is written and presented.<br/&>Department Managed Prerequisite(s): Graduate level PPH 8210 Minimum Grade of P/GR</b>

Two- and three-dimensional Euclidean geometry from a perspective 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.

Comprehensive treatment of earth materials and the external and internal geologic processes that shape the earth. Two- and three-dimensional Euclidean geometry from a perspective 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.

Comprehensive treatment of earth materials and the external and internal geologic processes that shape the earth. Two- and three-dimensional Euclidean geometry from a perspective 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.

This course builds awareness of cultural similarities and differences and addresses the impact of cultural and personal variables on English language learning in an international setting. Provides an understanding of the language acquisition process.<br/&>Department Managed Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D (ENG 4710 can be taken concurrently).<br/&>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 3</b>

Professor-led study abroad program in China; may include service-learning component; taught in Chinese.<br/&>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 3</b>

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.
| Fall 2020 | KNSH8990 | 8990 | Phys Ed Research | KNSH | 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 | HST7330 | 7330 | 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 | URS5210 | 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, 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 | EES4400 | 4440 | Mapping Methods | EES | Earth & Environmental Sciences | 2 | Basic skills of mapping and measurement with a Brionto 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 | LL | Lecture/Lab Combination |
| Fall 2020 | CEG4330 | 4330 | Microproc Embedded Sys | 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. | 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. | GR | 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 effect of rapid social and technological change on this process. | GR | LE | Lecture |
| Fall 2020 | THU3160 | 3160 | Singing for Actor VII | TH | Theatre | 1 | Private singing lessons for acting, theatre studies and dance majors only. | UG | ST | Studio |
| Fall 2020 | EES5990 | 5990 | Spec Pr/Int 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 | Interns 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. | GR | 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. | GR | 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 Eng Devel 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. | 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 | PL4824 | 4824 | Local/Community Internship | PL | 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 | KNSH1800 | 1800 | Weight Training | KNSH | 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 | DOS0990 | 0990 | Adv Qual Mihl Seminar | DOS | 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 | BIO3150 | 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 Instr Practicum II | SPN | Spanish | 1 | Peer teachers observe and assist in elementary and/or intermediate level classes; continuation of practicum from SPN 6110. | GR | PR | Practicum |
| Fall 2020 | ECG7260 | 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 systemic interrelations, and their impact on political, economic and social structures, practices, and outcomes. | 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 | BMS8070 | 8070 | Virology | BMS | Biomedical Sciences | 3 | Course is offered at levels 1 and 2. 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 | ARA3110 | 3110 | Arabic Conversation I | ARA | Arabic | 3 | A language practicum for intermediate students of Arabic, designed to expand conversational skills in Modern Standard Arabic. | GR | LE | Lecture |
Fall 2020  PS9960  9960 Selected Topics  PSI  Professional Psychology 1  Content selected by instructor in consultation with the Office of Academic Affairs.  GR  IS  Independent Study
Fall 2020  PLS4380  4380 Environmental Law Policy  PLS  Political Science 3  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.  UG  LE  Lecture
Fall 2020  ANT8520  8520 Biomedical Experimental Design  ANT  Anatomy 2  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 well written rationale, experimental design, predicted results and conclusions, and how to give effective oral presentations. In-class discussions will focus on elements of good experimental design, reinforcement of scientific writing, and elements of effective oral presentations in an effort 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.  GR  LE  Lecture
Fall 2020  MTH520  7520 Hydrogen Energy  ME  Mechanical and Materials Engr 3  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. <b>Department Managed Prerequisite(s): Undergraduate level MTH 3310 Minimum Grade of D or Undergraduate level MTH 5310 Minimum Grade of D and Undergraduate level MTH 3760 Minimum Grade of D or Undergraduate level MTH 5750 Minimum Grade of D</b>  GR  LL  Lecture/Lab Combination
Fall 2020  EE3520L  3520L Dig & Fdbck Cont SyS Lab  EE  Electrical Engineering 1  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 system stability, apply state space and root locus method, and to analyze and design PID Controllers.  UG  LB  Lab
Fall 2020  HST4500  4500 Latin American History  HST  History 3  Examines selected Latin American nations and regions (e.g., Mexico, Argentina) and particular topics (e.g., Authoritarianism) in detail. Topics vary. Integrated Writing course.  UG  LE  Lecture
Fall 2020  ML2050  2050 Russian Culture  ML  Modern Languages 3  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.  UG  LE  Lecture
Fall 2020  AES4700  4700 ECL Lab  AES  Aerospace Studies 0  Students who have completed Professional Officer coursework but are not yet eligible to graduate enroll in this course to remain proficient until they graduate.  UG  LB  Lab
Fall 2020  BBI6550L  6550L Plant Systematics Lab  BIO  Biology 0  Required laboratory for BBO 6550.  GR  LB  Lab
Fall 2020  BMS7461  7461 Rehab Eng Computers I  BMS  Biomedical Sciences 3  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.  GR  LL  Lecture/Lab Combination
Fall 2020  MTH2800  2800 Writing Math Proofs  MTH  Mathematics 3  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.  UG  LE  Lecture
Fall 2020  BBO3710  3710 Forensic DNA Profiling  BIO  Biology 2  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.  UG  LE  Lecture
Fall 2020  EDT8130  8130 Online Cross 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  EDS6510  6510 Found Spec Ed  EDS  Education - Special Education 3  Introduction to law, research, and history of special education.  GR  LE  Lecture
Fall 2020  PSY3010  3010 Research Methods I  PSY  Psychology 4  Basics of experimentation, data analysis and writing using the American Psychological Association (APA) style. Integrated Writing course.  UG  LE  Lecture
Fall 2020  ME2700R  2700R StruckProp of Mat I Rec  ME  Mechanical and Materials Engr 0  Required recitation for ME 2700. <b>Department Managed Prerequisite(s): Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level PHY 2400 Minimum Grade of D</b>  UG  RE  Recitation
Fall 2020  FTN4150  4150 Real Estate Fin & App  FIN  Finance 3  An 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.  UG  LE  Lecture
Fall 2020  CHM7020  7020 Res Perspectives Chm  CHM  Chemistry 1  Lecture/reading course to acquaint new graduate students with the research being carried out by the faculty in the Department of Chemistry.  GR  LE  Lecture
Fall 2020  CLS2040  2040 Great Books - Classics  CLS  Classics 3  Introduction to interpreting literature, using selected texts from ancient Greece and Rome, viewed in their socio-historical contexts and used for their value in treating more general themes of the human experience. Integrated Writing course.  UG  LE  Lecture
Fall 2020  PSY2560  2560 Psychology of Tango  PSY  Psychology 3  Explores inquiries into Argentine tango from the perspective of psychological science, while providing dance instruction intended to complement those inquiries.  UG  LL  Lecture/Lab Combination
Fall 2020  MTH6550  6550 Advanced Linear Algebra  MTH  Mathematics 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 form. Perron-Frobenius results on positive matrices. <b>Department Managed Prerequisite(s): Undergraduate level MTH 2530 Minimum Grade of D and Undergraduate level MTH 2800 Minimum Grade of D</b>  UG  LE  Lecture
Fall 2020  MUE8990  8990 Collegiate Chorale  MUE  Music: Ensembles 1  Development of choral and vocal skills. Emphasis on advanced choral concert repertoire representing a wide range of historical and compositional styles. Audition required.  GR  LL  Lecture/Lab Combination
Fall 2020  NEU1000  1000 Intro to Neuro Research  NEU  Neuroscience 2  Introduction to the primary neuroscience literature. Students will learn how to search for articles and begin to analyze the different components of them.  UG  LE  Lecture
Fall 2020
PPH7440  7440  Public Health Project Magna  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.  <b>Department Managed Prerequisite(s): Graduate level PPH 7420 Minimum Grade of C or permission by instructor</b>  UG  LE  Lecture

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.  UG  LE  Lecture

Fall 2020
EE7170  7170  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.  <b>Department Managed Prerequisite(s): Graduate level EE 6210 with minimum grade of C and Undergraduate level EE 3260 with minimum grade of D</b>  UG  LE  Lecture

Fall 2020
NUR4460C  4460C  Lpsh Mgmt to Prof Nring Clin  NUR  Nursing  0  Required clinical for NUR 4460.  UG  CL  Clinical

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.  GR  PR  Practicum

Fall 2020
CEEG950  950  MSECE Thesis Research  CEEG  Computer Engineering  1  Master’s thesis research in computer engineering.  GR  IS  Independent Study

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.  UG  LE  Lecture

Fall 2020
PHY2450  2450  Concepts in Physics I  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.  UG  LL  Lecture/Lab Combination

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

Fall 2020
ART4490  4490  Senior Painting Thesis  ART  Art  3  Production of coherency, 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.  <b>Department Managed Prerequisite(s): Undergraduate level ART 3490 Minimum Grade of D</b>  UG  IS  Independent Study

Fall 2020
FR2020  2020  Intermediate French II  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.  <b>Department Managed Prerequisite(s): Undergraduate level FR 2010 Minimum Grade of D</b>  UG  LE  Lecture

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.  GR  IS  Independent Study

Fall 2020
FR6820  6820  Ind Read for Grad Studen  FR  French  3  Independent reading for graduate students. Taught in French.  <b>Department Managed Prerequisite(s): Graduate level FR 5110 Minimum Grade of D or Graduate level FR 5120 Minimum Grade of F</b>  GR  IS  Independent Study

Fall 2020
MGT4770  4770  Train, Devp, 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.  UG  LE  Lecture

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, 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.  <b>Department Managed Prerequisite(s): Undergraduate level CS 1181 Minimum Grade of C</b>  UG  LE  Lecture

Fall 2020
ME1040  1040  EGR Design & Solid Model  ME  Mechanical and Materials Eng  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.  UG  LL  Lecture/Lab Combination

Fall 2020
MUS3280  3280  Instrumental Music Ed Meth  MUS  Music  1  Teaches students the methodology, techniques and strategies for teaching elementary, middle and high school concert band programs.  UG  LE  Lecture

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.  GR  PR  Practicum

Fall 2020
EDF9990  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.  GR  IS  Independent Study

Fall 2020
EDS4190  4190  Dyslexia Interventions Methods  EDS  Education - Special Education  3  Practices and procedures used in developing curricula for individuals with dyslexia and dyslexia tendencies. Clinical application, classroom accommodation, and development/implementation of the IEP are discussed.  UG  LE  Lecture

Fall 2020
HPR4250  4250  K-12 Practicum  HPR  Health Phy Educ & Recreation  12  Supervised full-time student teaching in a K-12 school setting.  UG  PR  Practicum

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.  GR  LE  Lecture

Fall 2020
ENG6640  6640  TopicsTech/Prof Writing  ENG  English  3  Courses, seminars, or workshops in specialized topics relating to business, technical, and professional writing.  <b>Department Managed Prerequisite(s): Undergraduate level ENG 3610 Minimum Grade of D or Graduate level ENG 5610 Minimum Grade of D</b>  UG  LE  Lecture
Fall 2020  
EDT7810  7810  Life Tech: 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.

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.

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.

Fall 2020  
EDL9900  9900  Practicum II. Supi  
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.

Fall 2020  
MLI4500  4500  Advanced Topics  
MLIL 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.

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.

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.

Fall 2020  
PHY6820  6820  Electromagnetic Th. II  
PHY  Physics  4  Understanding of formal Electromagnetic Theory including application of multipole treatments in Electro- and Magnetostatics, applications of relativity, and application of Maxwell's equations to particular physical systems.

Fall 2020  
NUR3460C  3460C  Nursing Care of Children Clin  
NUR  Nursing  0  Required clinical for NUR 3460.

Fall 2020  
MUE5070  5070  Paul L. Dunbar Choral  
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.

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; the question of the universality of mystical experience. 

Fall 2020  
CEG9900  9900  Special Topics in CS  
CEG Computer Engineering  1  Selected topics in computer science.

Fall 2020  
EDT7800  7800  ICT 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.

Fall 2020  
ART3670  3670  Beg Printmaking: Intaglio  
ART Art  3  Exploration of printmaking stressing 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. Department Managed Prerequisite(s): Undergraduate level ART 2280 Minimum Grade of D and Undergraduate level ART 2900 Minimum Grade of D or

Fall 2020  
CHM5520L  5520L  Physical Chem Lab II  
CHM Chemistry  2  Experimental methods of physical chemistry.

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. Department Managed Prerequisite(s): Undergraduate level STT 5610 Minimum Grade of D or Graduate level STT 5610 Minimum Grade of D or

Fall 2020  
HST6830  6830  Topics in Gender History  
HST History  3  Intensive analysis of subject 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.

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.

Fall 2020  
CS8910  8910  PhD Seminar in CS  
CS Computer Science  1  Seminar discussion of current research in computer science.

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.

Fall 2020  
ECE4700  4700  Research in ECE Topics  
ECE Education - Early Childhood  3  Research topics, issues and trends in Early Childhood Education using qualitative and action research methods.

Fall 2020  
KEN1340A  1340A  Juda  
KENH Kiniology & Health  1  Fundamental skills and knowledge of Juda. Competency-based approach. Course may accommodate disabled students when appropriate.

Fall 2020  
REL3790  3790  Topics in Greco-Rom Rebs  
REL Religion  3  Examination of selected topics related to the practice of religion in the Greco-Roman world. Integrated Writing course.

Fall 2020  
HPR2600  2600  Intro to Education  
HPR Health Phy Educ & Recreation  3  Orientation to the teaching profession and pluralistic American society as well as an awareness of the global community.

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.

Fall 2020  
BME7380  7380  Near to Relh - Hlth & Dia  
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
<th>Description</th>
<th>Level</th>
<th>Type</th>
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<tr>
<td>BMS9900</td>
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<td>Biomedical Sciences Sem</td>
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<td>Biomedical Engineering</td>
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<td>Economics</td>
<td>3</td>
<td>Lecture</td>
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<td>Industrial &amp; Systems Eng</td>
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<td>Anthropology</td>
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<td>9770</td>
<td>Laboratory Rotation II</td>
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<td>HPR4100</td>
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<td>Woman Int Perspective</td>
<td>WGS, Women, Gender, &amp; Sexuality</td>
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<td>Reading</td>
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<td>CS, Computer Science</td>
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<td>Lecture</td>
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<td>Fundamentals of Info Sys</td>
<td>MIS, Management Information Systems</td>
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<tr>
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<td>4240</td>
<td>Disease Eco &amp; Evol</td>
<td>BIO, Biology</td>
<td>3</td>
<td>Lecture</td>
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</tbody>
</table>
Fall 2020  STT6300  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 tests, simple and multiple regression, and analysis of variance. <b>Department Managed Prerequisite(s): Undergraduate level STT 2640 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  SM1990  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. IS  Independent Study

Fall 2020  STT3960  3960  Topics in Stat and Prob  STT  Statistics  1  May be taken for letter grade or pass/unsatisfactory. Titles vary. <b>Department Managed Prerequisite(s): Undergraduate level STT 2660 Minimum Grade of D-. GR</b>  IS  Independent Study

Fall 2020  TH1760  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. <b>Department Managed Prerequisite(s): Undergraduate level TH 1210 Minimum Grade of D-. GR</b>  ST  Studio

Fall 2020  ED7400  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 midproject TK20 assignment. <b>Department Managed Prerequisite(s): Undergraduate level ED 1740 Minimum Grade of D-. GR</b>  SE  Seminar

Fall 2020  ED52900  2900  Exceptionalities  EDS  Education - Special  Education  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 for K-12 students. <b>Department Managed Prerequisite(s): Undergraduate level EDS 2900 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  PHY3150  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 ADCs/DACs. <b>Department Managed Prerequisite(s): Undergraduate level PHY 2450 or PHY 2460, but not both courses, to satisfy the requirements of the WSU Core. GR</b>  LL  Lecture/Lab Combination

Fall 2020  MUE4900  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. <b>Department Managed Prerequisite(s): Undergraduate level MUE 2900 Minimum Grade of D-. GR</b>  LL  Lecture/Lab Combination

Fall 2020  MUS3720  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. <b>Department Managed Prerequisite(s): Undergraduate level MUS 2720 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  FAS3310  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. <b>Department Managed Prerequisite(s): Undergraduate level FAS 2310 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  EES4380  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. <b>Department Managed Prerequisite(s): Undergraduate level EES 2510 Minimum Grade of D-. GR</b>  LL  Lecture/Lab Combination

Fall 2020  CHM4250  4250  Selected Topics in Inorganic Chemistry  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. <b>Department Managed Prerequisite(s): Undergraduate level CHM 3250 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  EES2510L  2510L  Earth Systems Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 2510. <b>Department Managed Prerequisite(s): Undergraduate level EES 2510 Minimum Grade of D-. GR</b>  LB  Lab

Fall 2020  PHY1000  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. <b>Department Managed Prerequisite(s): Undergraduate level PHY 2450 or PHY 2460, but not both courses, to satisfy the requirements of the WSU Core. GR</b>  SE  Seminar

Fall 2020  PHY2460  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. <b>Department Managed Prerequisite(s): Undergraduate level PHY 2450 Minimum Grade of D-. GR</b>  LL  Lecture/Lab Combination

Fall 2020  PSY4740  4740  Space and Time Capstone  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on space and time. Integrated Writing course. <b>Department Managed Prerequisite(s): Undergraduate level PSY 2740 Minimum Grade of D-. GR</b>  SE  Seminar

Fall 2020  EST7900  7900  Perspectives in Env Sci  ES  Environmental Sciences  1  Explores current topics and contemporary research programs and ideas in Environmental Sciences. <b>Department Managed Prerequisite(s): Undergraduate level EST 2790 Minimum Grade of D-. GR</b>  SE  Seminar

Fall 2020  HST3400  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. <b>Department Managed Prerequisite(s): Undergraduate level HST 2300 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  URS6210  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. <b>Department Managed Prerequisite(s): Undergraduate level URS 2210 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  BB2010  2010  Int'l Business and Trade  B  International Business  3  Characteristics, trends, history, strategic principles, and tactics for success in conducting international business. Non-business majors only. <b>Department Managed Prerequisite(s): Undergraduate level BB 2010 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  EES6620  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. <b>Department Managed Prerequisite(s): Undergraduate level EES 4620 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  PHY7530  7530  Ultrafast Optics  PHY  Physics  3  The science and application of ultrafast optics. The theory of the generation, propagation, and application of ultrafast laser pulses. Nonlinear optics as related to ultrafast optics. <b>Department Managed Prerequisite(s): Undergraduate level PHYS 3530 Minimum Grade of D-. GR</b>  SE  Seminar

Fall 2020  AVI2000  2000  Intro to Aviation  AVI  Aviation  3  Introduction to aviation systems and careers: airlines, business, freight, flight test, and military flight operations. Introduces aviation systems including aircraft, airports, airspace, and regulatory environment for the broad range of aviation activities. <b>Department Managed Prerequisite(s): Undergraduate level AVI 2000 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  BM57530  7530  Molecular Signalling  BMS  Biomedical Sciences  3  Also listed as BM 57530. A molecular analysis of information transfer into and within cells. <b>Department Managed Prerequisite(s): Undergraduate level BM 57530 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  MUS2900  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. <b>Department Managed Prerequisite(s): Undergraduate level MUS 2900 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  FIN7240  7240  Semi 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. <b>Department Managed Prerequisite(s): Undergraduate level FIN 7240 Minimum Grade of D-. GR</b>  SE  Seminar

Fall 2020  ED56090  6090  Dyslexia Medium 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. <b>Department Managed Prerequisite(s): Undergraduate level EDS 56090 Minimum Grade of D-. GR</b>  LE  Lecture

Fall 2020  IT1220  1220  Adv Photo Des Sci  IT  Information Technology  3  Advanced photography techniques including image editing, output, workflow, advanced exposure, lighting techniques, and raw shooting. <b>Department Managed Prerequisite(s): Undergraduate level IT 1210 Minimum Grade of D-. GR</b>  LL  Lecture/Lab Combination
Fall 2020  
EC7300  
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  
LE  
Lecture  

Fall 2020  
EE7520L  
Low Par VLSI Sys Des Lab  
EE  
Electrical Engineering  
1  
Required lab for EE 7520.  
GR  
LB  
Lab  

Fall 2020  
PSY4940  
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  
SE  
Seminar  

Fall 2020  
BMS7210  
Orthoped & Prosthet Eng  
BMS  
Biomedical Sciences  
3  
The course enables the student to use engineering techniques in orthopaedic and prosthetic applications. Students also learn 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  
LE  
Lecture  

Fall 2020  
PSY9090  
Topics in Human Factors  
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  
LE  
Lecture  

Fall 2020  
EECE4020  
ECE-Gen Lang Arts & SS  
ECE  
Education - Early Childhood  
3  
Pedagogy and content knowledge of content area reading through the study of grades 4 and 5 social studies.  
UG  
LE  
Lecture  

Fall 2020  
FAS2870  
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  
PR  
Practicum  

Fall 2020  
NUR7203  
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  
SE  
Seminar  

Fall 2020  
EE2011  
Analog Circuit Techniques  
EE  
Electrical Engineering  
3  
Electrical quantities and their relationships, Impedance models of basic circuit elements, Conservation laws for current and voltage, Transient response of linear circuits.  
UG  
LE  
Lecture  

Fall 2020  
ANT3120  
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  
LE  
Lecture  

Fall 2020  
CS2990  
Spec Topics in Comp Sci  
CS  
Computer Science  
1  
Special Topics in Computer Science.  
UG  
LE  
Lecture  

Fall 2020  
CEG3310  
Computer Organization  
CEG  
Computer Science  
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  
LE  
Lecture  

Fall 2020  
FAS3120  
Agriculture Laws  
FAS  
Food and Agricultural Systems  
3  
Study of the U.S. legal system and areas of law that relate to agriculture and agricultural science. Topics include contracts, torts and civil liability, property contracts, land use planning, environmental issues, and other relevant topics.  
UG  
LE  
Lecture  

Fall 2020  
ART3660  
Bigプリンキング Relief  
ART  
Art  
3  
Exploration of printmaking, stress reduction 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.  
UG  
LB  
Lab  

Fall 2020  
IT2400  
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  
LL  
Lecture/Lab Combination  

Fall 2020  
CS6290  
Cryptography Data Secur  
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.  
GR  
LE  
Lecture  

Fall 2020  
NUR4800  
Transition Role Prof Nur  
NUR  
Nursing  
3  
Synthesis of concepts, theories, processes, issues of informatics, and models to facilitate transition into professional nursing.  
UG  
LE  
Lecture  

Fall 2020  
HST4300  
African History  
HST  
History  
3  
Examines particular periods, regions, or countries in African history. Topics vary. Integrated Writing course.  
UG  
LE  
Lecture  

Fall 2020  
PTX6260  
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  
LE  
Lecture  

Fall 2020  
EE7560  
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.  
GR  
LE  
Lecture  

Use assessment data to plan and implement remediation in a school setting. Write professional case studies integrating assessment and tutoring data. Includes twenty hours of off-campus elementary school setting.<b>Department Managed Prerequisite(s): Graduate level EDS 6590 Minimum Grade of D and Graduate level EDS 6610 Minimum Grade of D and Graduate level EDS 6620 Minimum Grade of D or Graduate level EDS 6600 Minimum Grade of D and Graduate level ED 6040 Minimum Grade of D and Graduate level ED 6050 Minimum Grade of D or D-.<b>GR</b></p>

**Fall 2020**

**ASM7771**
7771 Fund Aerospace Med I
ASM Aerospace Medicine
3 Fundamentals of Aerospace Medicine I is the first in a series of three courses that provide a foundation of basic principles and concepts applicable to the multiple realms encountered in the field of aerospace medicine. Each of the two subsequent courses in the series will build upon the knowledge gained in this initial exposure and further expand and progressively integrate knowledge attained.<b>GR</b>

**MIL2011**
2011 Foundation of Ldrship Lab
MIL Military Science 0 Application of Army tactics, techniques and procedures 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.<b>UG</b>

**BIO4090**
4090 Intro to R Biology App
BIO Biology 3 Programming biostatistics applications in the statistical software package R.<b>UG</b>

**ATH320**
3220 Human Variation and Adpt
ATH Anthropology 3 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.<b>UG</b>

**PLS6600**
6540 Politics of Mid 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.<b>GR</b>

**CNE7800**
7800 Sys Tech in Mar & Fam
CNE Counseling 2 This course focuses on teaching systemic interventions and problem solving in the process of resolving marriage and family related concerns.<b>GR</b>

**Soc4670**
4670 Disability-Pwr, Pol, Prv
SOC Sociology 3 Examines disabling from a sociological perspective and provides critical engagement with contemporary issues and debates in disability politics.<b>UG</b>

**DAN1210**
1210 Jazz for MT 1
DAN Dance 1 Group class introducing Musical Theatre majors to fundamentals of jazz and modern dance techniques.<b>UG</b>

**PSY2030**
2030 Careers in Clinical Psy
PSY Psychology 1 Help students explore the field of Clinical Psychology by learning about different career paths and educational options within the field. Also, students will be introduced to some of the various opportunities that are available to those who pursue clinical psychology.<b>UG</b>

**PLS4180**
4180 Politics and Ethics
PLS Political Science 3 Philosophical and legal foundations for regulating ethics among public officials. Integrated Writing course.<b>UG</b>

**PLS4930**
4930 Bioethics and Law
PLS Political Science 3 Examines legal implications of new biological technologies, particularly mind and behavior control, genetic engineering, birth and death control and organ transplantation.<b>GR</b>

**PSY8220**
8220 Spatial Knowledge
PSY Psychology 3 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.<b>GR</b>

**MIL2022**
2022 Found of Tac Ldrship Lab
MIL Military Science 0 Introduction into squad member responsibilities, battle drills and patrols. Each lab is cadet-led and cadre-supervised. Mandatory participation in weekly two-hour leadership lab, three weekly physical fitness classes and weekend training exercises for all contracted cadets.<b>UG</b>

**ENG9370**
6730 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.<b>GR</b>

**PSN950**
9510 Dev. Behavioral Peds I
PSY Professional Psychology 3 Part one of a two-semester course addressing infant through adolescent development; therapeutic interventions; and assessments and interventions for disorders such as Autism, Aspergers, and Noteworth Learning Disorders. Specific health conditions in early childhood through adolescence e.g., immunological disorders, renal disorders, traumatic brain injury, etc., will be addressed. Students will also learn about consultation (i.e. day-care and home-based), advocacy, and health care policy.<b>UG</b>

**ME4720**
4720 Engineering Polymers
ME Mechanical and Materials Eng 3 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.<b>UG</b>

**EES1030**
1030 Paleobiology Dinosaurs
EES Earth & Environmental Sciences 4 Multidisciplinary investigation into the morphology, classification and identification of the dinosaurs. Environmental, climatic, and geographic conditions on earth during the time of the dinosaurs. Biological principles involved in understanding the origin, evolution, and extinction of the dinosaurs.<b>UG</b>

**NUR4810**
4810 Nur Care in Genomics Era
NUR Nursing 3 Foundation course in genomics and determinants of health that explores essential competencies for professional nurses to improve clients' mental health and increase their longevity. Emphasizes health and wellness in context of human diversity for individuals and families. Implications for best practices associated with genomic information including ethics and counseling are highlighted.<b>UG</b>

**ME3320**
3320 Thermodynamics II
ME Mechanical and Materials Eng 3 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.<b>UG</b>

**BMB1010**
1010 Topics in BMB
BMB Biochem & Molecular Biology 0.5 Topics will vary. Current media coverage of biochemistry and molecular biology related events, popular literature, or other special interest topics related to biochemistry and molecular biology.<b>UG</b>
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 Analog to Digital Converters, and CMOS Digital to Analog Converters, and Switched Capacitor Circuits.  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 or (Graduate level EE 6540 Minimum Grade of D) and (Graduate level EE 6540L Minimum Grade of D)).

Fall 2020  SW4650  6500  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/Dogs  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  3010  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  MIL2020  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  MUE6940  6940  Univ 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.

Fall 2020  DOS59060  9060  Adv Rearch 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 Design 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 a 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 2530 Minimum Grade of D and (Undergraduate level MTH 4310 Minimum Grade of D or Graduate level MTH 6310 Minimum Grade of D)) or (Graduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L 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  KNH1100  1100  PE for Chdm 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 consists methods of adapting activities in physical education for individuals with disabilities.

Fall 2020  EED4990  4990  Internship II: Stud Teach  EED  Elementary Education P-5  9  Field experience student teaching placement in a P-5 setting.

Fall 2020  PSU9920  9920  Manual Control  PSY  Psychology  3  Description of human control processes and their models. Analyses of human skills and skill typology.

Fall 2020  CTE5700  5700  Research 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 and 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 Engrg  3  Fundamentals of finite element analysis as a general numerical method for the solution of boundary value problems in engineering, with an emphasis on structural and solid mechanics.  Department Managed Prerequisite(s): 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 and Undergraduate level MTH 2350 Minimum Grade of D)) or Undergraduate level ME 3120 Minimum Grade of D)) or (Graduate level MTH 4310 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, queuing analysis, and decision theory. Emphasis on mathematical modeling and interpretation of solutions.

Fall 2020  PSY6030  6030  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.

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.
Fall 2020  BMS8020  8020  Immunology  BMS  Biomedical Sciences  4  (Also listed as M&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.  GR  LE  Lecture

Fall 2020  MTH9800  8000  Graduate Seminar  MTH  Mathematics  1  Seminar on selected advanced topics in mathematics.  GR  SE  Seminar

Fall 2020  ED6980  6980  Workshops in Education  ED  Education  0.5  Workshops in selected areas of education taught through the Division of Professional Development (DPD).  GR  LE  Lecture

Fall 2020  BHE4620  6820  Supp Ch Analy & Des  BHE  Industrial & Hum Fac 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.—Department Managed Prerequisite(s): Graduate level MHE 6711.  GR  LE  Lecture

Fall 2020  BME7990  7990  Independ Stdy in BME II  BME  Biomedical Engineering  1  Graduate independent studies in advanced biomedical engineering. Topics vary.  GR  IS  Independent Study

Fall 2020  EDL9730  9730  Perspectives on Educ  EDL  Educational Leadership  3  Examines leadership, curriculum, and instruction in a rapidly evolving global and technological world from a district level perspective.  GR  SE  Seminar

Fall 2020  FAS2300  2300  Food Plant San and HACCP  FAS  Food and Agricultural Systems  3  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.  UG  LE  Lecture

Fall 2020  EES4410  4410  Phys Geol Nat Hist Ohio  EES  Earth & Environmental Sciences  2  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 laboratory and 4 one-day thematic field trips.  UG  LL  Lecture/Lab Combination

Fall 2020  TH4540  4540  Speech V  TH  Theatre  2  Emphasis on learning dialects.  UG  LL  Lecture/Lab Combination

Fall 2020  EDL8980  8980  Practicum II: 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  EDSD6020  6020  Lang Dev/Syst Soc Skl  EDS  Education - Special Education  3  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.  GR  LL  Lecture/Lab Combination

Fall 2020  EGR7040  7040  Design Optimization  EGR  Engineering  3  Concepts of limits and maxima; linear, dynamic, integer and nonlinear programming; variational methods. Interdisciplinary engineering applications are emphasized.  GR  LE  Lecture

Fall 2020  REL5120  5120  Modern Jewish Thought  REL  Religion  3  Examination of the major themes and issues in the works of contemporary Jewish thinkers (e.g., Buber, Bloch, Herberg, Fromm, Kaplan, Rothchild, Heschel, Rubenstein, and Weisel).  GR  LE  Lecture

Fall 2020  BIO4990  4990  Special Problems Biology  BIO  Biology  1  Independent laboratory study course.  UG  IS  Independent Study

Fall 2020  IT2320  2320  Publication Design  IT  Information Technology  3  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-/D-.  UG  LL  Lecture/Lab Combination

Fall 2020  APS3000  3000  APS Technologies  APS  Applied Studies  3  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.  UG  LL  Lecture/Lab Combination

Fall 2020  SAAS7550  7550  Sustain Pract LiChp&Hlpy Prof  SAA  Student Affairs in Higher Ed  3  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.  GR  LE  Lecture

Fall 2020  SOC3000  3000  Internship in CJ/Family  SOC  Sociology  3  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.  UG  IN  Internship

Fall 2020  ED7904  7904  Instruct Practices in Math  ED  Education  1  Centers on the effective implementation of various mathematical instructional practices, the evidence behind the practices, and their practical application in PK-12 classrooms.  GR  SE  Seminar

Fall 2020  PSY3330  3330  Personality Research Mkt  PSY  Psychology  4  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.  GR  LE  Lecture

Fall 2020  KHE1060A  1060A  Backpacking  KHE  Kinesiology & Health  1  Fundamental skills and knowledge of Backpacking. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  BIO4800  4800  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 makers 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 biodiversity.  GR  LE  Lecture

Fall 2020  SPN3500  3500  Spanish Ambassador Prog  SPN  Spanish  3  Professor-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-/D-.  UG  LE  Lecture

Fall 2020  EDL1200  1200  Ethics & Politics in Edu  EDL  Educational Leadership  3  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.  GR  LE  Lecture

Fall 2020  CHM4650  4650  Physical Polymer Chem  CHM  Chemistry  2  Structural and physical aspects of macromolecules. Emphasizes the relationship of polymer structure to physical and mechanical properties.  UG  LE  Lecture

Fall 2020  PHY7100  7100  Quantum Mechanics I  PHY  Physics  3  Principles of non-relativistic quantum mechanics, Schroedinger's equation and matrix mechanics. Facility with applications to atomic, molecular, nuclear, solid state, spin, and biological systems.  UG  LE  Lecture
Fall 2020 BMS7370 7370 Thermodynamics BMS Biomedical Sciences 2 Fundamentals of chemical thermodynamics; first, second, and third laws; applications to solutions. GR LE Lecture
Fall 2020 AED5780 6780 MA. Visual Arts C&M II AED Art Education 3 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. GR LE Lecture
Fall 2020 TH2100 2100 Theatre Technology TH Theatre 2 Participation in the operation of a production shop. Fundamentals of theatre technology, emphasizing basic processes and materials. Participation in selected department productions required. UG LB Lab
Fall 2020 CNL9510 9510 Clin Asses in Cld Prac CNL Counseling 3 Supervised clinical practice in the administration of mental health assessment instruments. Emphasizes advanced methods of administering and interpreting standardized tests. Includes use of assessment procedures in diagnosis and treatment planning. GR LE Lecture
Fall 2020 CLS3400 3400 Art and Archaeology CLS Classics 3 Greece in the Bronze Age, classical Greece and Rome, and selected areas of Greek and Roman art and archaeology. Integrated Writing course. UG LE Lecture
Fall 2020 MUS6200 6200 Opera Prod and Coaching MUS Music 2 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. GR LE Lecture
Fall 2020 FAS5350 3500 Animal Nutrition FAS Food and Agricultural Systems 3 Introduction to animal nutrition covering all aspects of nutrition for domestic animals from fundamentals of nutrition through feeds and feeding (digestion, absorption, assimilation, and utilization of nutrients, basic balancing of rations, and identification of feedstuffs). UG LL Lecture/Lab Combination
Fall 2020 ME4390 4390 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; future innovations in clean coal technology. (S) Department Managed Prerequisite(s): Undergraduate level ME 3360 Minimum Grade of D- or GR ME Lecture
Fall 2020 HED2330 2330 Human Sexuality for Educ HED Health Education 3 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. UG LE Lecture
Fall 2020 BOI3920 3920 Dept Honors Seminar BIO Biology 1 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. UG SE Seminar
Fall 2020 EES6470 6470 Astronomy K-12 Teachers EES Earth & Environmental Sciences 2 Introduction to astronomy and the space sciences from the viewpoint of the amateur astronomer. Emphasizes both aesthetic and scientific aspects, and the astronomer's enthusiasm for the subject. GR LE Lecture
Fall 2020 ASL4101 4101 Aspects of Deaf Life ASL American Sign Language 3 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. UG LE Lecture
Fall 2020 PLS6820 6820 State Legial Internship PLS Political Science 3 Students work for a state legislator in Columbus two days per week. They report weekly to the faculty instructor. This is an assessment of the experience at the end of the assignment. UG IN Internship
Fall 2020 ES7020 7020 Biogeochemical Cycles ES Environmental Sciences 3 This course examines the components of the Earth’s biogeochemical cycles and their interactions. The focus will be on the relationships among the earth, its atmosphere, and its oceans. UG LE Lecture
Fall 2020 ED7120 7120 Lit Inst Div Learners ED Education 3 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. GR LL Lecture/Lab Combination
Fall 2020 CTE6990 6990 Independent Study CTE Career and Technical Education 1 Independent study for CTE candidates. Topics vary. GR IS Independent Study
Fall 2020 ME8520 8520 Hydropower ME Mechanical and Materials Engr 3 Topics covered are hydrodynamics of waterways for power generation, hydraulic analysis for hydroelectric development for run-of-the-river systems and reservoir systems, dams and environmental impacts, environmental impact assessment, operations of reservoir systems, and economics of hydropower generation. (S) Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D- or Undergraduate level ME 3550 Minimum Grade of D- or GR ME Lecture
Fall 2020 MLB4990 4990 Medical Lab Op and Ed MLB Medical Laboratory Science 2 Principles of education, laboratory management, computer application and completion and presentation of a scientific project. Integrated Writing course. UG LE Lecture
Fall 2020 GEO3300 3300 World Regional Geography GEO Geography 3 Spatial characteristics that comprise world regions and connections between world regions utilizing environmental, cultural, political and economic factors. UG LE Lecture
Fall 2020 TAD2000 2000 Business Law TAD Technical Admin 3 The study of law as it relates to business organizations and transactions. Nature and classification of law, courts, torts, contracts, corporations, and negotiable instruments. UG LE Lecture
Fall 2020 LAT5570 5570 Readings in Roman Satire LAT Latin 3 Horace, Juvenal, Persius, Petronius, and Martial. Topics include development of this peculiar Roman genre, Fragments of Lucilius, satirical methods and techniques, satiric epigram, and satire as a source of information about Roman private life. Titles vary. GR LE Lecture
Fall 2020 REL5200 5200 Topics in Christianity REL Religion 3 Examination of selected topics related to the history and practice of Christianity. GR LE Lecture
Fall 2020 SAA7640 7640 Prog Eval-Assmnt High Ed SAA Student Affairs in Higher Ed 3 Studies theories, models, and techniques for evaluation of SAHE programs, and student organizations. Focus is on a systematic approach to designing, implementing and assessing the success of SAHE programs. GR LE Lecture
Fall 2020 LE1110 1110 Police Academy 2 LE Law Enforcement 3 Ohio Police Training Academy curriculum. Basic training and Ohio Revised Code: Examines criminal code (ORC 2903), laws of arrest, and firearms training. Requires admission to Grand Lake Law Enforcement Academy. UG LL Lecture/Lab Combination
Fall 2020 NEU3400 3400 Adv Neuro Lab Tech Micro NEU Neuroscience 4 How microscopes work. Techniques and skills necessary for preparing tissue for imaging. Optimizing images for visualization and quantification. Integrated Writing course. UG LL Lecture/Lab Combination
Fall 2020 BME3511L 3511L Bioelectronics I Laboratory BME Biomedical Engineering 0 Required laboratory for BME 3511. UG LL LB Lab
Fall 2020  ME2020  2020  Mech Drawing Solid Mod  ME  Mechanical and Materials Eng  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  CHM7510  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 3218 Minimum Grade of D or Undergraduate level SPN 3220 Minimum Grade of D.  GR  LE  Lecture

Fall 2020  DMV9999  999  For Administrative Use Only  DMV  DMV Consortium  0  UG  OT  Other

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, semiconductor, 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  PLS6681  6681  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 proficiency 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  KNE1440A  1440A  Phys Ed for Disabled  KNE  Kinesiology & Health  1  Fundamental skills and knowledge of Physical Education for Disabled. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LH  Lab

Fall 2020  SPN3220  3220  Adv SPN Conv and Writing  SPN  Spanish  3  Conversational writing techniques and grammar review; literary and film/media analysis incorporating targeted grammar, vocabulary, and stylistic devices. Taught in Spanish. Integrated Writing course.  GR  LE  Lecture

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  TH2150  2150  Singing Maa Theatre III  TH  Theatre  1  Private singing lessons for acting, theatre studies and dance majors only.  UG  ST  Studio

Fall 2020  SCM4800  4800  Special Topics in SCM  SCM  Supply Chain Management  3  Focuses on one area of 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 Aspct-Membran Trns  BMS  Biomedical Sciences  3  Employ 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/unsatisfactory.  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  PPH1720  7720  Global Health Systems  PPH  Population & Public Health  3  This course provides an overview to 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  PHY1120R  1120R  Principles of Physics II Rec  PHY  Physics  0  Required recitation for PHY 1120.  UG  RE  Recitation

Fall 2020  EES6200  6200  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  PLS4822  4822  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 & Reformatio  GER  German  3  Representative German authors of the period.  UG  LE  Lecture

Fall 2020  PRI5300  5300  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  PTX7010  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  GEO2000  2000  Global Awareness  GEO  Geography  3  Introduction to maps and using maps as means of developing global awareness.  UG  LE  Lecture

Fall 2020  ENG2000  2000  Business Writing  ENG  English  3  Writing business and organizational communication; rhetorical demands of writing in professional settings; attention to various forms including short reports and informal oral presentations.  UG  LE  Lecture

Fall 2020  SOC4650  4650  Glob Socl & Hum 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 and 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 transgendeo personas, surrogacy, body modifications, and HIV/AIDS. Integrated Writing.  UG  LE  Lecture
<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>Fall 2020</td>
<td>DAN4050</td>
<td>DAN</td>
<td>3</td>
<td>Introduction to the interrelated geology, physics, chemistry, and biology of the ocean.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ME3350</td>
<td>ME</td>
<td>3</td>
<td>Fluid Dynamics</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PLS4079</td>
<td>PLS</td>
<td>3</td>
<td>Seminar Political Theory</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ENG1030</td>
<td>ENG</td>
<td>3</td>
<td>Advanced Writing: ESL</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>STT3860</td>
<td>STT</td>
<td>1</td>
<td>Ind Read Stat and Prob</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>NEB3754</td>
<td>NEB</td>
<td>7</td>
<td>NNP Practice II</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BIO4270</td>
<td>BIO</td>
<td>4</td>
<td>Pathogenic Microbiology</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>DPI3830</td>
<td>DPI</td>
<td>3</td>
<td>Applied Elem Ger Instr</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES6240</td>
<td>EES</td>
<td>3</td>
<td>Oceanography</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>NEU4010</td>
<td>NEU</td>
<td>3</td>
<td>Intro to Neuroscience Program</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ENG1140</td>
<td>ENG</td>
<td>3</td>
<td>Research &amp; Argument</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GER3830</td>
<td>GER</td>
<td>3</td>
<td>German Language</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES6240</td>
<td>EES</td>
<td>3</td>
<td>Earth &amp; Environmental Sciences</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>NEU4010</td>
<td>NEU</td>
<td>3</td>
<td>Neuroscience</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUS3280L</td>
<td>MUS</td>
<td>3</td>
<td>Ads Choral Cond I</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EDT9220</td>
<td>EDT</td>
<td>3</td>
<td>2D Concepts &amp; Theories</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CHM3750</td>
<td>CHM</td>
<td>3</td>
<td>Thermodynamics</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PPH3940</td>
<td>PPH</td>
<td>3</td>
<td>Princ. of Emerg. Mgmt</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSY4720</td>
<td>PSY</td>
<td>3</td>
<td>Select Visual Art Cap</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EES6480</td>
<td>EES</td>
<td>3</td>
<td>Plate Tectonics for Edu</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ME4750</td>
<td>ME</td>
<td>3</td>
<td>Mat. Characterization</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MUS4420</td>
<td>MUS</td>
<td>3</td>
<td>Pedagogy</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>URS5990</td>
<td>URS</td>
<td>3</td>
<td>MPA Internship</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>DAN4320</td>
<td>DAN</td>
<td>3</td>
<td>Man's Ballet Class</td>
</tr>
</tbody>
</table>

- **UG**: Undergraduate level
- **GR**: Graduate level
- **LE**: Lecture
- **IS**: Independent Study
- **ST**: Studio
- **SE**: Seminar
- **LB**: Lab
- **Comb**: Combination
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE2990</td>
<td>Law Enforce Internship</td>
<td>LE</td>
<td>Law Enforcement</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>PHY4470</td>
<td>4470 Der of Ideas Phy Sci</td>
<td>PHY</td>
<td>Physics</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>ME4490</td>
<td>4490 Aerospace Structures</td>
<td>ME</td>
<td>Mechanical and Materials Eng</td>
<td>3</td>
<td>Stress, deformation, and stability analysis of aerospace structures. Thin-walled members bending, torsion, and shear stresses. Calculation in multilift structures. Buckling of thin plates. Department Managed Prerequisite(s): Undergraduate level ME 3120 Minimum Grade of D-.</td>
</tr>
<tr>
<td>TMG2700</td>
<td>2700 Production Management</td>
<td>TMG</td>
<td>Technical Management</td>
<td>3</td>
<td>Introduction to the production system, including product parts manufacture, process routing, quality standards, work measurement, work methods, scheduling, and inventory control.</td>
</tr>
<tr>
<td>ENG4850</td>
<td>4850 Sp Topics Creative Wrtg</td>
<td>ENG</td>
<td>English</td>
<td>3</td>
<td>Specialized courses in genres, modes, styles, practices, creative processes, and the craft of fiction, creative non-fiction, poetry, or playwriting. Integrated Writing course.</td>
</tr>
<tr>
<td>EGR980</td>
<td>1980 Special Topics in EGR</td>
<td>EGR</td>
<td>Engineering</td>
<td>1</td>
<td>Special topics in Engineering and Computer Science.</td>
</tr>
<tr>
<td>ENG7010</td>
<td>7010 Math &amp; Mat. Literature</td>
<td>ENG</td>
<td>English</td>
<td>3</td>
<td>Examination of the aims and approaches of scholars in the 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.</td>
</tr>
<tr>
<td>NUR275</td>
<td>7351 Curriculum Development</td>
<td>NUR</td>
<td>Nursing</td>
<td>3</td>
<td>Analysis of learning theories and models of nursing curriculum design. Development and evaluation of nursing curriculum and educational programs.</td>
</tr>
<tr>
<td>CLS3700</td>
<td>3700 Ancient Pol/Law/War</td>
<td>CLS</td>
<td>Classics</td>
<td>3</td>
<td>Politics, law and legal systems, and warfare in Greece and Rome. Integrated Writing course.</td>
</tr>
<tr>
<td>PSY3600</td>
<td>3600 Human Factors Psychology</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>Introduction to the study of human factors in the design and operation of machine systems.</td>
</tr>
<tr>
<td>SAA6670</td>
<td>6670 Career Dev Adv/Asses</td>
<td>SAA</td>
<td>Student Affairs in Higher Ed</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>TH1480</td>
<td>1480 Acting Aesthetics</td>
<td>TH</td>
<td>Theatre</td>
<td>2</td>
<td>Centralized acting course that includes various aspects of movement, vocal technique, improvisation, and scene work.</td>
</tr>
<tr>
<td>PLS7300</td>
<td>7300 Comparative Pol Theories</td>
<td>PLS</td>
<td>Political Science</td>
<td>3</td>
<td>Focuses on research emphasizing the comparative analysis of political systems and cultures, including mass and elite behavior in democratic and non-democratic regimes.</td>
</tr>
<tr>
<td>LE1020</td>
<td>1020 Intro to Criminal Law</td>
<td>LE</td>
<td>Law Enforcement</td>
<td>3</td>
<td>Rationale and legal foundations of legal procedures.</td>
</tr>
<tr>
<td>MGT2620</td>
<td>6260 Staffing</td>
<td>MGT</td>
<td>Management</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>MB3400</td>
<td>4300 Business Analytics</td>
<td>MBA</td>
<td>Management Information Systems</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>PSY5730</td>
<td>3730 Perception Methods</td>
<td>PSY</td>
<td>Psychology</td>
<td>4</td>
<td>Study of music and critical analysis of representative works from major composers of the Baroque period.</td>
</tr>
<tr>
<td>MUS4470</td>
<td>4470 Baroque Music</td>
<td>MUS</td>
<td>Music</td>
<td>3</td>
<td>Study of the Baroque style of counterpoint and its underpinnings. Specifically, the course will focus on the development of modern music.</td>
</tr>
<tr>
<td>MIL2010</td>
<td>2010 Foundations of Ldrshp</td>
<td>MIL</td>
<td>Military Science</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>NUR2221</td>
<td>2221 AG AC. Diagnostic Procd.</td>
<td>NUR</td>
<td>Nursing</td>
<td>2</td>
<td>This course provides theoretical knowledge and emphasizes psychomotor skills.</td>
</tr>
<tr>
<td>HED4430</td>
<td>4430 Hlth Progr Planning Eval</td>
<td>HED</td>
<td>Health Education</td>
<td>2</td>
<td>Knowledge and skills for planning, implementing, and evaluating Writing course.</td>
</tr>
<tr>
<td>ENG7520</td>
<td>7520 TESOL: Read/Write</td>
<td>ENG</td>
<td>English</td>
<td>3</td>
<td>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).</td>
</tr>
<tr>
<td>PPH7810</td>
<td>7810 Foundations of Clinical Ethics</td>
<td>PPH</td>
<td>Population &amp; Public Health</td>
<td>3</td>
<td>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 health care.</td>
</tr>
<tr>
<td>ED2700</td>
<td>2700 Intro Educational Psychology</td>
<td>ED</td>
<td>Education</td>
<td>3</td>
<td>Understanding how people learn, how to motivate, and assess PreK-12 students based on theoretical principles from field of educational psychology. Integrated Writing course.</td>
</tr>
<tr>
<td>OIS2200</td>
<td>2200 Admin Office Management</td>
<td>OIS</td>
<td>Office Information Systems</td>
<td>3</td>
<td>Office organization with an emphasis on work flow, proper equipment, problems in supervision, human relations, and management techniques.</td>
</tr>
<tr>
<td>AFSA4000</td>
<td>4000 Service Experience</td>
<td>AFSA</td>
<td>Afr /Afr Amer Studies</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>EE4360</td>
<td>4360 Digital Signal Proc</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>3</td>
<td>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.</td>
</tr>
</tbody>
</table>
Fall 2020  |  EC7190  |  7190  |  International Economics  |  EC  |  Economics  |  3  |  This course covers trade theories, commercial policy, and theories of international investment and migration, theories of exchange rate determination and open macroeconomics. Special attention is paid to international economic institutions and current financial crises. (b) Department Managed Prerequisite(s): Graduate level MBA 5200 Minimum Grade of C or (Undergraduate level EC 2640 Minimum Grade of D and Undergraduate level EC 2050 Minimum Grade of D);(b) |  GR  |  LE  |  Lecture  

Fall 2020  |  PSY4700  |  4700  |  Adv Topics Percept Cap  |  PSY  |  Psychology  |  3  |  Communication-intensive seminar integrating knowledge on perception. Topics vary. Integrated Writing course. (b) |  UG  |  SE  |  Seminar  

Fall 2020  |  ASM7572  |  7572  |  Aerospace Skills II  |  ASM  |  Aerospace Medicine  |  2  |  This is the second in a series of three courses designed to bridge traditional didactic knowledge obtained in the classroom with the post-graduation operational aerospace environment. Areas include human factors concepts and their integration and application to aerospace accident investigation. Contemporary accident investigation classification systems and utilization of the Division flight simulator will be employed in recreating mishaps to further strengthen learning outcomes. (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  GR4510  |  4510  |  Reading Greek Philosophy  |  GR  |  Greek  |  3  |  Plato, Xenophon, Aristotle, Epicurus, Epictetus, and Marcus Aurelius. Topics include pre-Socrates and the development of philosophical vocabulary, the sophistic movement, the Cynic tradition, and the development of popular philosophy. Titles vary. (b) |  UG  |  LE  |  Lecture  

Fall 2020  |  REL3420  |  3420  |  Japanese Religions  |  REL  |  Religion  |  3  |  Survey of historical and contemporary religious life in Japan. Primary focus will be on both early Shinto and later nationalistic Shinto, the varieties of Japanese Buddhism, and Japanese New religions. Topics examined include religious doctrine, faith and devotion, self-cultivation and enlightenment, monotheism, and religion and the state. (b) |  UG  |  LE  |  Lecture  

Fall 2020  |  PTX7001  |  7001  |  Cellular Pharm & Tox  |  PTX  |  Pharmacology/Toxicology  |  3  |  Modern toxicology focuses on understanding the mechanism of action of chemicals at the cellular level. This course will explore a spectrum of cellular mechanisms of toxicity providing a broad perspective of cutting-edge research in toxicology. (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  SW6420  |  6420  |  Con Foc F & C: Pol  |  SW  |  Social Work  |  0  |  Provides knowledge, skills, and values needed for advanced generalist social workers to engage, assess, intervene, and evaluate policy practice with children and families. Includes policies and programs that specifically target positive outcomes for children and families. (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  NUR8885  |  8885  |  Sys App Prog Impl & Eval  |  NUR  |  Nursing  |  3  |  This is an advanced DNP course focusing on the development and evaluation of proposed solutions for systems level programs and respective outcomes. Identify project, project outcomes, and evaluation. (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  SPN3520  |  3520  |  Survey of Span-American Lit  |  SPN  |  Spanish  |  3  |  Reading of prose, poetry, and plays by Spanish-American writers. From pre-Columbian times to the present. (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  CNL3600  |  3600  |  Adv Seminar Counseling  |  CNL  |  Counseling  |  1  |  Provides an opportunity for students to further develop skills in counseling, appraisal, research, or other related areas under faculty direction. (b) |  GR  |  SE  |  Seminar  

Fall 2020  |  EDL7680  |  7680  |  Teaching Diverse Learners  |  EDL  |  Educational Leadership  |  3  |  The purpose of this course is to gain contextual knowledge to teach in contemporary schools. The course emphasizes on psychological, social, and cultural aspects of teaching diverse populations. Diverse learners include, but are not limited to, students with disabilities, economically disadvantaged students, ethnic minorities, gifted, English Language Learners, multilingual speakers, students in workforce, and students with addictions and/or addictive behaviors. (b) |  GR  |  SE  |  Seminar  

Fall 2020  |  CS6280  |  6280  |  Combinatorics and Graphs  |  CS  |  Computer Science  |  4  |  Topics include: 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. (b) Department Managed Prerequisite(s): Undergraduate level MTH 2110 Minimum Grade of D and Undergraduate level CS 1160 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D or Undergraduate level CHG 2170 Minimum Grade of D; (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  MUS1120  |  1120  |  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. (b) |  UG  |  LE  |  Lecture  

Fall 2020  |  ART4780  |  4780  |  Advanced Sculpture  |  ART  |  Art  |  3  |  Further 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. (b) Department Managed Prerequisite(s): Undergraduate level ART 3750 Minimum Grade of D and Undergraduate level ART 3760 Minimum Grade of D and Undergraduate level ART 3770 Minimum Grade of D or Undergraduate level ART 3780 Minimum Grade of D; (b) |  UG  |  LB  |  Lab  

Fall 2020  |  REL5320  |  5320  |  Islam in Modern World  |  REL  |  Religion  |  3  |  Study of how Muslim thinkers and theologians have responded to the challenges of the modern era. (b) Department Managed Prerequisite(s): Graduate level EE 7020 Minimum Grade of D; (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  EE7280  |  7280  |  Intelligent Control  |  EE  |  Electrical Engineering  |  3  |  The course focuses on providing an introduction to the emerging area of intelligent control methods and their applications to the control and health monitoring of uncertain, complex dynamical systems. An additional goal is the development of the foundational tools needed for pursuing independent research, giving oral presentations, and producing written reports. (b) Department Managed Prerequisite(s): Graduate level EE 7020 Minimum Grade of D; (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  KNH1990  |  1990  |  BIPE Student Assistant  |  KNH  |  Kinesiology & Health  |  2  |  Advanced level of knowledge in one particular activity. Competency-based approach. Course may accommodate disabled students when appropriate. (b) |  UG  |  LB  |  Lab  

Fall 2020  |  CEG4640  |  4640  |  Comp Networks & Security  |  CEG  |  Computer Engineering  |  4  |  Introduction to computer networks, network security, and technologies for ensuring network security. (b) |  UG  |  LE  |  Lecture  

Fall 2020  |  MIB7300  |  7300  |  Business Process Mgmt  |  MIB  |  Management Information Systems  |  3  |  This course provides a comprehensive approach for transforming business processes of an organization. It will demonstrate how to keep renewed processes working at optimum levels through process ownership and performance management. This course has a fee that is non-refundable once the term begins. (b) |  GR  |  LE  |  Lecture  

Fall 2020  |  EED3230  |  3230  |  Field Experience P-5  |  EED  |  Elementary Education P-5  |  1  |  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 courses. (b) |  GR  |  PB  |  Practicum  

Fall 2020  |  GR4570  |  4570  |  Readings in Greek Prose  |  GR  |  Greek  |  3  |  Prose narrative in Greek. Authors may include the Hippocratic Corpus, Strabo, Pausanias, Athenaeus and Lucian. (b) |  UG  |  LE  |  Lecture  

"
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  ENG1010  1010  Basic Acad Spk Lstn 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  EE3320L  3320L  Digital System Design Lab  EE  Electrical Engineering  0  Required laboratory for CEG 3320.  UG  LB  Lab

Fall 2020  ESE321R  321R  Human Biomechanics I Rec  ESE  Industrial & Systems Engr  0  Required recitation for ESE 321L.  UG  LE  Lecture

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.  UG  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  1  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 pedagogical content knowledge from middle childhood content and methods courses.  GR  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  Lyssias, 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  KNH1680A  1680A  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  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.  GR  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  SAA7660  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 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
A modular approach to oral and written communication of complex technical information to an expert audience.

Nanotechnology is an interdisciplinary field that encompasses aspects of biology, chemistry, and physics. This course will cover the fundamentals of nanotechnology, including its historical development, the characterization of nanoparticles, and their potential applications in medicine/biomedical applications, and their potential toxicological risks for human health.

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 an introduction to digital communications. Topics include: analog communication vs digital communication, source coding, pulse shaping, digital modulation/demodulation, signal detection and optimal receiver, simulation of digital communication system is an integral part of this course.

The 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE6350</td>
<td>3</td>
<td>Comp Neuroeng &amp; Bih App</td>
<td>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.</td>
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<tr>
<td>CEG3310L</td>
<td>3</td>
<td>Computer Organization Lab</td>
<td>Required laboratory for CEG 3310.</td>
<td></td>
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<tr>
<td>ENGR3606</td>
<td>3</td>
<td>Intro Literary Study</td>
<td>Introduction to the discipline of English, with a focus on verse, narrative, textual analysis, literature theory, and integration of secondary sources in analytical arguments. Integrated Writing course.</td>
<td></td>
</tr>
<tr>
<td>PSY6620</td>
<td>6</td>
<td>Ergonomics Capstone</td>
<td>Communication-intensive seminar integrating knowledge on ergonomics.</td>
<td>SE</td>
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<tr>
<td>ME4840</td>
<td>4-40</td>
<td>Mat Sel for Mech Design</td>
<td>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. Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of D; transfer credit.</td>
<td></td>
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<tr>
<td>IT2220</td>
<td>2</td>
<td>Web Theory and Design I</td>
<td>Introduction to web authoring and programming using basic HTML authoring tools. 2 hours lecture/2 hours lab.</td>
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<tr>
<td>EE7580L</td>
<td>7.5</td>
<td>CMOS Msd Sig IC Des Lab</td>
<td>Required for EE 7580. 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 or Graduate level EE 6540L Minimum Grade of D; transfer credit.</td>
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<tr>
<td>BIO1150</td>
<td>11-50</td>
<td>Organisms and Ecosystems</td>
<td>Introduction to basic concepts of biology. Topics include evolution, ecology, and the diversity of life. Three hours lecture, two hours lab. Department Managed Prerequisite(s): WSU Math Placement Level 25 or Undergraduate level DEV 0280 Minimum Grade of P.</td>
<td></td>
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<tr>
<td>GR5530</td>
<td>5-50</td>
<td>Readings in Greek Poetry</td>
<td>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.</td>
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<tr>
<td>ED6480</td>
<td>6-40</td>
<td>Flt Exp II: MA/Vis Arts</td>
<td>Education 1. Candidates, mentored by a visual arts educator, shall assist in the planning, organizing, delivering, and assessing of instruction in a P-12 grade setting applying pedagogical content knowledge from visual arts content and methods courses.</td>
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<tr>
<td>PLS4600</td>
<td>4</td>
<td>Comparative Politics Sem</td>
<td>Readings, research, reports, and discussion of selected topics and problems. Topics vary. Integrated Writing course.</td>
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<tr>
<td>SAA7540</td>
<td>75-40</td>
<td>Resilience Lithrup&amp;Wild of Work</td>
<td>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, and sustaining healthy engagement in the workplace.</td>
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<tr>
<td>GR6510</td>
<td>61-50</td>
<td>Readings in Greek Philos</td>
<td>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.</td>
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<tr>
<td>ME6430</td>
<td>6-430</td>
<td>Aeronautics</td>
<td>Aviation history. Standard atmosphere, basic aerodynamics, theory of lift, airplane performance, principles of stability and control, astrodynamics, and propulsion concepts. Department Managed Prerequisite(s): Undergraduate level ME 3350 Minimum Grade of D; transfer credit.</td>
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</tr>
<tr>
<td>ENGR4820</td>
<td>4-820</td>
<td>Adv Poetry Wrtg Seminar</td>
<td>Advanced practice in writing and revising poems, refining craft and style, with the aim of producing poetry of superior merit; group discussions of manuscript; and reading and discussion of modern poetry and poetics. Integrated Writing course.</td>
<td></td>
</tr>
<tr>
<td>URS6070</td>
<td>69-70</td>
<td>NLA Internship</td>
<td>A one quarter supervised internship of at least 300 hours in a selected nonprofit agency. Arranged in consultation with Director of American Humanities.</td>
<td>Internship</td>
</tr>
<tr>
<td>PTX7006</td>
<td>70-66</td>
<td>Ldshp, Theory &amp; Application</td>
<td>Leadership is not intuitive; 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.</td>
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</tr>
<tr>
<td>PB2050</td>
<td>10-10</td>
<td>Professional Devel I</td>
<td>Profesional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.</td>
<td></td>
</tr>
<tr>
<td>PSY6950</td>
<td>69-50</td>
<td>Sex &amp; Endocrionology Cap</td>
<td>Communication-intensive seminar integrating knowledge on sexuality and endocrinology.</td>
<td></td>
</tr>
<tr>
<td>PLS5420</td>
<td>54-20</td>
<td>Civil Liberties I/1st Amendment</td>
<td>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.</td>
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</tr>
<tr>
<td>HST7860</td>
<td>78-60</td>
<td>Historic Preservation</td>
<td>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.</td>
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</tr>
<tr>
<td>SST3866</td>
<td>38-66</td>
<td>Actuarial Prob Exam Prep</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>EDS6240</td>
<td>6-240</td>
<td>Cur met mt EUCS &amp; PKSN</td>
<td>Interventions, modifications and adaptations for children in early childhood special education or early intervention to access curriculum.</td>
<td></td>
</tr>
<tr>
<td>ATH6000</td>
<td>6-600</td>
<td>Political Anthropology</td>
<td>(Also PLS 6500/SOC 6000) 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, freedoms versus order, and globalization.</td>
<td></td>
</tr>
</tbody>
</table>
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.

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.

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. (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 STT 3660 Minimum Grade of D or Undergraduate level STT 3630 Minimum Grade of D or Undergraduate level ESE 2211 Minimum Grade of D+.

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. (b) Department Managed Prerequisite(s): Graduate level PSY 7050 Minimum Grade of D+.

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.

Fall 2020  KINH 700  1700  Tai Chi  KINH  Kinesiology & Health  1  Fundamental skills and knowledge of Tai Chi. Competency-based approach. Course may accommodate disabled students when appropriate.

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.

Fall 2020  MTE6480  6480  Calculus Mid Schl 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.

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 controls.

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.

Fall 2020  URS4290  4290  Issues in City/Community Mgmt  URS  Urban Affairs  3  Issues and topics related to community development agencies and local governments.

Fall 2020  IHE6300  6300  Fund of HFE  IHE  Industrial & Hum Fac Engr  3  Fundamentals of human factors engineering tools and processes as applied to systems development. Emphasis is placed on user-centered design principles. Material is presented through lectures and application-oriented projects.

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.

Fall 2020  REL3490  3490  Hindu Goddesses  REL  Religion  3  Explores conceptualizations of the divine feminine in Hinduism, combines textual, historic, and anthropological resources to understand the nature of the various Hindu goddesses and how they are worshipped.

Fall 2020  CS8930  8930  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.

Fall 2020  MP4990  4990  Ind Study in Motion Pict  MP  Motion Picture  1  Independent study in motion picture history, theory, criticism, and practice.

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.

Fall 2020  MKT4670  4670  Analytics Tools Insights  MKT  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.

Fall 2020  EES4240  4420  Paleozoic Vertebr/Plants  EES  Earth & Environmental Sciences  4  The rise and evolution of Paleozoic vertebrate and plant groups emphasizing the evolution of jawed fishes, early tetrapods, and the terrestrialization of Earth. Phylogenetic and molecular analysis.

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.


Fall 2020  ME6860  6860  Metal Forming  ME  Mechanical and Materials Eng  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 2700 Minimum Grade of D and Graduate level ME 5120 Minimum Grade of D or Undergraduate level ME 3120 Minimum Grade of D+ or Undergraduate level ME 3120 Minimum Grade of D+).

Fall 2020  MUS2310  2310  Percussion Pedagogy  MUS  Music  1  Class instruction. Materials and pedagogy.

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.

Fall 2020  BMES690  6990  Independent Study in BME 1  BME  Biomedical Engineering  1  Graduate independent studies in advanced biomedical engineering. Topics vary.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Grade</th>
<th>Credits</th>
<th>Semester</th>
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<tr>
<td>FAS2410</td>
<td>Food Microbiology Lab</td>
<td>FAS</td>
<td>UG</td>
<td>2410</td>
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<tr>
<td>FAS4850</td>
<td>Food and Agricultural Systems</td>
<td>FAS</td>
<td>UG</td>
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<td>SP7040</td>
<td>Recreation Management</td>
<td>SPM</td>
<td>UG</td>
<td>7040</td>
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<tr>
<td>EE7510</td>
<td>Dig. Wideband Rec. Design</td>
<td>EE</td>
<td>GR</td>
<td>7510</td>
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<td>ENG2520</td>
<td>Amer Acad Culture</td>
<td>ENG</td>
<td>GR</td>
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<td>EDL9860</td>
<td>Organizational Behavior</td>
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<td>GR</td>
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<td>ENG7610</td>
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<td>GR</td>
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<td>MKT5000</td>
<td>Honors Ind Study Market</td>
<td>MKT</td>
<td>GR</td>
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<td>ENG4920</td>
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<td>UG</td>
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<td>PSI9500</td>
<td>Professional Psychology</td>
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<td>GR</td>
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<td>BMB3900</td>
<td>Scientific Communication</td>
<td>BMB</td>
<td>GR</td>
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<td>MUS7995</td>
<td>Perf. Document/Rental</td>
<td>MUS</td>
<td>GR</td>
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<td>ML3990</td>
<td>Studies in Selected Subjects</td>
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<td>UG</td>
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<td>PSY4410</td>
<td>Industrial Psych Cap</td>
<td>PSY</td>
<td>UG</td>
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<tr>
<td>ME6680</td>
<td>Experimental Nanoscience</td>
<td>ME</td>
<td>GR</td>
<td>6680</td>
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<td>VLSI Des Synth Optim Lab</td>
<td>CEG</td>
<td>GR</td>
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<td>BME4850</td>
<td>Six Sigma for Engineers</td>
<td>BME</td>
<td>GR</td>
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<tr>
<td>CEG4000</td>
<td>Comp Networks &amp; Security</td>
<td>CEG</td>
<td>GR</td>
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<td>MLB4210</td>
<td>Urine/BodyFluid Analysis</td>
<td>MLB</td>
<td>GR</td>
<td>4210</td>
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<td>KHN7770A</td>
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<td>KHN</td>
<td>UG</td>
<td>7770A</td>
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<td>SOC3110</td>
<td>Sociology of Religion</td>
<td>SOC</td>
<td>UG</td>
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<td>PSY4520</td>
<td>Prejudice Research Cap</td>
<td>PSY</td>
<td>UG</td>
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<td>Fall 2020</td>
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<td>COM4320</td>
<td>Race Class Gender Comm</td>
<td>COM</td>
<td>UG</td>
<td>4320</td>
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<tr>
<td>CS8960</td>
<td>PhD Candidacy Exam</td>
<td>CS</td>
<td>GR</td>
<td>8960</td>
<td>Fall 2020</td>
</tr>
</tbody>
</table>
Fall 2020  ME6700  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.  GR  LE  Lecture

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  ISE4110  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  SOC3700  7600  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.  UG  LE  Lecture

Fall 2020  PTX8005  8005  Med 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. Focus 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  MUE3670  6670  Pep Band  MUE  Music: Ensembles  1  Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities. Audition required.  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  PPH7530  7530  Health Systems Comm  PPH  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, correspondence, 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.  UG  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  KINH1220A  1220A  Fencing: Competitive  KINH  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 is an integrated writing (IW) course within the Human Resource Management Major.  UG  LE  Lecture

Fall 2020  DOS9000  9000  Colloquium in Org Stud  DOS  Doctor of Organizational 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 Syst  BMS  Biomedical Sciences  3  Introductory course providing students with a general control background. Major topics include block diagrams and signal flow graphs, electromechanical modelling, time response, root locus, and design of PID controllers.  GR  LE  Lecture

Fall 2020  EC3460  3460  Industrial Organization  EC  Economics  3  Analyzes business behavior under various industry structures and government policies. Emphasizes actual case studies.  UG  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.  UG  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  EDI6575  6575  MA Intern PILE, ST CJS  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  EES4740  4740  Fund Occup Hlth & Safety  EES  Earth & Environmental Sciences  3  Accident recognition, evaluation, and control in the work environment regarding hard- and soft-labor 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Description</th>
<th>Type</th>
<th>Department</th>
<th>Prerequisites</th>
<th>Fall 2020</th>
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<tr>
<td>ENG3550</td>
<td>3</td>
<td>Teaching Shakespeare</td>
<td>ENG English</td>
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<td>ANT4030</td>
<td>6</td>
<td>Biomedical Review Article</td>
<td>ANT Anatomy</td>
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<td>ME5685</td>
<td>6</td>
<td>Natural Gas Prod EGR</td>
<td>ME Mechanical and Materials Eng</td>
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<td>SPN5220</td>
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<td>Adv SPN Core and Writing</td>
<td>SPN Spanish</td>
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<td>Mental Health Interp</td>
<td>SLM Sign Language Interpreting</td>
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<td>Matrix Computations</td>
<td>CS Computer Science</td>
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<td>Wireless Comm Lab</td>
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<td>COM Communication</td>
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<td>Read &amp; Lit Int Spec</td>
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<td>Multivariate Methods</td>
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<td>MUS4840</td>
<td>4-84</td>
<td>Classic and Romantic Music</td>
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<td>BME4550L</td>
<td>Biomeasurement Laboratory</td>
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<td>Required laboratory for BME 4550.</td>
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<td>EED4200</td>
<td>Math Methods P-5</td>
<td>3</td>
<td>Curricula and materials for teaching P-5 Mathematics emphasizing conceptual math, integration, and interventions to meet the needs of diverse learners. Includes development and implementation of assessments, lessons, and appropriate modifications.</td>
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<td>EE4600L</td>
<td>UAV Flight Control Lab</td>
<td>1</td>
<td>Laboratory supporting EE 4600/6600. Students will experience hands on learning in lab environment. Designing, implementing, and testing autonomous UAV flight control systems. Department Managed Prerequisite(s): Undergraduate level EE 4130 Minimum Grade of D and Undergraduate level EE 4130L Minimum Grade of D and Undergraduate level CEG 1160 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D&gt;=.</td>
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<tr>
<td>CS7840</td>
<td>Soft Computing</td>
<td>3</td>
<td>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. Department Managed Prerequisite(s): Undergraduate level CS 3100 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D&gt;=.</td>
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<tr>
<td>MUS6430</td>
<td>Vocal Pedagogy</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>P&amp;N7750</td>
<td>Neuroscience &amp; Phys</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>ABS7800</td>
<td>Continuing Registration</td>
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<tr>
<td>DAN2080</td>
<td>Beginning Tap Dance II</td>
<td>1</td>
<td>Group class continues to introduce students to fundamentals of tap dance techniques.</td>
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<tr>
<td>HST4810</td>
<td>African-American History</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>SM2100</td>
<td>Scientific Inquiry</td>
<td>3</td>
<td>Introduction to the WSU 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 &quot;research stream&quot; cohort for the following two semesters.</td>
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<tr>
<td>ACC4460</td>
<td>Financial Strut Analysis</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>PPH1710</td>
<td>PH Epidemiology II</td>
<td>3</td>
<td>Through homework, readings, exercises and class projects, students will gain hands-on experience of epidemiologic research.</td>
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<tr>
<td>EDS4650</td>
<td>Transitions Exceptions</td>
<td>3</td>
<td>Role of intervention specialists in shaping transition for students with exceptionalities. Focus on high school/adult transition with consideration of transitions at earlier levels. Ten hours field experience with student age 14-22 required.</td>
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<tr>
<td>ART4580</td>
<td>Adv Photo Practices</td>
<td>3</td>
<td>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. Department Managed Prerequisite(s): Undergraduate level ART 3580 Minimum Grade of D and Undergraduate level ART 3590 Minimum Grade of D&gt;=.</td>
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<tr>
<td>LA3990</td>
<td>Studies Select Subjects</td>
<td>3</td>
<td>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.</td>
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<td>FAS2050</td>
<td>Intro to Horticulture</td>
<td>3</td>
<td>Designing, maintaining, and cultivating vegetable gardens. Topics include soil amendments, nutrients, integrated pest management, plant selection, garden layout, harvesting and produce care.</td>
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<tr>
<td>DOS9040</td>
<td>Org. in Global Environ.</td>
<td>3</td>
<td>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.</td>
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<td>ATH4650</td>
<td>Archaeology Field School</td>
<td>3</td>
<td>Summer field training in the methods of excavation and data recording at selected archaeological sites.</td>
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<tr>
<td>MGT4850</td>
<td>International Management</td>
<td>3</td>
<td>Distinctive managerial challenges in conducting business in diverse regions and nations around the world. Environmental constraints and functional competencies in international management.</td>
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<tr>
<td>SAA7650</td>
<td>Internship I in SAHE</td>
<td>3</td>
<td>This field-based experience provides students with practice and supervision in areas of interest in SAHE.</td>
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<tr>
<td>EDSD195</td>
<td>Pract I: Dyslexia</td>
<td>1</td>
<td>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.</td>
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<tr>
<td>HEA9260</td>
<td>The Community College</td>
<td>3</td>
<td>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?</td>
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Legend:
- GR: Graduate
- LE: Lecture
- Lab: Laboratory
- ST: Studio
- UG: Undergraduate
- Lab/Lab Combination: Laboratory/Lecture
- Lecture/Lab Combination: Lecture/Studio
- SB: Seminar
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<td>ATR7950</td>
<td>7950</td>
<td>Clinical Practice V</td>
<td>ATR Athlete Training</td>
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<td>ED3050</td>
<td>3050</td>
<td>MCE Gen Science Instr</td>
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<td>DAN2310</td>
<td>2310</td>
<td>Intermediate Jazz II</td>
<td>DAN Dance</td>
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<td>FR4930</td>
<td>4930</td>
<td>Franco-American Films</td>
<td>FR French</td>
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<td>Teaching Writing K-12</td>
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<td>PSY4530</td>
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<td>Psychology and Law Capstone</td>
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<td>LB</td>
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<td>Gibb &amp; Social Change</td>
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<td>6320</td>
<td>Hum-Sys Int &amp; Usability Engr</td>
<td>BHE Industrial &amp; Hum Fac Engr</td>
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<td>Pathogenic Mechanisms</td>
<td>M&amp;I Microbiology &amp; Immunology</td>
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<td>ECE3750</td>
<td>3750</td>
<td>Writing Methods in ECE</td>
<td>ECE Education - Early Childhood</td>
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<td>Fall 2020</td>
<td>URS3000</td>
<td>3000</td>
<td>Special Topics</td>
<td>LRS Life and Recreational Skills</td>
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<td>CHM4720</td>
<td>4720</td>
<td>Chemical Crystallography</td>
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<td>KNH Kinesiology &amp; Health</td>
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<td>Modern Algebra I</td>
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<tr>
<td>Fall 2020</td>
<td>BMS7331</td>
<td>7331</td>
<td>Quant Workload Analysis</td>
<td>BMS Biomedical Sciences</td>
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<td>Fall 2020</td>
<td>ENG7200</td>
<td>7200</td>
<td>Teaching College Comp I</td>
<td>ENG English</td>
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<td>Fall 2020</td>
<td>IT2230</td>
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<td>Web Integration</td>
<td>IT Information Technology</td>
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<td>Fall 2020</td>
<td>URS3200</td>
<td>3200</td>
<td>Comm/Reg Planning I</td>
<td>URS Urban Affairs</td>
<td>3</td>
<td>UG</td>
<td>Lecture</td>
</tr>
</tbody>
</table>

Notes:
- **UG**: Undergraduate
- **GR**: Graduate
- **LB**: Lab
- **Lab**: Laboratory
- **PKG**: Package
- **Combination**: Combination
- **Fall 2020**: Offered in Fall 2020
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Department</th>
<th>Level</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>CS4850</td>
<td>4850</td>
<td>Foundations of AI</td>
<td>CS</td>
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<td>Lecture</td>
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<tr>
<td>BIO6700L</td>
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<td>General Entomology Lab</td>
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<tr>
<td>TH1510</td>
<td>1510</td>
<td>Intro to Perf Process</td>
<td>TH</td>
<td>GR</td>
<td>Lecture</td>
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<td>BIO6750L</td>
<td>6750L</td>
<td>Ichthyology Lab</td>
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<td>EC3100</td>
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<td>The Global Economy</td>
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<td>SPN6130</td>
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<td>SPN Inst Practicum III</td>
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<td>Practicum</td>
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<td>BME3940</td>
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<td>GR</td>
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<td>IC3010</td>
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<td>GER4330</td>
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<td>20th Cent German Poetry</td>
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<td>BME3540</td>
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<td>Independent Study</td>
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<td>EE1050L</td>
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<td>Dynamic Earth Lab</td>
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<td>GR</td>
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<td>NUR8006</td>
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<td>Miking Entrepreneurship Lab</td>
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<td>LDR7300</td>
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<tr>
<td>CHM6880</td>
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<td>3rd Reading in Chemistry</td>
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<td>HPR2040</td>
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<td>ART4280</td>
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<td>Advanced Drawing</td>
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<td>PSY8790</td>
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<td>Legal Issues in I/O Psyanc</td>
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<td>EE7990</td>
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<td>Independent Study</td>
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<td>Core Procedures and Ops</td>
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<td>EE7420</td>
<td>7420</td>
<td>Power Electronics II</td>
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**Fall 2020**

- Foundations of AI (CS4850)
- General Entomology Lab (BIO6700L)
- Intro to Performance Process (TH1510)
- Ichthyology Lab (BIO6750L)
- The Global Economy (EC3100)
- SPN Inst Practicum III (SPN6130)
- Biomed Eng Internship I (BME3940)
- Econ of Global Money Management (IC3010)
- 20th Century German Poetry (GER4330)
- Semantic Web (CS7820)
- Teach in the Amer Ed Sys (ED6600)
- Ears Law for Scientists (EES4680)
- 3rd Reading in Chemistry (CHM6880)
- Adventure Education (HPR2040)
- Economic Studies (EC7770)
- Practicum 1: HPR (HPR5100)
- Advanced Drawing (ART4280)
- Legal Issues in I/O Psychology (PSY8790)
- Thesis (EE7990)
- Core Procedures and Ops (CRT1040)
- Power Electronics II (EE7420)
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<th>Course Code</th>
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<tr>
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<td>Studies in Photography</td>
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<td>SAA6640</td>
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<td>GRS550</td>
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<td>SOC4500</td>
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<td>MES520</td>
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<td>Thermodynamics II</td>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
<td>Fall 2020</td>
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</table>
Fall 2020  LAT3570  3570  Readings Roman Satire  LAT  Latin  3  Horace, Juvenal, Persius, Petronius, and Martial. Topics include development of this peculiar Roman genre, fragments of Lucilius, satirical method and techniques, satiric epigram, and satire as a source of information about Roman private life.  UG  LE  Lecture

Fall 2020  DAG7010  7010  DAGSI Registration  DAG  DAGSI  0.5  Research designed for specific need and talents of students at the graduate level in the MST program. May be taken for a letter grade or pass/unsatisfactory.  GR  LE  Lecture

Fall 2020  EES7800  7800  MST Research  EES  Earth & Environmental Sciences  0.5  Research designed for specific need and talents of students at the graduate level in the MST program. May be taken for a letter grade or pass/unsatisfactory.  GR  IS  Independent Study

Fall 2020  LEPS0580  0580  Grammar Refresher  LEP  LEAP  0  English grammar review course for high-intermediate to advanced non-native English speakers. This course has a fee that is non-refundable once the term begins.  UG  LE  Lecture

Fall 2020  BIO0430  6440  Verterbrate Histology  BIO  Biology  5  Study of structure/function relationships in vertebrate tissues, organs and organ systems.  GR  LE  Lecture

Fall 2020  ISE331L  351L  Bioelectronics I Lab  ISE  Industrial & Systems Engr  0  Required Laboratory for ISE 531L  UG  LB  Lab

Fall 2020  PSB8410  8410  Group Psychotherapy  PSI  Professional Psychology  3  Presents background, development, and theory of small groups as well as effective leadership techniques and procedures for planning, conducting, and evaluating group interaction and process.  GR  LE  Lecture

Fall 2020  ENG4750  4750  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 nonnative speakers of English.  UG  LE  Lecture

Fall 2020  EDL7120  7120  Philos & Curr Foundations  EDL  Educational Leadership  3  Overview of past, present, and emerging curriculum trends. Examination of educational and curricular philosophy and how philosophy impacts school programs.  GR  LE  Lecture

Fall 2020  PTX8001  8001  Lab Safety  PTX  Pharmacology/Toxicology  1  In this course we discuss the environmental, health, and safety requirements for laboratory workers. The topics will include hazard communication, laboratory-specific hazards, and general laboratory practices. The regulatory agency and committee that oversee laboratory operations will also be reviewed. This course has been approved for continuing education or contact hours for the Ohio Environmental Protection Agency's Water and Wastewater Operator Certification Program.  GR  LE  Lecture

Fall 2020  EESE6280  6280  EES Colloquium  EES  Earth & Environmental Sciences  0.5  A weekly seminar in which research scientists from within and from outside the Department of Earth and Environmental Sciences present their research. Class normally meets once a week for one hour.  GR  SE  Seminar

Fall 2020  ENG4020  4020  Topics: Advanced Writing  ENG  English  3  Advanced study of specialized topics and problems in writing.  UG  LE  Lecture

Fall 2020  RHH3040  3040  Rehab Case Management  RHH  Rehabilitation  3  Interviewing, case recording, writing rehabilitation plans with appropriate justifications, and case management.  UG  LE  Lecture

Fall 2020  PSY6920  6920  Clinical Neuro Cap  PSY  Psychology  3  Communication-intensive seminar integrating knowledge on clinical neuroscience.  GR  SE  Seminar

Fall 2020  EE6460  6460  Microwave Egr II  EE  Electrical Engineering  3  Fundamental of RF active components; Design impedance matching network; microwave transistor amplifier design; Microwave transistor oscillator and mixer design; Introduction to microwave systems.  GR  LE  Lecture

Fall 2020  SOCS500  5000  Internship in CJ/Family  SOC  Sociology  3  Supervised field experience in criminal justice and family agencies. Requires readings, activity log, progress report, and final synthesis paper. Must be prearranged with departments/internship coordinator at least one term prior to placement.  GR  IN  Internship

Fall 2020  EDT7760  7760  Issues and Resp in DL  EDT  Educational Technology  3  Examines the issues and responsibilities of using digital technologies. Consideration of issues of intellectual property rights, ethics, managing online reputation, and professional responsibilities.  GR  LE  Lecture

Fall 2020  ENG7360  7360  Semi: Literary Problems  ENG  English  3  Reading, research, reports, and discussion on topics dealing with special problems such as literary themes, literary conventions, literature in relation to other disciplines, literary backgrounds, critical approaches, and interdisciplinary study.  GR  SE  Seminar

Fall 2020  MTH3430  3430  Alg Faux Mid Schl Tchr  MTH  Mathematics  4  Algebraic principles and linear, polynomial, rational, exponential, logarithmic, and trigonometric functions from a perspective appropriate for middle school teachers. Uses technology to explore how properties of functions appear in various representations.  UG  LE  Lecture

Fall 2020  ARAB1020  1020  Beginning Arabic II  ARAB  Arabic  3  Communicative introduction to Arabic. Study of the vocabulary and structure of the Arabic language; practice in speaking, listening, reading, and writing.  GR  LE  Lecture

Fall 2020  EC4200  4200  Law and Economics  EC  Economics  3  Economic analysis of the law and legal institutions.  UG  LE  Lecture

Fall 2020  ENG1430  1430  Women and Literature  ENG  English  3  Representative works by and about women of diverse backgrounds across major literary periods. Examines traditions in women’s writing, pervasive representations of women in literature, and the mutually constitutive relationship between literature and identity.  UG  LE  Lecture

Fall 2020  ANT7000  7000  Human Anatomy Instruct  ANT  Anatomy  1  Overview of gross anatomy, histology, neuroanatomy, embryology, and educational theory that enables students to be more effective in the teaching of undergraduate courses in anatomy. For first-year graduate teaching assistants in the Department of Anatomy only.  GR  IS  Independent Study

Fall 2020  CTE6000  6000  Pre-Serv Wkshp 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 teaching pedagogy, knowledge and skills required for new role as CTE educator.  GR  LE  Lecture

Fall 2020  ME4585  4585  Natural Gas Prod EGR  ME  Mechanical and Materials Eng  3  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 effluent treatments and the environmental impacts of natural gas.  UG  LE  Lecture

Fall 2020  CS7980  7980  Part-time CPT in CS  CS  Computer Science  0  Practical work experience in graduate level Computer Science.  GR  IN  Internship

Fall 2020  FR4810  4810  Independent Study  FR  French  3  Topics vary.  GR  IS  Independent Study

Fall 2020  WGS7000  7000  Feminist Theory  WGS  Women, Gender, and Sexuality  3  Analysis of works of influential feminist thinkers from 18th to 21st centuries. Examines major questions, debates, and issues considered by feminist theorists.  GR  SE  Seminar

Fall 2020  BI07890  7890  Continuing Registration  BIO  Biology  1  Maintenance of contacts with department. Fulfills university requirement that student must be registered for at least one hour of graduate credit during the quarter in which they successfully defend their thesis.  GR  IS  Independent Study
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Description</th>
<th>Type</th>
<th>Department</th>
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<tr>
<td>PHY7120</td>
<td>Ref Quantum Mech</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>
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<tr>
<td>CEG7060</td>
<td>Advanced Robotics</td>
<td>3</td>
<td>Detailed study of the dynamics and control of robotic systems and robot programming languages and systems. Material coverage 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. Department Managed Prerequisite(s): Undergraduate level EE 4560 Minimum Grade of D or Graduate level EE 6560 Minimum Grade of D or Undergraduate level CEG 4250 Minimum Grade of D or Graduate level CEG 6230 Minimum Grade of D or Undergraduate level ME 4260 Minimum Grade of D or Graduate level ME 6260 Minimum Grade of D.</td>
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<tr>
<td>ENG6470</td>
<td>Post-Colonial Lit</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, genera, language use, thematic concerns, and global trends.</td>
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<tr>
<td>ED2800</td>
<td>Cultural Humility w/Youth</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 youths. Integrated Writing course.</td>
<td></td>
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<tr>
<td>NUR4990</td>
<td>Nur Honors Ind Study</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></td>
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<tr>
<td>TH1570</td>
<td>Singing Min Theatre I</td>
<td>2</td>
<td>Private singing lessons for Musical Theatre.</td>
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<tr>
<td>ME2210</td>
<td>Dynamics</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. Department Managed Prerequisite(s): Undergraduate level ME 2120 Minimum Grade of C and (Undergraduate level ME 1020 Minimum Grade of C or Undergraduate level CS 1160 Minimum Grade of C or Undergraduate level CS 1180 Minimum Grade of C).</td>
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<tr>
<td>LDR7600</td>
<td>Research Project</td>
<td>1</td>
<td>This course guides individual research projects to insure that the project demonstrates the student’s ability to take a problem from inquiry and data gathering, through analysis and solution identification, to formal presentation.</td>
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<tr>
<td>PSY4930</td>
<td>Behav Neuro Ed Cupstone</td>
<td>3</td>
<td>Communication-intensive seminar integrating knowledge on behavioral neuroscience education. Integrated Writing course.</td>
<td></td>
<td>SE</td>
</tr>
<tr>
<td>MUS4860</td>
<td>Counterpoint</td>
<td>3</td>
<td>Introduction to contrapuntal techniques. Exercises in species counterpoint, imitation and fugal devices. Analysis of examples from the Renaissance to the 20th century.</td>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>REL3810</td>
<td>Anthropology of Religion</td>
<td>3</td>
<td>(also listed as ATH 4020) 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.</td>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>MUS6510</td>
<td>Piano Literature I</td>
<td>3</td>
<td>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.</td>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>MUS6540</td>
<td>Simulation of Thermal-Fl</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. Department Managed Prerequisite(s): Undergraduate level ME 4610 Minimum Grade of D.</td>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>CHM5210L</td>
<td>Adv Inorg Syn &amp; Charact</td>
<td>3</td>
<td>Advanced synthesis and characterization of representative inorganic compounds.</td>
<td></td>
<td>Lab</td>
</tr>
<tr>
<td>FR5900</td>
<td>Foreign Lang Institute</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></td>
<td>IS</td>
</tr>
<tr>
<td>KHE1610A</td>
<td>Strengthen &amp; Tone</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></td>
<td>Lab</td>
</tr>
<tr>
<td>STT1600</td>
<td>Statistical Concepts</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></td>
<td>Lab</td>
</tr>
<tr>
<td>ENG7240</td>
<td>Professional Writing</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 forms.</td>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>EFL7810</td>
<td>Schi Finance &amp; Economics</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></td>
<td>LE</td>
</tr>
<tr>
<td>EE7580</td>
<td>CMOS Mod Sig IC Des</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. Department Managed Prerequisite(s): Undergraduate level EE 4560 Minimum Grade of D and Graduate level EE 4540 Minimum Grade of D or Graduate level EE 6540 Minimum Grade of D.</td>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>FTN3240</td>
<td>Real Estate Prin/Pract</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></td>
<td>LE</td>
</tr>
<tr>
<td>SCM7950</td>
<td>Info Tech &amp; Supply Chain</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></td>
<td>LE</td>
</tr>
<tr>
<td>ART5130</td>
<td>Renaissance 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></td>
<td>LE</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>CNL9600</td>
<td>9600</td>
<td>Adv Instit Human Serv</td>
<td>CNL</td>
<td>Counseling</td>
</tr>
<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>Thermals Fluids Lab</td>
<td>ME</td>
<td>Mechanical and Materials Engr</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PL56450</td>
<td>6450</td>
<td>Adv-Grn Invest</td>
<td>PL5</td>
<td>Political Science</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE4620</td>
<td>4820</td>
<td>Part-Time CPT in EE</td>
<td>EE</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EX36500L</td>
<td>6500L</td>
<td>Clinical Exercise Phys Lab</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>PHYS150</td>
<td>5150</td>
<td>Physics Instrument Lab</td>
<td>PHY</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>PL53430</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>SPN3210</td>
<td>3120</td>
<td>Spanish Conversation II</td>
<td>SPN</td>
<td>Spanish</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>TFX8000</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>MUS37720</td>
<td>7730</td>
<td>Gen Music: Fund K-12 Instrct</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>PL53370</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>
</tbody>
</table>

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**Course Descriptions:**

**CNL9600:** Advanced Institutional Human Services

**FAS1050:** Amish Society

**ME4610:** Thermals Fluids Lab

**PL56450:** Advanced Criminal Investigation

**EE4620:** Part-time CPT in Electrical Engineering

**EX36500L:** Clinical Exercise Physiology Lab

**CHM5880:** Independent Reading in Chemistry

**PHYS150:** Physics Instrument Lab

**ECE3150:** Literacy Methods for Reading

**EES3100:** Earth Science Research

**PL53430:** Civil Law II Due Process

**SPN3210:** Spanish Conversation II

**TFX8000:** Selected Topics in Pharmacology/Toxicology

**EE4480:** Remote Sensing Detection and Systems

**MUS37720:** General Music: Fundamentals K-12 Instruction

**SW3990:** Independent Study in Social Work

**CTE4150:** Career and Technical Education Practicum

**ME4570:** Energy Materials

**PL53370:** The Legislative Process

**GEO3600:** Geographic Information Systems

**PSF9170:** Career Assessment

**SPN3310:** Survey of Spanish Literature
Fall 2020  EE4470L  4470L  Antenna Theory Design Lab  EE  Electrical Engineering 1  Hands-on experience and fabrication of antenna elements with evaluation of antenna performance.  b>  Department Managed Prerequisite(s): Undergraduate level EE 4420L Minimum Grade of D and Undergraduate level EE 4420L Minimum Grade of D>b>

Fall 2020  ECE3800  3800  Language Dev & ELL  ECE  Education - Early Childhood 3  Language development, causes and effects of communication disorders, evaluations, interventions, second language acquisition, planning and implementing culturally responsive lessons and classroom environments.

Fall 2020  ED4570  4570  Multi-Age TESOL Methods  ED  Education 3  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.

Fall 2020  ED54610  4610  Curriculum & Methods M/M  EDS  Education - Special Education 3  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. Forty hours of field experience required.

Fall 2020  SOM702  702  Year 4 Medical Study  SOM  School of Medicine 24  MD  OT  Other

Fall 2020  ISE4910  4910  ISE Design I  ISE  Industrial & Systems Engr 3  Segment one of the ISE senior design sequence. Introduction to patents and engineering ethics included. Practicum results in the definition of the capstone design project to be completed in ISE 4920. Integrated Writing course.

Fall 2020  MGT7730  7730  Proj Plq Eval & Ctrl  MGT  Management 3  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, taking a service project from planning phase through scheduling, budgeting, execution and project termination.

Fall 2020  CNL3000  8000  Human Sexuality Counsel  CNL  Counseling 3  The principles and practice of human sexuality and sexuality counseling are reviewed. A major focus of the course is the application and integration of theories and principles of sexuality counseling with couples.

Fall 2020  EES6220  6220  Intro to Geophysics  EES  Earth & Environmental Sciences 4  In Introduction to Geophysics students learn the methods and concepts of practical exploration geophysics. We deal with the five main methods of exploration: seismic refraction, 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.

Fall 2020  PL6280  6280  Nat'l Security Politics  PLS  Political Science 3  Study of U.S. national defense and security policy process and the major strategic issues facing the U.S. government.

Fall 2020  SPN4810  4810  Independ Read Adv Studen  SPN  Spanish 3  Topics vary.  b>  Department Managed Prerequisite(s): Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D>b>

Fall 2020  ART4370  4370  InstallPerform Sculp  ART  Art 3  Development of personal concepts and aesthetic expression in the fabrication of sculptural media. Emphasis on individualized approach to sculptural media problems. This course has a fee that is non-refundable once the term begins.  b>  Department Managed Prerequisite(s): Undergraduate level ART 3750 Minimum Grade of D and Undergraduate level ART 3760 Minimum Grade of D and Undergraduate level ART 3770 Minimum Grade of D and Undergraduate level ART 3780 Minimum Grade of D>b>

Fall 2020  EE7080  7080  Advanced MEMS  EE  Electrical Engineering 3  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 bio-MEMS and microfluidics.  b>  Department Managed Prerequisite(s): Undergraduate level EE 4600 Minimum Grade of D or Graduate level EE 6400 Minimum Grade of D>b>

Fall 2020  ED6830  6830  Rese&to Imp Class Inst  ED  Education 2  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.

Fall 2020  PPH7140  7140  Social Networks and Hlth  PPH  Population & Public Health 3  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 body of research on 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.

Fall 2020  COM3250  3250  Health Communication  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.

Fall 2020  EDL7990  7990  Pracitcum EDL  EDL  Educational Leadership 3  Provides experience in school leadership and administration at the building level. Candidates perform administrative tasks under the supervision of a licensed school building administrator.

Fall 2020  PL6210  6210  Am Constitutional Pol Pol/Law  PLS  Political Science 3  The creation of the US Constitution and the ongoing struggle in American legal politics over its basic meaning.

Fall 2020  MGT1520  1520  Analysis Design Info Sys  MGT  Management Information Systems 3  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.

Fall 2020  GTW0010  0010  Clerk State Gateway Pathway  GTW  Gateway 0  UG  LE  Lecture

Fall 2020  NUR2124  2124  Nur for Unlicensed HC  NUR  Nursing 1  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 introductory writing course. (3 or didactic; 2 or clinical total; 2 or lab total).

Fall 2020  EE7840  7840  Computer Vision  EE  Electrical Engineering 3  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.

<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>PHY4270</td>
<td>Physics - Remote Sensing</td>
<td>PHY</td>
<td>4270</td>
<td>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.</td>
</tr>
<tr>
<td>CHM3560</td>
<td>Phys Chem-Life Sci</td>
<td>CHM</td>
<td>3560</td>
<td>Ideas of physical chemistry, including thermodynamics, properties of liquids and solids, solution properties, and kinetics. Intended for biologists, geologists, physicists, premedical students and others with an interest in physical chemistry.</td>
</tr>
<tr>
<td>REL5420</td>
<td>Japanese Religions</td>
<td>REL</td>
<td>5420</td>
<td>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 new religions. Topics include religious doctrine, faith and devotion, self-cultivation and enlightenment, monasticism, and religion and the state.</td>
</tr>
<tr>
<td>PLS4940</td>
<td>Special Topics</td>
<td>PLS</td>
<td>4940</td>
<td>Problems of contemporary significance. Integrated Writing course.</td>
</tr>
<tr>
<td>PSY3510</td>
<td>Personality Psychology</td>
<td>PSY</td>
<td>3310</td>
<td>Survey of contemporary perspectives in personality psychology. Computer research methods, assessment strategies, and applications.</td>
</tr>
<tr>
<td>ART0700</td>
<td>Studies in Printmaking</td>
<td>ART</td>
<td>6070</td>
<td>Provides opportunities to explore special problems and approaches to printmaking including cross-media and interdisciplinary studies. Titles vary.</td>
</tr>
<tr>
<td>KNI1700B</td>
<td>Tai Chi</td>
<td>KNI</td>
<td>1700B</td>
<td>Fundamental skills and knowledge of Tai Chi. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>CHI3700</td>
<td>Internship in Chinese</td>
<td>CHI</td>
<td>3700</td>
<td>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 on-site work. Senior standing and advisor permission required. (Preparation: Department Managed Requirement(s): Undergraduate level CHI 3010 Minimum Grade of D and Undergraduate level CHI 3020 Minimum Grade of D+ or B).</td>
</tr>
<tr>
<td>SOG4909</td>
<td>Studies in Selected Subj</td>
<td>SOG</td>
<td>4909</td>
<td>Problems, approaches, and topics in the field of sociology. Topics vary. Credit will not be awarded for repetition of courses with identical topic titles. (Preparation: Department Managed Requirement(s): Undergraduate level SOC 2000 Minimum Grade of D or Undergraduate level SOC 2200 Minimum Grade of D+/B).</td>
</tr>
<tr>
<td>ED56190</td>
<td>Dyslexia Interventions Methods</td>
<td>EDS</td>
<td>6190</td>
<td>Practices and procedures used in developing curricula for individuals with dyslexia and dyslexia tendencies. Clinical application, classroom accommodation, and development/implementation of the IEP.</td>
</tr>
<tr>
<td>PLS4650</td>
<td>Politics of Nationalism</td>
<td>PLS</td>
<td>4650</td>
<td>Examine theories and various causes of nationalism 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.</td>
</tr>
<tr>
<td>MH4200</td>
<td>Neo-Iron/Sys Crv-Tk Hmns</td>
<td>MI</td>
<td>4200</td>
<td>Microbiol &amp; Immuno</td>
</tr>
<tr>
<td>CNL7800</td>
<td>Sys Tch in Marr &amp; Fam</td>
<td>CNL</td>
<td>7800</td>
<td>This course focuses on teaching systemic interventions and problem solving in the process of resolving marriage and family related concerns.</td>
</tr>
<tr>
<td>PTX7022</td>
<td>Effective Sui Writing.P2</td>
<td>PTX</td>
<td>7022</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>
</tr>
<tr>
<td>MUS2270</td>
<td>Woodwind Pedagogy</td>
<td>MUS</td>
<td>2270</td>
<td>The study of materials, equipment, and class instruction in playing and teaching woodwind instruments in public school.</td>
</tr>
<tr>
<td>EE6600L</td>
<td>UAV Flight Control Lab</td>
<td>EE</td>
<td>6600L</td>
<td>Laboratory supporting EE 4600/6600. Students will experience hands on learning in lab environment. Designing, implementing, and testing autonomous UAV flight control systems. (Preparation: Department Managed Requirement(s): Graduate level EE 6130 Minimum Grade of D and Graduate level EE 6130L Minimum Grade of D+/B).</td>
</tr>
<tr>
<td>BMS7130</td>
<td>Cont Control Sys Lab</td>
<td>BMS</td>
<td>7130</td>
<td>Laboratory supporting BMS 7120. Students will experience hands on learning in lab environment. Application and testing of control systems theory with electromechanical systems.</td>
</tr>
<tr>
<td>EDL6580</td>
<td>Advanced Ed Measurement</td>
<td>EDL</td>
<td>6580</td>
<td>School district level interpretation of assessments, evaluation, accountability measures, standardization, validation, reliability, item analysis, norm setting, criterion referencing, standardized tests, and the development of district level long-range improvement and accountability systems.</td>
</tr>
<tr>
<td>CPE0911</td>
<td>Cooperative Education I</td>
<td>CPE</td>
<td>0910</td>
<td>Cooperative Education I: Full-time career-related work. Through cooperative education, students enhance 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 repair and other course work experience on the transcript. Career Services staff enroll students in the CPE course and monitor their learning.</td>
</tr>
<tr>
<td>GER3120</td>
<td>German Conversation II</td>
<td>GER</td>
<td>3120</td>
<td>Practice in oral use of German emphasizing the culture of the German-speaking world. 1.5 Credit hours: (Preparation: Department Managed Requirement(s): Undergraduate level GER 3110 Minimum Grade of D+/B).</td>
</tr>
<tr>
<td>MIS7000</td>
<td>Info Systems Strategy</td>
<td>MIS</td>
<td>7000</td>
<td>Concepts and practices of management information systems for using information in the management of business enterprises are investigated to determine their deployment in achieving organization objectives. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>CEG4980</td>
<td>Team Projects I</td>
<td>CEG</td>
<td>4980</td>
<td>A summative computer engineering team 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.</td>
</tr>
</tbody>
</table>
MUA1220 Lab Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.

ANT4800 Lab 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?

EDH7330 Lecture/Lab Teacher Leadership EDL Educational Leadership 3 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.

EDT3800 Lecture/Lab Ind Reading Anatomy ANA Anatomy 1 Various anatomy topics will be discussed with an assigned faculty advisor.

ENG5100 Lecture/Lab Selected Subjects ENG English 3 Problems, approaches, and topics in the field of English. Topics vary.

EE5400 Lecture/Lab Ed Honors Project I ED Education 2 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.

PDS4860 Lecture/Lab Model UN Seminar PLS Political Science 3 Experiential learning opportunity with intensive training in research, writing, public speaking and conflict resolution. Culminates at the national collegiate conference in New York simulating the UN. Integrated Writing course.

ENG6010 Lecture/Lab Advanced modern technique class for pre-professional dancers. Principles and concepts of Horton technique with continued emphasis on flexibility, strength and coordination.

HST4800 Lecture/Lab 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, or other human experiences that transcend a particular time or place. Topics vary. Integrated Writing course.

PDX7000 Lecture/Lab Research Techniques PTX Pharmacology/Toxiology 3 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.

MA2755 Lecture/Lab Competitive Strategy MBA MBA 3 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 strategic decision making from the perspective of managers who are responsible for an entire business unit and a wide range of competitive business situations.

PDS4860 Lecture/Lab Model UN Seminar PLS Political Science 3 Experiential learning opportunity with intensive training in research, writing, public speaking and conflict resolution. Culminates at the national collegiate conference in New York simulating the UN. Integrated Writing course.

RBM7973 Lecture/Lab Aerospace Research ASM Aerospace Medicine 1 Independent research on a topic of aerospace medical relevance culminating with a formal presentation followed by a question and answer session. Additionally, final research reports and presentation material must be submitted electronically.

KHN4218B Lecture/Lab Orienteering/Land Nav KIN Kinesiology & Health 1 Fundamental skills and knowledge of Orienteering/Land Navigation. Competency-based approach. Course may accommodate disabled students when appropriate.

ED4000 Lecture/Lab Ed Honors Project I ED Education 2 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.

CIS5250 Lecture/Lab 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 each technique are first introduced and then numerical experiments demonstrate their applicability. Standard software and programming languages are utilized. (b) Department Managed Prerequisite(s): (Undergraduate level MTH 2300 Minimum Grade of D or Undergraduate level MTH 2250 Minimum Grade of D or Undergraduate level MTH 2240 Minimum Grade of D) and (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) and (Undergraduate level STT 1600 Minimum Grade of D or Undergraduate level STT 3600 Minimum Grade of D or Undergraduate level STT 3610 Minimum Grade of D or Undergraduate level STT 3510 Minimum Grade of D or Undergraduate level STT 3620 Minimum Grade of D).

EE2020L Lecture/Lab Intro to Mechatronic Lab EE Electrical Engineering 1 Laboratory that assists with the students abilities to perform level design of integrated systems, program an embedded microcontroller, analyze and design basic sensor interface circuits, analyze and design driver circuits, and to develop simple programs that control actuators.

ART2320 Lecture/Lab Sculpture for Non-Majors ART Art 3 Introduction to the fundamental approaches and concepts of sculpture through direct engagement with materials and processes of the discipline, including mold making, casting, construction, and welding.

MUE2920 Lecture/Lab 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.
<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>ED7170</td>
<td>Word Study and Phonics</td>
<td>ED</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>ME7990</td>
<td>Independent Study</td>
<td>ME</td>
<td>1</td>
<td>Independent study in Mechanical Engineering, Materials Science and Engineering, and Renewable and Clean Energy.</td>
</tr>
<tr>
<td>PPH7650</td>
<td>Public Health Crisis and Population &amp; Public Health</td>
<td>PPH</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CS7140</td>
<td>Adv Software Engineering</td>
<td>CS</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CS1150</td>
<td>Intro to Comp Sci</td>
<td>CS</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>ART3690</td>
<td>Beg Printing Scenoprint</td>
<td>ART</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>PLS3220</td>
<td>State Government</td>
<td>PLS</td>
<td>3</td>
<td>Survey and analysis of the structures and functions of the Americans with special attention to the problems of federal-state and state-local relations, legislative apportionment, and urban growth. Integrated Writing course.</td>
</tr>
<tr>
<td>ME6530</td>
<td>Energy Conversion</td>
<td>ME</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 - generators, wind, ocean, turbines, direct energy conversion, fossil fuels, biomass, and nuclear power will be presented.</td>
</tr>
<tr>
<td>EE3310</td>
<td>Devices and Circuits</td>
<td>EE</td>
<td>3</td>
<td>Introduction to basic solid-state electronic devices for discrete and integrated circuits. Major topics include carrier flow in semi-conductors, p-n junction theory, semiconductor devices, bipolar junction transistors, field effect transistors, biasing, introduction to amplifiers, and frequency response.</td>
</tr>
<tr>
<td>EE7260</td>
<td>Autonomous Unmanned Syst</td>
<td>EE</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>EES8990</td>
<td>Thesis</td>
<td>EES</td>
<td>0.5</td>
<td>Supervised research and writing for a Master of Science thesis.</td>
</tr>
<tr>
<td>GEO4840</td>
<td>Biogeography</td>
<td>GEO</td>
<td>4</td>
<td>4840 Introduction to the factors affecting the distribution of plants and animals.</td>
</tr>
<tr>
<td>EDE6800</td>
<td>AYA Prof Seminar</td>
<td>ED</td>
<td>3</td>
<td>Seminar accompanying AYA Student Teaching focusing on pedagogical content knowledge and the and completion of and submission of the AFTPA.</td>
</tr>
<tr>
<td>PL53560</td>
<td>Politics Society France</td>
<td>PLS</td>
<td>3</td>
<td>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. Integrated Writing course.</td>
</tr>
<tr>
<td>CHI5120</td>
<td>Adv Chinese Conversation</td>
<td>CHI</td>
<td>3</td>
<td>A continuation of Chinese 3110/5110 pursuing a balance of the four basic language skills: reading, writing, listening, and speaking in Chinese with a focus on conversation.</td>
</tr>
<tr>
<td>BHE6650</td>
<td>Six Sigma for Engr</td>
<td>BHE</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CS3820</td>
<td>Intro to Semantic Web</td>
<td>CS</td>
<td>3</td>
<td>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 the syntax, 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.</td>
</tr>
<tr>
<td>BME321R</td>
<td>Human Biomechanics I Rec</td>
<td>BME</td>
<td>0</td>
<td>Required recitation for BME 3211.</td>
</tr>
<tr>
<td>URS6440</td>
<td>Adv. GIS Apps</td>
<td>URS</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>PSY4060</td>
<td>Independent Research</td>
<td>PSY</td>
<td>1</td>
<td>Original problems for investigation. Graded pass/unsatisfactory.</td>
</tr>
</tbody>
</table>
Fall 2020
- SPM7050  7050  Compliance & Regulation  SPM  Sports Management  1  This course focuses on the NCAA legislative process and bylaws governing the operations of an athletics program. Included topics are those bylaws related to eligibility, amateurism, recruiting, and financial aid.  GR  SE  Seminar
- CS5100  5100  Data Struct & Algorithms  CS  Computer Science  3  Study of the implementation of data structures and control structures in professional computer programs. Introduction to the fundamentals of complexity and analysis. Study of common standard problems and solutions (e.g., transitive closure and critical paths). Emphasis on high-level language software design.  <b>Department Managed Prerequisite(s): Undergraduate level CS 1181. Minimum Grade of D and Undergraduate level CEG 2350 Minimum Grade of D and Undergraduate level MTH 2370 Minimum Grade of D</b>  GR  LE  Lecture
- REL5550  5550  Human Rights in China  REL  Religion  3  Survey of the debate on human rights in China in relation to events in modern Chinese history such as: the fall of imperial rule, the Nationalist and Communist revolutions, the Cultural Revolution, and the Tiananmen Square massacre. Focus to include measuring the impact of Confucianism on current Chinese thinking regarding the themes of modernization, democratization, and human rights. Examination extends beyond China to other regions including Singapore, Taiwan, and Tibet.  GR  LE  Lecture
- NUR7551  7551  Chronic Care for PNP's  NUR  Nursing  6  Application of theoretical frameworks and research findings for health promotion, disease prevention, health maintenance, and health restoration for children and adolescents. The clinical practicum will focus on advanced nursing care, incorporating multi-disciplinary collaboration for the delivery of comprehensive health care in various care settings. Emphasis is on management of pediatric chronic conditions.  GR  LE  Lecture
- CEG4440  4440  Android Int and Security  CEG  Computer Engineering  3  Study the intervals of the Android mobile OS such as Messaging, Graphics, Audio, Video, Cameras, 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.  SG  LE  Lecture
- FR3830  3830  Applied Elem Fr Instruct  FR  French  1  French majors or minors assist FR 1010 or FR 1020 instructors in conducting classes. Taught in French.  <b>Department Managed Prerequisite(s): Undergraduate level FR 3110 Minimum Grade of D or 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</b>  UG  IS  Independent Study
- ED7120  7120  Lil Initir Div Learners  ED  Education  3  Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities. Audition required.  GR  LE  Lecture
- MUE4676  4670  Pep Band  MUE  Music: Ensembles  1  Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities. Audition required.  UG  LL  Lecture/Lab Combination
- GER5310  5310  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 Realism, and Modern Period.  GR  LE  Lecture
- EES230  6230  Intro to the Ocean  EES  Earth & Environmental Sciences  3  This course covers the fundamental principles and processes of oceanography for students with background in geology but not oceanography. The content is general but the emphasis is toward the needs of Earth Science teachers. The student will need to be able to use the Internet and some basic computer tools such as Word and Excel.  GR  LE  Lecture
- GR1020  1020  Beginning Greek II  GR  Greek  3  Essentials of the Greek language.  UG  LE  Lecture
- MLB4810  4810  Basic Immunohematology  MLB  Medical Laboratory Science  2  Theory and application of the use of antigens and antibodies in blood grouping and transfusion medicine.  UG  LE  Lecture
- SAA5760  7670  Internship II in SAHE  SAA  Student Affiliates in Higher Ed  1  This field-based experience provides students with advanced practice and supervision in areas of interest in SAHE.  GR  IN  Internship
- RBB3710  3710  International Rehab  RBB  Rehabilitation  3  Introduction to rehabilitation around the globe. Overview of the historical treatment, societal perceptions, services, and outcomes of people with disabilities internationally.  UG  LE  Lecture
- CS8990  8990  Continuing Registration  CS  Computer Science  1  Research on the Ph.D. dissertation topic taken in residence.  GR  IS  Independent Study
- DAG6010  6010  DAGSI Registration  DAG  DAGSI  0.5  GR  LE  Lecture
- MGT6750  6750  Small Business Mgt.  MGT  Management  3  An examination of the competencies required of small business managers including hiring and motivating employees and balancing stakeholders' interests.  GR  LE  Lecture
- BOD6410  6410  Behavioral Ecology  BIO  Biology  3  This course will focus on how and why animals behave the way they do. In particular, we will study how an individual's behavior contributes to its survival and reproductive success (i.e., why do particular behaviors evolve?) and how the environment influences optimal behavioral strategies (i.e., what is the ecological basis of behavior?). This course has a large theoretical component, but we will also examine some real behaviors as case studies.  GR  LE  Lecture
- CS1180  1180  Computer Science I  CS  Computer Science  4  Basic concepts of programming and programming languages. Structured programming, stepwise refinement, and object-oriented development. Integrated Writing course.  <b>Department Managed Prerequisite(s): WSU Math Placement 40 or Undergraduate level MTH 1280 Minimum Grade of D</b>  UG  LE  Lecture
- ATR7900  7900  AT Special Topics  ATR  Athletic Training  1  Variable title/variable credit hour course to allow for special topic exploration that occurs during the MSAT program.  GR  SE  Seminar
- ENG5200  5520  Writing Pedagogy for ILA  ENG  English  3  Introduction to writing pedagogy for Integrated Language Arts in grades 4-12 with an emphasis on writing processes and improving writing skills.  GR  LE  Lecture
- MUS2610  2610  French Dicton  MUS  Music  2  For students of singing. Application of the International Phonetic Alphabet to French. Includes intensive readings of song lyrics.  UG  LE  Lecture
- PL6330  6330  Public Opinion  PL  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 the policy process; and development of political attitudes and values.  GR  LE  Lecture
- EES4190  4190  Palenobiology  EES  Earth & Environmental Sciences  4  Origin of higher taxa, speciation, genealogical relatedness of all life, transformation of species, and macroevolutionary trends, as well as the response over geological time of Earth's biota to environmental, ecological, and geographical changes. Role of fossil organisms in reconstructing past environments and global paleogeography.  <b>Department Managed Prerequisite(s): Undergraduate level EES 2550 Minimum Grade of D</b>  UG  LE  Lecture
Fall 2020  
PLS4871  4871 Fundamentals of Intel  
P&N  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  
ED6775  6775 MA/CIS Curr & Mt 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  Examines 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  
PTX8600  8600 Prin Biomedical Research  
PTX  Pharmacology/Toxicology  1  Principles of Biomedical Research is appropriate for students that will be involved in biomedical research. FIBR 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  3  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 Lifshp&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 Intensive.<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  
EES6570  4570 Site Remed & Management  
EES  Earth & Environmental Sciences  3  Physical, chemical, and biological methods used to remediate contamination in soils and groundwater, emphasizing practical applications. Strategies and technology 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  
AED2680  2680 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  
PSY8150  8150 Binaral Hearing  
PSY  Psychology  3  Examines the psychophysical and physiological basis of binural and spatial hearing. Topics include binural detection, sound localization, the cocktail-party effect, models of spatial hearing, and 3-dimentional 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 inverteous 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, Brenson, 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>  
UG  LE  Lecture

Fall 2020  
COM3330  3330 Persuasion & Rhet Theory  
COM  Communication  3  Delimization 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 1  
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  Examines 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 1  
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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS6640</td>
<td>6640</td>
<td>Political Science</td>
<td>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.</td>
</tr>
<tr>
<td>FIN4260</td>
<td>4260</td>
<td>Estate Planning</td>
<td>FIN Finance</td>
</tr>
<tr>
<td>MUE4400</td>
<td>4400</td>
<td>University Clarinet Choir</td>
<td>MUE Music: Ensembles</td>
</tr>
<tr>
<td>PSY2810</td>
<td>2810</td>
<td>Psychology Incarceration</td>
<td>PSY Psychology</td>
</tr>
<tr>
<td>PSY5710</td>
<td>5710</td>
<td>Perception</td>
<td>PSY Psychology</td>
</tr>
<tr>
<td>BMB4001</td>
<td>4001</td>
<td>Fundamentals of Biochem</td>
<td>BMB Biochem &amp; Molecular Biology</td>
</tr>
<tr>
<td>ART2150</td>
<td>2150</td>
<td>Foundations of Art Ed</td>
<td>ART Art</td>
</tr>
<tr>
<td>ANT6040</td>
<td>6040</td>
<td>Biomedical Experimental Design</td>
<td>ANT Anatomy</td>
</tr>
<tr>
<td>DAN3110</td>
<td>3110</td>
<td>Musical Theatre Dance I</td>
<td>DAN Dance</td>
</tr>
<tr>
<td>ED3170</td>
<td>3170</td>
<td>Midle Lvl Inq &amp; Act Raeh</td>
<td>ED Education</td>
</tr>
<tr>
<td>AF5404</td>
<td>4040</td>
<td>African Diaspora</td>
<td>AFS Afr/Afr Amer Studies</td>
</tr>
<tr>
<td>EE5030</td>
<td>5030</td>
<td>History of Ideas of Race</td>
<td>AFS Afr/Afr Amer Studies</td>
</tr>
<tr>
<td>EE4840</td>
<td>4840</td>
<td>Intro Machine Learning</td>
<td>EE Electrical Engineering</td>
</tr>
<tr>
<td>H13250</td>
<td>3250</td>
<td>Set Design</td>
<td>TH Theatre</td>
</tr>
<tr>
<td>FAS3800</td>
<td>3800</td>
<td>Undergrad Research FS</td>
<td>FAS Food and Agricultural Systems</td>
</tr>
<tr>
<td>EDL7200</td>
<td>7200</td>
<td>Analysis of Teaching</td>
<td>EDL Educational Leadership</td>
</tr>
<tr>
<td>BMB7030R</td>
<td>7030R</td>
<td>Research Ethics Rec</td>
<td>BMB Biochem &amp; Molecular Biology</td>
</tr>
<tr>
<td>BDI4010</td>
<td>4010</td>
<td>Topics in Modern Biology</td>
<td>BDI Biology</td>
</tr>
<tr>
<td>SOC4080</td>
<td>4080</td>
<td>Independent Study</td>
<td>SOC Sociology</td>
</tr>
<tr>
<td>EDL5300</td>
<td>5300</td>
<td>Research on Teaching</td>
<td>EDL Educational Leadership</td>
</tr>
<tr>
<td>EE3210</td>
<td>3210</td>
<td>Linear Systems I</td>
<td>EE Electrical Engineering</td>
</tr>
<tr>
<td>MTH2240</td>
<td>2240</td>
<td>Applied Calculus</td>
<td>MTH Mathematics</td>
</tr>
<tr>
<td>ENG1130</td>
<td>1130</td>
<td>Research and Argument</td>
<td>ENG English</td>
</tr>
<tr>
<td>SW4860</td>
<td>4860</td>
<td>SW Field Practicum I</td>
<td>SW Social Work</td>
</tr>
<tr>
<td>KNH520</td>
<td>520</td>
<td>SCUBA: Master Diver</td>
<td>KNH Kiniesology &amp; Health</td>
</tr>
<tr>
<td>BIO6560</td>
<td>6560</td>
<td>Ecosystems/Global Change</td>
<td>BIO Biology</td>
</tr>
<tr>
<td>ATH4020</td>
<td>4020</td>
<td>Anthropology of Religion</td>
<td>ATH Anthropology</td>
</tr>
<tr>
<td>BIO1150L</td>
<td>1150L</td>
<td>Organisms &amp; Ecosystems Lab</td>
<td>BIO Biology</td>
</tr>
</tbody>
</table>

**Course Codes:**
- **UG:** Undergraduate level
- **GR:** Graduate level
- **LE:** Lecture
- ** combination:** Lecture/Lab
- **Lab:** Laboratory
- **Lab:** Lecture/Lab Combination

**Additional Information:**
- **Fall 2020**
- **Spring 2020**
- **Summer 2020**
- **Fall 2021**
- **Spring 2021**
- **Summer 2021**
- **Fall 2022**
- **Spring 2022**
- **Summer 2022**
- **Fall 2023**
- **Spring 2023**
- **Summer 2023**
- **Fall 2024**
- **Spring 2024**
- **Summer 2024**

**Course Levels:**
- **100:** Introductory level
- **200:** Intermediate level
- **300:** Upper level
- **400:** Graduate level
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Instructor</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC6710</td>
<td>Victimology</td>
<td>3</td>
<td>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.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>HST4830</td>
<td>Topics in Gender History</td>
<td>3</td>
<td>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. Integrated Writing course.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ME4140</td>
<td>Mechanical Design I</td>
<td>3</td>
<td>Fundamental concepts in design for both static and fatigue loading, with application to selected mechanical components and systems. (&lt;b&gt;Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C' and Undergraduate level ME 3120 Minimum Grade of D+&lt;/b&gt;)</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>LEP0480</td>
<td>LEAP Test Preparation</td>
<td>0</td>
<td>This course is designed to help non-native students of English prepare for standardized English tests such as the TOEFL and IELTS. The course includes strategies for test-taking in addition to practice exams with feedback. This course has a fee that is non-refundable once the term begins.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>JPN3120</td>
<td>Adv Japanese Conv</td>
<td>3</td>
<td>Continued practice in oral use of Japanese, emphasizing the culture of the Japanese world. (&lt;b&gt;Department Managed Prerequisite(s): Undergraduate level JPN 2020 Minimum Grade of D or AP Japanese Language &amp; Culture 4+&lt;/b&gt;)</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CS3100</td>
<td>Data Struc &amp; Algorithms</td>
<td>3</td>
<td>Study of the implementation of data structures and control structures in professional computer programs. Introduction to the fundamentals of complexity and analysis. Study of common standard problems and solutions (e.g., transitive closure and critical path). Emphasis on high-level language software design. (&lt;b&gt;Department Managed Prerequisite(s): Undergraduate level CS 1181 Minimum Grade of C' and Undergraduate level CEG 3310 Minimum Grade of C and Undergraduate level MTH 2570 Minimum Grade of D or Undergraduate level CS 2200 Minimum Grade of D+&lt;/b&gt;)</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENG7510</td>
<td>TESOL: Speak/Listen</td>
<td>5</td>
<td>Understanding and further developing the theory and practice of teaching listening and speaking, including issues of pronunciation, to speakers of English as a second, foreign, or international language. (&lt;b&gt;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 7810 Minimum Grade of C or Graduate level HUM 7000 Minimum Grade of C and Undergraduate level ENG 4710 Minimum Grade of C or Graduate level ENG 6710 Minimum Grade of C&lt;/b&gt;)</td>
<td></td>
<td>Seminar</td>
<td></td>
</tr>
<tr>
<td>BIO4420</td>
<td>Adv Molecular Biology</td>
<td>4</td>
<td>Gene organization and genome organization, centering on the molecular anatomy, expression, and regulation of eukaryotic genes. Emphasizes recombinant DNA technology.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>CHM5120</td>
<td>Quantitative Analysis</td>
<td>2</td>
<td>Introduction to chemical methods of analysis covering traditional as well as modern techniques and equipment; emphasis on calculations and interpretation of analyses.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>PNP8600</td>
<td>Physiol &amp; Neuroscience</td>
<td>2</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>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>FIN7810</td>
<td>Special Studies Fin</td>
<td>1</td>
<td>Intensive reading or research in a selected field of advanced finance.</td>
<td></td>
<td>Lecture</td>
<td>Independent Study</td>
</tr>
<tr>
<td>CS2200</td>
<td>Discrete Struc Algorithm</td>
<td>4</td>
<td>Discrete structures and their algorithms for computer science. Emphasis on rigorous proof and formal argumentation. (&lt;b&gt;Department Managed Prerequisite(s): Undergraduate level CS 1200 Minimum Grade of C&lt;/b&gt;)</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>DMV8100</td>
<td>DMV Registration</td>
<td>0.5</td>
<td>Study of the processes that create and modify landforms. Classifications of landforms and what they reveal of past geologic processes and climates.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EES6270</td>
<td>Process Geomorphology</td>
<td>3</td>
<td>Continuation of ISE 2211 engineering statistics as applied to testing, development, and manufacturing and quality assurance. Expands on the concepts of sampling theory, design of experiments, hypothesis testing and statistical inference, simple and multiple linear regression, non-parametric analysis, analysis of variance, and process improvement (statistical process control and six sigma techniques). The use of an interactive statistics and graphics application software is emphasized.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ESE3221</td>
<td>Adv Stats for Engineers</td>
<td>3</td>
<td>Exploring the relationships between organizational change, professional growth, and leadership. Candidates engage in theoretical and research-based readings, discussions and activities regarding change, innovation, leadership, organizational culture, and professional development.</td>
<td></td>
<td>Lecture</td>
<td>Seminar Lab/Combination</td>
</tr>
<tr>
<td>EDL9920</td>
<td>Sdld Culture Prof Growth</td>
<td>3</td>
<td>Explores the role of literacy instruction and addresses more advanced levels of literacy including content and process.</td>
<td></td>
<td>Lecture</td>
<td>Laboratory/Lab/Corporation</td>
</tr>
<tr>
<td>CS7100</td>
<td>Adv. Prog. Languages</td>
<td>3</td>
<td>This course provides a solid foundation in programming language specification and design. It covers different programming paradigms, algebraic specification and implementation of data types, and develops interpreters for specifying operationally various programming language constructs. It also introduces attribute grammar formalism and axiomatic basis for computer programming. (&lt;b&gt;Department Managed Prerequisite(s): Undergraduate level CS 3180 Minimum Grade of D or Graduate level CS 5180 Minimum Grade of D&lt;/b&gt;)</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>HPR2010</td>
<td>Teaching Invasion Games</td>
<td>3</td>
<td>This activity class models best teaching practices in invasion games such as basketball, soccer, and flag football. Students are required to demonstrate skill performance competency.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENG4910</td>
<td>Directed Reading</td>
<td>3</td>
<td>Directed reading in special areas of American, English, or world literature in translation, and English language and linguistics not available through course structure. Limited to senior English majors with a 3.0 cumulative average. (&lt;b&gt;Department Managed Prerequisite(s): Undergraduate level ENG 3860 Minimum Grade of C&lt;/b&gt;)</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ENG4740</td>
<td>Post-Colonial Lit</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. Integrated Writing course.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>EDL7720</td>
<td>Ed Administrative Behav</td>
<td>3</td>
<td>Develops an understanding of the principles of educational administrative processes, formal school structures and organization, and an introduction to school administrative task areas.</td>
<td></td>
<td>Lecture</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020

REL5460 5460 Confucianism REL Religion 3 A survey of Confucianism in Chinese history beginning with various classical expressions of Confucian thought such as: Confucius Anecdotes, 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. GR LE Lecture

Fall 2020

PLS6670 6670 China: Domestic Politics PLS Political Science 3 Analysis of governmental structures and processes within modern China, emphasizing both elite and mass politics. Overview of the rise of state socialism and examination of some of the key issues in Chinese politics and society today. GR LE Lecture

Fall 2020

PSY9040 9040 Statistics & Research I PSI Professional Psychology 3 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. GR LE Lecture

Fall 2020

MKT4800 4800 Internship in Marketing MKT Marketing 3 On-the-job training and experience with an organization. Integrates classroom study with practical work experience. UG IN Internship

Fall 2020

PNT220 7220 Ion Channels PN Physiology & Neuroscience 3 This course explores the role of ion channels in a variety of cell types with an emphasis on both electrophysiological and biochemical methods for evaluation of channel function. GR LE Lecture

Fall 2020

PHY2400 2400 General Physics I PHY Physics 4 Introductory survey of mechanics for science and engineering students. Uses of interpreting physical phenomena. Topics include vectors, kinematics, dynamics, energy, momentum, rotation, oscillation and thermodynamics. UG LE Lecture

Fall 2020

KNH2530 2530 Kinesiology KNH Kinesiology & Health 3 Analysis of muscular interrelationships in basic body movement and principles of mechanics as they relate to fundamental and complex motor skills in physical education activities. UG LE Lecture

Fall 2020

SLI3570 3570 Business of Interpreting SLI Sign Language Interpreting 3 Explains 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. UG LE Lecture

Fall 2020

MUE2450 2450 Collegium Musicum MUE Music: Ensembles 1 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. UG LL Lecture/Lab Combination

Fall 2020

NUR7211 7211 Concepts in Cardiovasc Nurs NUR Nursing 3 Examination of physiological concepts, human responses, nursing assessments, and interventions related to actual and potential health problems in adults with cardiovascular alterations. GR LE Lecture

Fall 2020

MIL3020 3020 Applied Team Leadership MIL Military Science 3 Students plan, coordinate, navigate, motivate and lead a team or squad in the execution of a tactical mission. UG LE Lecture

Fall 2020

ATH2150 2150 Comp Nonwest Cultures ATH Anthropology 3 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 milieu, 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. UG LE Lecture

Fall 2020

DAN1070 1070 Ballet for the Actor I DAN Dance 2 Fundamental ballet technique for beginning non-dance majors to develop creative movement potential. Explores basic ballet vocabulary and steps. UG ST Studio

Fall 2020

MUS4560 4560 Vocal Literature II MUS Music 3 Survey of vocal literature from the 18th through the 20th century emphasizing opera and oratorio. UG LE Lecture

Fall 2020

IDL7220 7220 Instruc Design Concept&Theory IDL Instructional Design & Learning 3 Students will explore a variety of instructional design concepts and theories, and how instructional design theory can be applied to practice. GR LE Lecture

Fall 2020

EES4560 4560 Groundwater Contam EES Earth & Environmental Sciences 3 Common anthropogenic contaminant distribution in the groundwater as investigated in recent decades. Directly affects the mobility and fate of the contaminants in soil and water. <b>Department Managed Prerequisite(s): Undergraduate level EES 2510 Minimum Grade of D</b> GR LE Lecture

Fall 2020

CS7220 7220 Computability/Complexity CS Computer Science 3 Fundamentals of computability theory. Undecidability. Time and space complexity. Cook's Theorem and NP completeness. Approximation strategies for intractable problems. <b>Department Managed Prerequisite(s): Undergraduate level CS 3200 Minimum Grade of D or Graduate level CS 5200 Minimum Grade of D</b> GR LE Lecture

Fall 2020

CEG7080L 7080L CMOS Med Sig IC Des Lab CEG Computer Engineering 1 Required lab for EE 7500. <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</b> GR LB Lab

Fall 2020

RHE810 810 Intro Disability Studies RHB Rehabilitation 3 Introduction to the interdisciplinary field of disability studies, with a focus on the critical analysis of key theoretical views, historical and current sociocultural understandings of disability, difference, power, disability culture, justice, and activism. UG LE Lecture

Fall 2020

M&J8440 8440 Sem Topics - M&J M&J Microbiology & Immunology 2 Molecular virology, viral oncology, immunology, transplantation immunology, tumor immunology, immune regulation, infection and immunity. GR SE Seminar

Fall 2020

KNH1550A 1550A GRACIE Self Def Basic KNH Kinesiology & Health 1 Fundamental skills and knowledge of GRACIE Self Defense Basic. Competency-based approach. Course may accommodate disabled students when appropriate. GR UB Lab

Fall 2020

EE6420 6420 Microwave Egr 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. GR LE Lecture

Fall 2020

EE6630 6630 Global Biogeochem Cycles EES Earth & Environmental Sciences 3 Climate, atmospheric chemistry, geophysical processes and terrestrial ecosystems. UG LE Lecture

Fall 2020

CHM4990 4990 Critical Lit Analysis CHM Chemistry 1 Development of critical thinking skills for analysis of current chemical and general scientific literature. UG LE Lecture

Fall 2020

PLS220 2220 International Politics PLS Political Science 3 Introductory survey of the international political system including study of state and nonstate actors, major features of the system, conflict roots, approaches to peace-keeping, and current issues. UG LE Lecture
Political Science

Examines how gender is created and negotiated across space and place. Also examines how gender and gender inequality intersect with other social constructs like race, social class, the media, culture, sexuality, work, family, and violence.

Supervised individual projects. May involve intern programs, field research or other specialized projects. Requires 3.0 GPA.

An introduction to the language of business German with insight into Germany's place in the global economy. Taught in German. Integrated Writing course. 

Learn to develop effective career development programs and services for use with individuals and groups.

This course covers basic theories, methods, and algorithms of atomistic computer simulations of materials. Classical, semi-empirical, and ab initio quantum mechanical methods are explained.

Combines different data analysis and data mining techniques. Includes statistical analysis, decision tree and association analysis, and dimension reduction techniques.

Managed Prerequisite(s): (Graduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of C) or (Graduate level ME 2700 Minimum Grade of D). 

Combination of classical, semi-empirical, and ab initio quantum mechanical methods is explained.

Develops a framework for understanding metrics to macro inclusive practice interventions in groups within organization throughout communities of varying types. 

This course 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.

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Develops a framework for understanding metrics to macro inclusive practice interventions in groups within organization throughout communities of varying types. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

This course covers 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.

Graduate level research and writing in the field of French. Topics vary. Taught in French. 

Develops a framework for understanding metrics to macro inclusive practice interventions in groups within organization throughout communities of varying types. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Graduate level research and writing in the field of French. Topics vary. Taught in French. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D or Undergraduate level SW 3755 Minimum Grade of D and Undergraduate level SW 4900 Minimum Grade of D. 

Graduate level research and writing in the field of French. Topics vary. Taught in French.
Examination of the religious phenomenon and category of "mysticism" in various Asian traditions including Hinduism, Daoism, and Buddhism (both early Indian Buddhism and Japanese Zen).

Critical reading of primary sources. Readings from thinkers such as Arendt, Marcuse, Habermas, Foucault, Derrida, Rawls, Rorty, Cohen, MacIntyre, Taylor, Nussbaum, and Agamben.

Development of capacity to interpret remote sensed data and complete an analysis of data.

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.

An opportunity for students to reinterpret their goals and identify steps that can be taken while in college toward success and well-being.

Written proposal for a Ph.D. topic and an oral examination that is open to the public.

An introduction to the competence, 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITA2010</td>
<td>Intermediate Italian I</td>
<td>Intermediate study of the Italian language. Grammar review, reading, and discussion of selected texts, with practice in speaking and writing.</td>
</tr>
<tr>
<td>BME6704L</td>
<td>Adv Med Imaging Lab</td>
<td>Required laboratory for BME 6704.</td>
</tr>
<tr>
<td>MUS3110</td>
<td>History of Music I</td>
<td>History of western art music from ancient Greece to 1750. Integrated Writing course.</td>
</tr>
<tr>
<td>ED6690</td>
<td>ED Psych for Educators</td>
<td>Understanding theories of learning, motivation and assessment in the context of pre-K-12 education.</td>
</tr>
<tr>
<td>KNH1600A</td>
<td>Step Aerobics</td>
<td>Fundamental skills and knowledge of Step Aerobics. Competency-based approach.</td>
</tr>
<tr>
<td>ECE4300</td>
<td>Differeil &amp; Collab</td>
<td>An examination of modifications and teaching strategies necessary to facilitate the diverse learning needs of young students. Focus on developing and implementing differentiated lessons.</td>
</tr>
<tr>
<td>REL5450</td>
<td>Daoism</td>
<td>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.</td>
</tr>
<tr>
<td>KNH1270</td>
<td>H2O Kickboxing</td>
<td>Fundamental skills and knowledge of H2O Kickboxing. Competency-based approach.</td>
</tr>
<tr>
<td>CHM1070L</td>
<td>Chemistry: Energy &amp; Env Lab</td>
<td>Required laboratory for CHM 1070.</td>
</tr>
<tr>
<td>EE2000</td>
<td>Digital Design with HDL</td>
<td>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.</td>
</tr>
<tr>
<td>NUR3480</td>
<td>Nursing Care of Adults</td>
<td>Focuses on critical reasoning and nursing care of adults in acute care settings. Delivers of holistic, patient-centered care that incorporates understanding of pathophysiology, pharmacology, and medical and nursing care principles. (3 u. didactic; 4 u. total clinical lab)</td>
</tr>
<tr>
<td>GER4260</td>
<td>19th-Cent German Drama</td>
<td>Readings and reports in 19th-century drama. Representative works of Tieck, Kleist, Grillparzer, Hebbel, Buchner, and others. 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 3210 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3220 Minimum Grade of D or Undergraduate level GER 3240 Minimum Grade of D or Undergraduate level GER 3240 Minimum Grade of D or Undergraduate level GER 3280 Minimum Grade of D or Undergraduate level GER 3280 Minimum Grade of D or Undergraduate level GER 3510 Minimum Grade of D or Undergraduate level GER 3610 Minimum Grade of D. Department Managed Prerequisite(s).</td>
</tr>
<tr>
<td>ISG7260</td>
<td>Asasen in Ghrd Ed</td>
<td>National and State perspectives on the role of assessment in program design, identification of students, development of written education plans and classroom instruction.</td>
</tr>
<tr>
<td>EGR3980L</td>
<td>Special Topics in EGR Lab</td>
<td>Required laboratory for EGR 2980.</td>
</tr>
<tr>
<td>ECO5180</td>
<td>Eco Applica Internet II</td>
<td>This course covers basic economic concepts/skills to K-12 teachers and how they may be applied to the classroom using resources available on the Internet. The course is an excellent foundation for teachers with little economic knowledge that desire greater expertise. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>REL5490</td>
<td>Hindu Goddesses</td>
<td>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.</td>
</tr>
<tr>
<td>HED4850</td>
<td>Foundations HBS Ed II</td>
<td>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.</td>
</tr>
<tr>
<td>EGR3990L</td>
<td>Fuel Cell Sci and Tech</td>
<td>This course covers the fundamentals, technologies, and applications of various types of fuel cells. The Fundamentals covered are thermodynamic prediction, electrode kinetics. The types of fuel cells covered are polymer electrolyte fuel cell, solid oxide fuel cell, and fuel cell stack. Department Managed Prerequisite(s). Undergraduate level ME 2700 Minimum Grade of D and Undergraduate level ME 3510 Minimum Grade of D or Graduate level ME 5310 Minimum Grade of D and Undergraduate level ME 3570 Minimum Grade of D or Graduate level ME 3570 Minimum Grade of D.</td>
</tr>
<tr>
<td>MIS4950</td>
<td>IS Proj Mgt &amp; Develop</td>
<td>Introduces concept, practice, and the importance of project management. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing IS projects. Student 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.</td>
</tr>
</tbody>
</table>
Fall 2020
COM2460 2460 Organizational Comm COM Communication 3 Nature and functions of communication in the organizational setting. Concepts and methods needed to assess and improve communication in organizations. \(<b>Department Managed Prerequisite(s): Undergraduate level COM 1040 Minimum Grade of C and Undergraduate level ENG 1100 Minimum Grade of C</b>\) UG LE Lecture

Fall 2020
CEG8950 8950 Dissertation Research CEG Computer Engineering 1 Research on the Ph.D. dissertation topic. GR IS Independent Study

Fall 2020
IT4479 4479 Special Topics IT Information Technology 1 Focused study in an area of interest in Graphic Design and Visual Media. UG LL Lecture/Lab Combination

Fall 2020
EES3660 3660 Env Hlth Sci Internship EES Earth & Environmental Sciences 6 Internship in an environmental or public health agency or industrial organization, supervised by faculty and a professional environmentalist. Reports and specific assignments determined in cooperation with internship director. UG IN Internship

Fall 2020
MTH7170 7170 Numerical Analysis II MTH Mathematics 4 Finite difference and finite element methods for partial differential equations, including elliptic, parabolic and hyperbolic. \(<b>Department Managed Prerequisite(s): Graduate level MTH 5330 Minimum Grade of D and Graduate level MTH 6550 Minimum Grade of D</b>\) GR LE Lecture

Fall 2020
IC4440 4440 Problems in Ec Dev EC Economics 3 Explores theories of economic development and underdevelopment and their relationship to poverty. Develops strategies for reducing world poverty from different perspectives. UG LE Lecture

Fall 2020
ART4020 4020 Museum/Gallery Intern ART Art 1 Supervised individual projects in museum or gallery setting. UG IN Internship

Fall 2020
GR5510 5510 Readings in Greek Drama GR Greek 3 Aeschylus, Sophocles, Euripides, Aristophanes, and Meander. Study of at least one play in Greek. Topics include origin and development of tragedy, dramas as a reflection of contemporary events, and development of new comedy. Tilits vary. GR LE Lecture

Fall 2020
CPE0920 0920 Cooperative Education II CPE Cooperative Education 0 Cooperative Education II: Part-time career-related work. Through cooperative education, students enhance 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. UG IN Internship

Fall 2020
STT6960 6960 Topics in Stat and Prob STT Statistics 1 Topics in statistics and probability. GR IS Independent Study

Fall 2020
SPN3210 3210 SPN Caps and Writing SPN Spanish 3 Oral and written composition in Spanish; writing techniques and grammar review. Taught in Spanish. Integrated Writing course. \(<b>Department Managed Prerequisite(s): Undergraduate level SPN 2020 Minimum Grade of D or Undergraduate level SPN 2120 Minimum Grade of D or AP Spanish Language 4 or AP Spanish Literature 4</b>\) UG LE Lecture

Fall 2020
ART3760 3760 Subtractive Proc ART Art 3 Development of personal concepts and aesthetic expression in sculpture, with focus on subtractive processes. Emphasizes 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. \(<b>Department Managed Prerequisite(s): Undergraduate level ART 2801 Minimum Grade of D</b>\) UG ST Studio

Fall 2020
ENG5000 5000 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 formal oral presentations. GR LE Lecture

Fall 2020
REL5630 5630 Women & Religion in Amer REL Religion 3 Examination of the role women have played in American religious history, with special reference to the diversity of women's religious experiences. GR LE Lecture

Fall 2020
EGR7910 7910 MEEB Team Project I EGR Engineering 3 First semester 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
CEG7450 7450 Adv. Comp. Networks CEG Computer Engineering 3 This course provides an in-depth coverage of advanced computer network architecture, communication and networking technologies. Topics include: quality of service networking architecture (IntServ, DiffServ, RSVP), Core state-less, packet scheduling, quality of service routing, congestion control, multicast, delay tolerant networking, inter-planetary networking, self-similar traffic analysis, network calculus, overlay networks, peer-to-peer networks, and network security. \(<b>Department Managed Prerequisite(s): Undergraduate level CEG 4400 Minimum Grade of D or Graduate level CEG 4400 Minimum Grade of D</b>\) GR LE Lecture

Fall 2020
SW6620 6620 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 these 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. GR LE Lecture

Fall 2020
BMS7411 7411 Rehab Engin Design I BMS Biomedical Sciences 3 Application of knowledge and experience in the rehabilitation engineering design, research and development process. Includes navigating funding issues. GR LE Lecture

Fall 2020
EE4620 4620 Digital Circuit Design EE Electrical 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. UG LE Lecture

Fall 2020
ME4740 4740 Mat Sel Failure Analysis ME Mechanical and Materials Eng 3 Engineered components are manufactured with materials designed for a specified life, but may fail in service. Using analytical methods and computer software, procedures for selecting the optimum materials and manufacturing processes under multiple constraints are discussed. Analysis to establish the root cause of failures is addressed through lectures and case studies that relate factors such as design, material, manufacture, and service conditions. \(<b>Department Managed Prerequisite(s): Undergraduate level ME 2790 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of D and Undergraduate level ME 4620 Minimum Grade of D (ME 4620 can be taken concurrently)</b>\) UG LE Lecture

Fall 2020
CEG2170L 2170L Intro to C Prog for S&E Lab CEG Computer Engineering 0 Required laboratory for CEG 2170. UG LB Lab

Fall 2020
BIO4440L 4440L Plant Physiology Laboratory BIO Biology 0 Required laboratory for BIO 4440. UG LB Lab
Fall 2020
ARAS220 5220  Adv ARA Syntax & Gramm 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>GR</b><b> LE</b> Lecture

Fall 2020
ME4950 4950 Research in ME
ME Mechanical and Materials Engr 1
Second 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.<b>UG</b> IS Independent Study

Fall 2020
RELS600 3600 Topics: Amer Religion
RELS Religion 3
Selected topics related to the history and practice of religion in America.<b>UG</b> LE Lecture

Fall 2020
ED3100 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.<b>UG</b> 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.<b>GR</b> LE Lecture

Fall 2020
REH2020 2020 Community Resources
REH Rehabilitation 3
Preparation in becoming professional consumers of rehabilitation resources. Learning how to identify, write, and submit a grant and effective strategies of teamwork are also components of the course. Students will volunteer in a rehabilitation agency. Integrated Writing course. Service Learning course.<b>UG</b> LE Lecture

Fall 2020
RELS3550 3550 Human Rights in China
RELS Religion 3
A survey of the debate on human rights in 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.<b>UG</b> LE Lecture

Fall 2020
OSIS500 2500 Internship
OSIS Office Information Systems 3
Practical experience coordinated by faculty, student, and business representative.<b>UG</b> IN Internship

Fall 2020
PHL2100 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 is, with EC 2100, part of a two-course Wright State Core sequence on government and society.<b>UG</b> 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 reorient their goals and identify steps that can be taken while in college toward success and well-being.<b>UG</b> LE Lecture

Fall 2020
DAN3020 3020 Ballet III
DAN Dance 3
Vocabulary, techniques, and theory of advanced ballet. Emphasis on body alignment and flexibility.<b>UG</b> 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.<b>UG</b> 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.<b>UG</b> LL Lecture/Lab Combination

Fall 2020
CNL6220 6220 Group Background & Theory
CNL Counseling 3
Surveys the background, theory, patterns of function, techniques of facilitating, and the uses of small groups in counseling.<b>GR</b> LL Lecture/Lab Combination

Fall 2020
HPR2030 2030 Teaching Net/Wall Games
HPR Health Pfy Educ & Recration 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.<b>UG</b> LE Lecture

Fall 2020
HST7000 7000 Historical Methods
HST History 3
Intensive training in the research methods and materials of history.<b>GR</b> LE Lecture

Fall 2020
THI2900 4590 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.<b>UG</b> LL Lecture/Lab Combination

Fall 2020
BHE1615 6150 Adv Prob & Stats for Engineers
BHE Industrial & Ham Fac 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.<b>GR</b> 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.<b>GR</b> 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.<b>UG</b> 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.<b>UG</b> LE Lecture

Fall 2020
KH1760 1760 Walk-Jog-Run
KHN Kinesiology & Health 1
Fundamental skills and knowledge of Walk-Jog-Run. Competency-based approach. Course may accommodate disabled students when appropriate.<b>UG</b> LB Lab

Fall 2020
FNN4140 4140 Real Estate Law
FNN 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, cooperatives, condominiums, and license laws of Ohio. Successful completion of this course meets part of the licensing requirements for real estate salespeople in Ohio.<b>UG</b> LE Lecture

Fall 2020
BMS7080 7080 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.<b>GR</b> LE Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEG3110</td>
<td>Intro Software Testing</td>
<td>3</td>
<td></td>
<td>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. Requires prerequisite: Undergraduate level CS 1161 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D.</td>
</tr>
<tr>
<td>PSY5130L</td>
<td>Meth in Clinical Psych Lab</td>
<td>5</td>
<td>Required laboratory for PSY 5130.</td>
<td>GR LE Lab</td>
</tr>
<tr>
<td>MUS3340</td>
<td>Music in the Elementary</td>
<td>3</td>
<td></td>
<td>Materials, techniques, organization, and administration of vocal and general music programs in the public school. Reading components and teaching strategies included.</td>
</tr>
<tr>
<td>ED4455</td>
<td>AYA Intern Part I</td>
<td>4</td>
<td></td>
<td>Candidates, mentor 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.</td>
</tr>
<tr>
<td>REL6500</td>
<td>Seminar on Am Religion</td>
<td>6</td>
<td></td>
<td>Seminar examining selected topics related to the history and practice of religion in America.</td>
</tr>
<tr>
<td>REL3630</td>
<td>Women Religions America REL</td>
<td>3</td>
<td></td>
<td>Role of women in American religious history, with special reference to the diversity of women's religious experiences.</td>
</tr>
<tr>
<td>COM1010</td>
<td>Essential Public Address</td>
<td>1</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>ED2000</td>
<td>Undergrad Practicum Multi-Age ED</td>
<td>4</td>
<td></td>
<td>Education provided by a classroom teacher, in cooperation with the school, for students attending a school for field experience in grades P-12 and their concentration area(s).</td>
</tr>
<tr>
<td>PSY6500</td>
<td>Social Psych Cap</td>
<td>6</td>
<td></td>
<td>Communication-intensive seminar integrating knowledge on Social Psychology. Topic will vary by title.</td>
</tr>
<tr>
<td>ECO5580</td>
<td>ECO and Geography</td>
<td>5</td>
<td></td>
<td>Communication-intensive seminar integrating knowledge on Social Psychology. Topic will vary by title.</td>
</tr>
<tr>
<td>HED1230</td>
<td>Personal Health</td>
<td>HED 3</td>
<td></td>
<td>Basic concepts and skills needed to adopt and maintain a healthy lifestyle.</td>
</tr>
<tr>
<td>REL7800</td>
<td>Apocalypse of John REL</td>
<td>3</td>
<td></td>
<td>A literary and historical study of the Book of Revelation in its original setting with a consideration of its ongoing influence.</td>
</tr>
<tr>
<td>DMV2020</td>
<td>DMV Registration</td>
<td>DMV 2</td>
<td></td>
<td>0.5 DMV DMV Consortium.</td>
</tr>
<tr>
<td>FAS2720</td>
<td>Clim Weather Crop Growth</td>
<td>2</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>STT6310</td>
<td>Stat Meth Clinical Trial STT</td>
<td>3</td>
<td></td>
<td>Basic clinical design methodology, types of clinical trials, analysis of trial data, and statistical issues that commonly arise in clinical trials. Requires prerequisite: Undergraduate level STT 3610 Minimum Grade of D or Graduate level STT 5610 Minimum Grade of D) or Graduate level STT 6300 Minimum Grade of D.</td>
</tr>
<tr>
<td>MBS7800</td>
<td>Mgt of Tech Services MBS</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>ED6890</td>
<td>AYAMA Capstone Research ED</td>
<td>6</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>BMES350</td>
<td>Comp Neuroerg &amp; Hlth App BMI</td>
<td>6</td>
<td></td>
<td>Principles and application of computational methods and technologies to neuromechanics and neuroengineering; analysis of applications related to brain-system interface and augmented sensory perception; articulation of various methods of non-invasive neuroimaging measurements.</td>
</tr>
<tr>
<td>THS260</td>
<td>Costume Design</td>
<td>TH 3</td>
<td></td>
<td>Costume design for the theatre. Includes project design work with an emphasis on professional technique and period design.</td>
</tr>
<tr>
<td>MUS3260</td>
<td>Orchestral Conducting</td>
<td>MUS 3</td>
<td>Practical applications of conducting, teaching, and rehearsing in actual conducting situations with live orchestral performers.</td>
<td></td>
</tr>
<tr>
<td>BMST260</td>
<td>Synthetic Polymer Chem</td>
<td>BMS 2</td>
<td>(Also listed as CHM 6610.) Step-growth and chain-growth polymerization in homogeneous and heterogeneous media; properties of commercial polymers.</td>
<td></td>
</tr>
<tr>
<td>PSY8210</td>
<td>Paragragms in Exp. Psych.</td>
<td>3</td>
<td>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 roles of science and scientific paradigms. Students will analyze paradigmatic shifts occurring in experimental psychology over the past century, including behavorism, information processing, and ecological approaches to psychology.</td>
<td></td>
</tr>
<tr>
<td>EE4170</td>
<td>Digital Control Sys EE</td>
<td>4</td>
<td></td>
<td>Sample spectra and aliasing, analysis and design of digital control systems using root locus and transform techniques; discrete equivalents of continuous controller and quantization effects.</td>
</tr>
<tr>
<td>PTX8120</td>
<td>Case Studies CBRN Defense</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>PSY6200</td>
<td>Cognitive Psych Cap</td>
<td>PSY 3</td>
<td>Communication-intensive seminar integrating knowledge on Cognitive Psychology. Topic will vary.</td>
<td></td>
</tr>
<tr>
<td>PHY7510</td>
<td>Atomic Spectra &amp; Strct. PHY</td>
<td>3</td>
<td>Modern theory of the atom and quantum mechanical treatment of the origin of atomic and X-ray spectra.</td>
<td></td>
</tr>
<tr>
<td>COM6440</td>
<td>Media Criticism</td>
<td>COM 3</td>
<td>Analysis of contemporary programming and production practices including the development of critical standards for evaluation.</td>
<td></td>
</tr>
<tr>
<td>PHL5010</td>
<td>Ancient Philosophy</td>
<td>PHL 3</td>
<td>History of philosophy from the Pre-Socratics to Neo-Platonism. Topic vary.</td>
<td></td>
</tr>
</tbody>
</table>
Fall 2020  
MBA7800  7800  Supply Chain Mgmt  
MBA  MBA  
3  Exploring 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.

Fall 2020  
BME440L  6440L  Biomedical Materials Lab  
BME  Biomedical Engineering  
0  Required laboratory for BME 6440.

Fall 2020  
PLS4550  4550  Political Corruption  
PLS  Political Science  
3  Analysis of political corruption including campaign and elections, graft, the executive branch, congressional ethics, corruption in law enforcement, organized crime and abuse of authority.

Fall 2020  
STT5910  5910  Statistics for Nursing  
STT  Statistics  
0.5  Coverage of concepts, principles, interpretation and practical rules of thumb for advanced statistical methods used in nursing research.

Fall 2020  
PLS4520  4520  Int'l Politics Cyber Security  
PLS  Political Science  
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 emphasis on cyber espionage, cyber influence, and cyber conflict operations. Integrated Writing course.

Fall 2020  
LA3800  3800  Internship Liberal Arts  
LA  Liberal Arts  
1  Career Services facilitated. 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 the faculty supervisor. May be repeated 3 times.

Fall 2020  
REL5610  5610  Religion in America  
REL  Religion  
3  Historical exploration of the variety of forms of religious expression in America and the role in religion in American life.

Fall 2020  
PLS6550  6550  Politics of Iraq  
PLS  Political Science  
3  Traces recent political history of Iraq since its formation in 1920s. Examines reasons for recent war and implications for Iraq's political future.

Fall 2020  
PLS6930  6930  Contemporary Problems  
PLS  Political Science  
3  Advanced study in a selected topic that frequently includes new developments in the methodology or subject matter of the various subfields of the discipline.

Fall 2020  
GEO3100  3100  Economic Geography  
GEO  Geography  
3  Geographical factors that influence human economic activities and explain patterns of production, consumption of goods and services, and location change.

Fall 2020  
GER2010  2010  Intermediate German I  
GER  German  
3  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 3-5.

Fall 2020  
NUR622  622  Supervision -Psych NP Students II  
NUR  Nursing  
1  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. 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.

Fall 2020  
MLB4320  4320  Advanced Hematology  
MLB  Medical Laboratory Science  
2  Advanced topics in hematology with an emphasis on the diagnosis and treatment of anemias, myelodysplastic and myeloproliferative disorders.

Fall 2020  
CHI5210  5210  Chinese Composition  
CHI  Chinese  
3  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-.

Fall 2020  
CS7700  7700  Adv. Database Systems  
CS  Computer Science  
3  Introduction of design concepts, operating principles, 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-.

Fall 2020  
BHE7010  7010  Hum Dev Mak  
BHE  Industrial & Hum Fac Engr  
3  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-.

Fall 2020  
SW6130  6130  Social Work Ethics  
SW  Social Work  
0  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.

Fall 2020  
CHM1020  1020  Elem Organic Chem w/Apps  
CHM  Chemistry  
4  Introduction to the principles of organic chemistry and biochemistry.

Fall 2020  
SPN6311  6311  SPN Lab Practicum I  
SPN  Spanish  
1  Observes 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.

Fall 2020  
SCM5340  3340  Global SCM  
SCM  Supply Chain Management  
3  Management of the logistics function in supply chains, including physical distribution activities such as transportation, facility location and materials handling.

Fall 2020  
LA2010  2010  Effective Career Plan  
LA  Liberal Arts  
1  Assists students in developing academic major and career goals through identifying skills and interests and then researching appropriate options.

Fall 2020  
CEG4422  4422  Secure Computing Pract  
CEG  Computer Engineering  
3  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 ssis, TrueCrypt, GnuPG, virtual-box.

Fall 2020  
EC4500  4500  Independent Study in ECE  
ECE  Education - Early Childhood  
0.5  Independent study in a selected area of Early Childhood Education.

Fall 2020  
PLS5410  5410  Fund Crime Investigation  
PLS  Political Science  
3  Survey of investigative techniques focusing on specific problems and crimes to illustrate proper methods and procedures of criminal investigation.

Fall 2020  
CTE4100  4100  Learning Environment  
CTE  Career and Technical Education  
3  Examination, discussion, application and reporting of best practices for creating an environment conducive to learning and achievement.

Fall 2020  
SW6160  6160  Grad SW Research I  
SW  Social Work  
0  First of three research courses required in MASW 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.

Fall 2020  
ECE3600  3600  Phonics & Word Study  
ECE  Education - Early Childhood  
3  An in-depth analysis of how children learn printed words and use this knowledge while reading and writing.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>CRNs</th>
<th>Department</th>
<th>Offered Terms</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED6110</td>
<td>Early Lit Assess/Inst I</td>
<td>3</td>
<td>6110</td>
<td>ED</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>ATH2200</td>
<td>Intro to Archaeology</td>
<td>3</td>
<td>2200</td>
<td>ATH</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>SM1010</td>
<td>Scientific Literacy</td>
<td>4</td>
<td>1010</td>
<td>SM</td>
<td>Lecture/Lab</td>
<td>Combination</td>
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<tr>
<td>EDL7760</td>
<td>Sup of Instr &amp; Personnel</td>
<td>3</td>
<td>7760</td>
<td>EDL</td>
<td>Lecture</td>
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<tr>
<td>MTH3060</td>
<td>Mathematical Modeling</td>
<td>3</td>
<td>3060</td>
<td>MTH</td>
<td>Lecture</td>
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<tr>
<td>LEP0100</td>
<td>Integrated Skills - Level 3</td>
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<td>0100</td>
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<td>Lecture</td>
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<tr>
<td>MUE4050</td>
<td>Chamber Music</td>
<td>1</td>
<td>4050</td>
<td>MUE</td>
<td>Lecture/Lab</td>
<td>Combination</td>
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<td>BIO4410</td>
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<td>LAT4530</td>
<td>Roman History and Bio</td>
<td>LAT</td>
<td>Latin 3 Readings in Latin focusing on prose narrative in history and biography. Authors include Sallust, Livy, Tacitus, and Suetonius.</td>
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<td>SPM7860</td>
<td>Facilities and Event Mgmt</td>
<td>SPM</td>
<td>Sports Management 1 This course focuses on the planning, designing, operations and management of physical education, athletics, recreation, health and fitness, and aquatics facilities. Included are the development, planning, scheduling and implementation of daily and major events.</td>
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<td>CHM2120R</td>
<td>Organic Chemistry II Recitation</td>
<td>CHM</td>
<td>Chemistry 0 Required recitation for CHM 2120.</td>
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<td>REL3520</td>
<td>Western Mystics</td>
<td>REL</td>
<td>Religion 3 Mysticism and the history of its literary legacy within Judaism, Christianity and Islam. Integrated Writing course.</td>
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<tr>
<td>SW6150</td>
<td>Cultural Comp in SW</td>
<td>SW</td>
<td>Social Work 0 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.</td>
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<tr>
<td>MTH2300</td>
<td>Calculus I</td>
<td>MTH</td>
<td>Mathematics 4 Examines limits, the derivative, differentiation, applications of the derivative, antiderivatives, Riemann sums, the definite integral, and the fundamental theorem of calculus.</td>
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<tr>
<td>MTH4710</td>
<td>Geometry</td>
<td>MTH</td>
<td>Mathematics 3 Introduction to hyperbolic and other geometries.</td>
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<tr>
<td>NUR4980</td>
<td>Honors Project Proposal</td>
<td>NUR</td>
<td>Nursing 2 Under the guidance of a faculty member, students develop an honors project.</td>
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<tr>
<td>SW3890</td>
<td>Selected Topics in SW</td>
<td>SW</td>
<td>Social Work 1 Selected topics related to current issues in social work practice; readings, research, and discussion. Topics vary.</td>
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<tr>
<td>CS6710</td>
<td>Intro to Data Mining</td>
<td>CS</td>
<td>Computer Science 3 Introduction to the fundamentals of data mining. Emphasis is on data preparation/evaluation/exploration, 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>
<td>CS1300L</td>
<td>Data Science for Everyone Lab</td>
<td>CS</td>
<td>Computer Science 0 Hands-on applications of machine learning and data analysis algorithms. Students will be required to review data, hypothesize relationships among data variables, and use algorithms to support or refute the hypotheses. Laboratory performance will be evaluated by a combination of attendance and successful completion of the data analysis experiments.</td>
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<tr>
<td>CLS2600</td>
<td>Classical Mythology</td>
<td>CLS</td>
<td>Classics 3 A survey of the myths and legends of ancient Greece and Rome which are an important part of the Western literary and cultural tradition. Integrated Writing course. Credit will not be given for CLS 2600 Classical Mythology for students who have already successfully completed CLS 1600.</td>
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<tr>
<td>ATH3400</td>
<td>Special Topics Biologica</td>
<td>ATH</td>
<td>Anthropology 3 Surveys of various specialized aspects of biological anthropology.</td>
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<tr>
<td>PSY3930</td>
<td>Beh Neuroscience Methods</td>
<td>PSY</td>
<td>Psychology 4 Overview of methods used in behavioral neuroscience. Includes neuroanatomical dissections, student presentations, animal testing, and manuscript preparation. Integrated Writing course.</td>
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<tr>
<td>ME4240</td>
<td>Vehicle Engineering</td>
<td>ME</td>
<td>Mechanical and Materials Eng 4 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.</td>
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<tr>
<td>CRT2990</td>
<td>Law Enforcement Intern</td>
<td>CRT</td>
<td>Corrections 3 Opportunity to observe the criminal justice system in operation while comparing 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, spread over the semester, in the agencies assigned.</td>
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<tr>
<td>ART3480</td>
<td>Painting</td>
<td>ART</td>
<td>Art 3 Emphasis on pictorial organization with increased attention to the individual student's personal imagery. This course has a fee that is non-refundable once the term begins.</td>
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<tr>
<td>PPH6500</td>
<td>Health Resource Mgmt &amp; P Planning</td>
<td>PPH</td>
<td>Population &amp; Public Health 3 This course will introduce students to the theory, concepts, and practice of managing health resources in both traditional health services and public health settings. In addition, this course will cover health care policies and their impact on health care resources/outcomes. Sessions will include presentations on patient behavior, the insurance industry, health provider theory, law, and quality among other topics.</td>
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<tr>
<td>EES6150</td>
<td>Global Change for Tchnrs</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences 3 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>
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<tr>
<td>MGT7210</td>
<td>International Management</td>
<td>MGT</td>
<td>Management 3 Course provides an overview 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.</td>
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<tr>
<td>ME8250</td>
<td>Kinematics &amp; Design-Mech</td>
<td>ME</td>
<td>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.</td>
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<tr>
<td>EE8000L</td>
<td>Select Topics in EE Lab</td>
<td>EE</td>
<td>Electrical Engineering 1 Laboratory for EE 8000.</td>
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<tr>
<td>HUM7400</td>
<td>Humanities Thes</td>
<td>HUM</td>
<td>Humanities 1 Master's thesis under the direction of a three-member faculty committee.</td>
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<tr>
<td>ACC4810</td>
<td>Internship in Accounting</td>
<td>ACC</td>
<td>Accountancy 1 Faculty-supervised internship in the area of public, industrial, or governmental accounting.</td>
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<tr>
<td>EES7200</td>
<td>Apps Isotopes in Env Sci</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences 3 Theories of isotope fractionation and applications of light isotopes to solving environmental and hydrologic problems. Lecture topics cover both stable light isotopes (H, O, C, N, S) and radiocative nuclides (H-3, C-14, C-12) but with primary emphasis on stable isotopes. Both biological and aetiological processes will be discussed. Three hours lecture.</td>
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<td>WGS200</td>
<td>Women, Gender, and Sexuality</td>
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<td>7910</td>
<td>CS7910</td>
<td>Advanced Proposal Writing</td>
<td>CS</td>
<td>EE</td>
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<td>4560</td>
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<td>Intro Robotics</td>
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<td>ART6170</td>
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<td>3030</td>
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<td>Circuit Analysis II</td>
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<td>Year 3 Medical Study</td>
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Fall 2020  CHM1060L  1060L  Chemistry: Materials Lab  CHM  Chemistry  0  Required laboratory for CHM 1060.
Fall 2020  PSY3530  3530  Social Psychology Mth  PSY  Psychology  4  Laboratory course in methods and problems involved in social psychology research. Integrated Writing course.
Fall 2020  TMG2800  2800  Small Business Mgt  TMG  Technical Management  3  Stresses business management functions important to small businesses, including single ownership, partnership, incorporation, capitalization and financing requirements, legal requirements, production, and marketing arrangements.
Fall 2020  PN6690  6690  Quant Aspc-Mmt Trans  PN  Physiology & Neuroscience  2  Employs a quantitative approach to the properties of solutions, 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.
Fall 2020  RHB7040  7040  Psychosocial Rehab  RHB  Rehabilitation  3  Psychological issues associated with specific disabling conditions. An in-depth review of the general adjustment process to disability and definitions of normality and abnormality.
Fall 2020  ME7500  7500  Advanced Thermodynamics  ME  Mechanical and Materials Engr  3  Thermodynamics is studied from both the classical (macroscopic) and statistical (microscopic) viewpoints with emphasis on statistical thermodynamics. Property relationships, Maxwell relations, partition functions, distribution functions, kinetic theory and the Boltzmann transport equation are discussed. Department Managed Prerequisite(s): (Undergraduate level ME 3320 Minimum Grade of D or Graduate level ME 5320 Minimum Grade of D) or (Undergraduate level ME 3750 Minimum Grade of D or Graduate level ME 5750 Minimum Grade of D). Fall 2020  REL3610  3610  Religion in America  REL  Religion  3  Historical exploration of the variety of forms of religious expression in America and the role of religion in American life.
Fall 2020  ME4260  4260  Intro Robotics  ME  Mechanical and Materials Engr  3  (Also listed as CEG 6560 and ME 6860) 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  BMB7500  7500  Molecular Biochemistry I  BMB  Biochem & Molecular Biology  3  Also listed as BMS 7500. Survey course emphasizing experimental and problem-solving approaches to understanding amino acids, protein structure, enzymes, nucleic acid structure and DNA replication.
Fall 2020  PLS4730  4730  American Foreign Policy  PLS  Political Science  3  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.
Fall 2020  CHM6720  6720  Chemical Crystallography  CHM  Chemistry  3  Methodology and techniques in the determination of crystal and molecular structures using single-crystal x-ray diffraction.
Fall 2020  PSI8070  8070  Clinical Neuropsychology  PSI  Professional Psychology  3  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 functioning, education and training issues within the field, behavioral neuroanatomical, 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.
Fall 2020  CEG4520  4520  Sci Vis and Virt Env  CEG  Computer Engineering  3  Visualization approaches for different data types, using real-world data sets. Different usage modalities, including non-traditional input devices and display types.
Fall 2020  ISE1110  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.
Fall 2020  EE7480  7480  Adv Microwave Eng  EE  Electrical Engineering  3  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-Ge, CNT and graphene. A description of advanced opto-electronic devices including light-emitting diodes, semiconductor lasers and photovoltaic systems (solar cells). Department Managed Prerequisite(s): (Undergraduate level EE 4420 Minimum Grade of D and Undergraduate level EE 4420L Minimum Grade of D) or (Graduate level EE 6420 Minimum Grade of D and Graduate level EE 6420L Minimum Grade of D). Fall 2020  EGR3940  3940  Internship II  EGR  Engineering  1  Second internship course. Students are supervised via weekly seminars and regular feedback from employers.
Fall 2020  BBO3160L  3160L  Vertebrate Zoology Lab  BBO  Biology  0  Required laboratory for BBO 3160.
Fall 2020  KIN1128  1128  H2O Movers with Skip  KIN  Kinesiology & Health  1  Fundamental skills and knowledge of H2O Movers with Skip. Competency-based approach. Course may accommodate disabled students when appropriate.
Fall 2020  NUR2720  2720  Pri Cr to Age 2 Form Ill  NUR  Nursing  2  This course is for students enrolled in the neonatal nurse practitioner 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.
Fall 2020  ATH3500  3500  Special Topics Archaeology  ATH  Anthropology  3  Intensive study of selected topics in archaeology.
Fall 2020  PPH7430  7430  Health Awareness and Adv  PPH  Population & Public Health  3  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.
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  SE  Seminar

Fall 2020  PSY2710  2710  Psycholinguistics  PSY  Psychology 3  Physical, neurological, and cognitive processes underlying the acquisition, production, and application of language. Examines contributions of psychology, linguistics, computer science, and neuroscience to this discipline.  UG  LE  Lecture

Fall 2020  PSY2520  2520  Forensic Psychology  PSY  Psychology 3  Examines applications of psychology to law and the U.S. legal system. Addressed 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  GEO5460  4640  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  Mhls & Mtrs 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.  UG  LL  Lecture/Lab Combination

Fall 2020  ENG6020  6020  Math & Mat: Rhet/Writ  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  RHB0970  870  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  THS520  520  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 unions.  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. -OR- Department Managed Pre-requisite(s): Undergraduate level OIS 1260 Minimum Grade of D and Undergraduate level OIS 1280 Minimum Grade of D

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.

Fall 2020  PHY1110R  1110R  Principles of Physics I Rec  PHY  Physics 0  Required recitation for PHY 1110.  UG  RR  Recitation

Fall 2020  BIO6440L  6440L  Plant Physiology Lab  BIO  Biology 0  Required laboratory for BIO 6440.  GR  LH  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  THY3440  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  SE  Seminar

Fall 2020  COM4103  1030  Writing for Com  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, proteomics, and use of web-based bioinformatics tools.  GR  LE  Lecture

Fall 2020  MP2510  2510  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.

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 I: 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 response.  GR  LE  Lecture

Fall 2020  SLA4400  4400  Specialized Interpreting  SLI  Sign Language Interpreting 3  Speciality settings of medical, mental health, legal, Deaf-Bilingual or oral interpreting. Discussions include ethical decision making, specialized vocabulary and legal ramifications. Students will demonstrate specialized vocabulary and sign competence. Integrated Writing course.

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. -OR- Department Managed Pre-requisite(s): Graduate level EE 7202 Minimum Grade of D

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. -OR- Department Managed Pre-requisite(s): Undergraduate level CSD 2870 Minimum Grade of D
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Semester</th>
<th>Title</th>
<th>Department</th>
<th>Credits</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>BIO2120</td>
<td>Fall 2020</td>
<td>Cell Biology</td>
<td>BIO</td>
<td>2/120</td>
<td>Formal reading instruction in early childhood classrooms; strategies and materials for teaching reading to young children based on IRA and Ohio Content Standards.</td>
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<tr>
<td>ECE3500</td>
<td>Fall 2020</td>
<td>Reading Methods &amp; Mat</td>
<td>ECE</td>
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<tr>
<td>PSY6230</td>
<td>Fall 2020</td>
<td>Problem Solving Cap</td>
<td>PSY</td>
<td>6230</td>
<td>Writing and oral communication intensive seminar integrating knowledge on problem solving and reasoning.</td>
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<tr>
<td>CS5260</td>
<td>Fall 2020</td>
<td>CS Numerical Methods</td>
<td>CS</td>
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<tr>
<td>PSI9440</td>
<td>Fall 2020</td>
<td>Child Psychotherapy</td>
<td>PSI</td>
<td>9440</td>
<td>Professional Psychology 3</td>
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<tr>
<td>RHB8650</td>
<td>Fall 2020</td>
<td>Rehab Counseling Pract</td>
<td>RHB</td>
<td>8650</td>
<td>Rehabilitation 3</td>
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<tr>
<td>BM57060</td>
<td>Fall 2020</td>
<td>Modern Control I</td>
<td>BMS</td>
<td>7060</td>
<td>Biomedical Sciences 3</td>
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<tr>
<td>CNI4610</td>
<td>Fall 2020</td>
<td>Principles of Counseling</td>
<td>CNI</td>
<td>4610</td>
<td>Counseling 3</td>
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<tr>
<td>MTH2001</td>
<td>Fall 2020</td>
<td>Orientation Seminar Math &amp; Stat</td>
<td>MTH</td>
<td>2001</td>
<td>Mathematics 1</td>
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<tr>
<td>BIO4520</td>
<td>Fall 2020</td>
<td>Exercise Pharmacology</td>
<td>BIO</td>
<td>4520</td>
<td>Exercise Bio</td>
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<tr>
<td>SLI1200</td>
<td>Fall 2020</td>
<td>Interpreting Profession</td>
<td>SLI</td>
<td>1200</td>
<td>Sign Language Interpreting 3</td>
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<tr>
<td>SOC2700</td>
<td>Fall 2020</td>
<td>Intro to CJ in Society</td>
<td>SOC</td>
<td>2700</td>
<td>Sociology 3</td>
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<tr>
<td>ED1100</td>
<td>Fall 2020</td>
<td>Intro to MCE</td>
<td>ED</td>
<td>1100</td>
<td>Education 3</td>
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<tr>
<td>PSN9050</td>
<td>Fall 2020</td>
<td>Social &amp; Research Methods II</td>
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<td>9050</td>
<td>Professional Psychology 3</td>
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<td>SPN4030</td>
<td>Fall 2020</td>
<td>Adv Studies: Lang Civil</td>
<td>SPN</td>
<td>4030</td>
<td>Spanish 3</td>
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<tr>
<td>SOC6610</td>
<td>Fall 2020</td>
<td>Gender and Crime</td>
<td>SOC</td>
<td>6610</td>
<td>Sociology 3</td>
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<tr>
<td>PPH2100</td>
<td>Fall 2020</td>
<td>Climate Change &amp; Health</td>
<td>PPH</td>
<td>2100</td>
<td>Populatation &amp; Public Health 3</td>
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<td>ED7510</td>
<td>Fall 2020</td>
<td>Media Literacy</td>
<td>EDT</td>
<td>7510</td>
<td>Educational Technology 3</td>
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<tr>
<td>COM6260</td>
<td>Fall 2020</td>
<td>Health Comm</td>
<td>COM</td>
<td>6260</td>
<td>Communication 3</td>
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<tr>
<td>REL930</td>
<td>Fall 2020</td>
<td>Faith and Reason</td>
<td>REL</td>
<td>930</td>
<td>Religion 3</td>
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<tr>
<td>ME4340</td>
<td>Fall 2020</td>
<td>Sin of Thermal-Fluids</td>
<td>ME</td>
<td>4340</td>
<td>Mechanical and Materials Eng</td>
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<td>BIO7120</td>
<td>Fall 2020</td>
<td>Env Bio Genes Org &amp; Eco</td>
<td>BIO</td>
<td>7120</td>
<td>Biology 3</td>
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<tr>
<td>KNI1200</td>
<td>Fall 2020</td>
<td>Motor Dev: Low Incidence</td>
<td>KNI</td>
<td>1200</td>
<td>Kinesiology &amp; Health 3</td>
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<tr>
<td>EDL7350</td>
<td>Fall 2020</td>
<td>Curriculum Analysis</td>
<td>EDL</td>
<td>7350</td>
<td>Educational Leadership 3</td>
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<td>ED4610</td>
<td>Fall 2020</td>
<td>Practicum in TESOL</td>
<td>ED</td>
<td>4610</td>
<td>Education 2</td>
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<td>EDS480</td>
<td>Fall 2020</td>
<td>Sign Language Interpreting</td>
<td>EDS</td>
<td>480</td>
<td>Education - Special 3</td>
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<td>Course Code</td>
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<td>Credit Hours</td>
<td>Description</td>
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<tr>
<td>ED2260</td>
<td>Math PCK Seminar</td>
<td>ED</td>
<td>2260</td>
<td>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.</td>
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<tr>
<td>BUS1000</td>
<td>Bus. &amp; Career Opp</td>
<td>BUS</td>
<td>1000</td>
<td>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 Sr. College of Business.</td>
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<tr>
<td>RHB3630</td>
<td>Behavioral Analysis</td>
<td>RHB</td>
<td>3630</td>
<td>Introduction to applied behavior analysis. Principles and interventions related to applied behavior analysis as well as potential benefits of applied behavior analysis treatment.</td>
<td></td>
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<tr>
<td>LDR4600</td>
<td>Ind Study in Leadership</td>
<td>LDR</td>
<td>4600</td>
<td>Independent study.</td>
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<tr>
<td>CEG7370</td>
<td>Distributed Computing</td>
<td>CEG</td>
<td>7370</td>
<td>Semaphores: weak and strong, spilt-binary, distributed. Distributed Algorithms. Communicating sequential processes. Distributed Tuple Space. Clients and servers. RPC, BML, Hadoop, etc. Department Managed Prerequisite(s): Undergraduate level CEG 4350 Minimum Grade of D or Graduate level CEG 6350 Minimum Grade of D.</td>
<td></td>
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<tr>
<td>BIO4700</td>
<td>General Entomology</td>
<td>BIO</td>
<td>4700</td>
<td>Basic biology of insects, including their morphology, physiology, life history, ecology, evolution and taxonomy.</td>
<td></td>
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<tr>
<td>EDT510</td>
<td>Grad Field Experience</td>
<td>ED</td>
<td>6710</td>
<td>Introduces students to the educational process through participation in a Pre-classroom and through an examination of classroom dynamics within a natural setting.</td>
<td></td>
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<tr>
<td>ECO5230</td>
<td>Stretch Your Buck</td>
<td>ECO</td>
<td>5230</td>
<td>Financial planning and personal finance topics geared toward the family, with emphasis on aspects teachable in the K-12 classroom. This course has a fee that is non-refundable once the term begins.</td>
<td></td>
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<tr>
<td>PHL3250</td>
<td>Inductive Logic</td>
<td>PHL</td>
<td>3250</td>
<td>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 PHL 2150 cannot take PHL 3250.</td>
<td></td>
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<tr>
<td>CEG3400</td>
<td>Intro to Cyber Security</td>
<td>CEG</td>
<td>3400</td>
<td>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. Department Managed Prerequisite(s): Undergraduate level CS 1160 Minimum Grade of C or Undergraduate Level CS 1180 Minimum Grade of C or Undergraduate Level CS 2170 Minimum Grade of C.</td>
<td></td>
</tr>
<tr>
<td>NUR7611</td>
<td>Psych MPH NP Pract I</td>
<td>NUR</td>
<td>7611</td>
<td>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. Health promotion, health behaviors, and disease prevention strategies are emphasized with respect to epidemiology, risks, and growth and development. Therapeutic communication, ethics, and cultural competency are emphasized.</td>
<td></td>
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<tr>
<td>BMI3212</td>
<td>Human Biomechanics II</td>
<td>BMI</td>
<td>3212</td>
<td>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.</td>
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<tr>
<td>SCM799R</td>
<td>SCM Capstone Project Res</td>
<td>SCM</td>
<td>7990R</td>
<td>Required recitation for SCM 7990.</td>
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<tr>
<td>PSY4800</td>
<td>Humanaic Psychotherapy</td>
<td>PSY</td>
<td>4800</td>
<td>Theory, technique, and research base of client-centered psychotherapy. Theory of assessment procedures and techniques of transacational analysis, Gestalt therapy, and selected existential approaches.</td>
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</tr>
<tr>
<td>PLS6600</td>
<td>Sem Comp Politics</td>
<td>PLS</td>
<td>6600</td>
<td>Readings, research, reports, and discussion of selected topics and problems. Topics vary.</td>
<td></td>
</tr>
<tr>
<td>PFS7600</td>
<td>Biostats for Health Prof</td>
<td>PFS</td>
<td>7600</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></td>
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<tr>
<td>EC3450</td>
<td>Economics of Diversity</td>
<td>EC</td>
<td>3450</td>
<td>Uses economic theory to explore the implications of ethnic, racial, religious and other kinds of diversity in the U.S. and globally.</td>
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</tr>
<tr>
<td>PLS4770</td>
<td>International Org</td>
<td>PLS</td>
<td>4770</td>
<td>Examines the competing theoretical perspectives on international organization and analyzes the structure, functions, and the evolving role of key international organizations. Integrated Writing course.</td>
<td></td>
</tr>
<tr>
<td>ME4940</td>
<td>Mach &amp; Mat EGR Intern</td>
<td>ME</td>
<td>4940</td>
<td>Departmental internship course. Students are supervised via weekly seminars and regular feedback from employers. 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>
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<tr>
<td>ACC750</td>
<td>Accounting Internship</td>
<td>ACC</td>
<td>750</td>
<td>One semester, faculty-supervised internship in the area of public, industrial, or not-for-profit accounting. Course inquiries written reports. Students may register for internship once during their graduate program. May be taken for letter grade of pass/unsatisfactory.</td>
<td></td>
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<tr>
<td>DOO9020</td>
<td>Org Leadership Skills</td>
<td>DOS</td>
<td>9020</td>
<td>Doctoral level course focusing on 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.</td>
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<tr>
<td>EDL7550</td>
<td>Research Projects</td>
<td>EDL</td>
<td>7550</td>
<td>Individual research to satisfy requirements of a program's research study.</td>
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<tr>
<td>CLS5660</td>
<td>Ancient Mythology</td>
<td>CLS</td>
<td>5660</td>
<td>Greek and Roman mythology; aspects and approaches to the study of myth.</td>
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<tr>
<td>EDT760</td>
<td>Ed Apps of Computers</td>
<td>EDT</td>
<td>760</td>
<td>Explores types of educational software and applications, software evaluation, curriculum development, and lesson planning integrating computer coursework.</td>
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<tr>
<td>CS8900</td>
<td>Special Topics in CS</td>
<td>CS</td>
<td>8900</td>
<td>Special topics in computer science.</td>
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<tr>
<td>CSE810</td>
<td>Meta Represent Languages</td>
<td>CSE</td>
<td>810</td>
<td>Special topics in computer science. 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.</td>
<td></td>
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<tr>
<td>M&amp;I8000</td>
<td>Microbiology Seminar</td>
<td>M&amp;I</td>
<td>8000</td>
<td>Graded pass/unsatisfactory.</td>
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<tr>
<td>REL3770</td>
<td>The Letters of Paul</td>
<td>REL</td>
<td>3770</td>
<td>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.</td>
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<tr>
<td>REL3900</td>
<td>Asian Religions</td>
<td>REL</td>
<td>3900</td>
<td>General introduction to the major religious traditions of South Asia and East Asia: Hinduism, Buddhism, Confucianism, Daoism, Zen, and Shinto.</td>
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<tr>
<td>FIN4780</td>
<td>Hon: Ind Study in Finance</td>
<td>FIN</td>
<td>4780</td>
<td>Research for finance fulfillment of the Honors program project requirement.</td>
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</tbody>
</table>

**Course Offered:** Fall 2020
Fall 2020  SOC5720 5720  Policing in Society  SOC  Sociology 3  Discussion of the history and theories of policing while reviewing the role and function of the police.  GR  LE  Lecture
Fall 2020  MBL4720 4720  Adv Diagnostic Micro  MLB  Medical Laboratory Science 2  Characteristics, pathophysiologic mechanisms and identification of chyamydia, fungi, viruses and other organisms and the methods used to diagnose and treat related diseases.  UG  LE  Lecture
Fall 2020  EC7170 7170  Applied Macroco Analy EC  Economics 3  Emphasis is on modern views on fiscal and monetary policy in an open economy. Interrelationships between interest rates, unemployment, economic growth, inflation, and balance of payments are highlighted.  GR  LE  Lecture
Fall 2020  EED4800 4800  Professional Seminar P-5  EED  Elementary Education P-5 3  Seminar course prepares teacher candidates for the field of teaching in grades P-5. Topics include: teacher assessment, licensure, resume building, job search, interviewing techniques, and ethics surrounding teachers. Integrated Writing course.  UG  GE  Seminar
Fall 2020  TEG2940 2940  Induat Controls PLCS TEG  Technical Engineering 4  Construction and modification of complete relay logic and Programmable Logic Control Systems.  GR  LE  Lecture/Lab  Combination
Fall 2020  KHE1280A 1280A  H2O Moves with Stag  KHE  Kinesiology & Health 1  Fundamental skills and knowledge of H2O Moves with Step. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  MTH2415 2415  Elms Math Concepts Teachers I  MTH  Mathematics 4  Overview of mathematical topics from a perspective appropriate for early and middle childhood educators. Number systems such as whole numbers, fractions, rationals and decimals. Place value and bases. The meaning of and algorithms for the operations of addition, subtraction, multiplication, and division. Introduction to geometry.  UG  LE  Lecture
Fall 2020  ISE4712L 4712L  Sim & Stoch Models Lab ISE  Industrial & Systems Engr 0  Required laboratory for ISE 4712.  UG  LB  Lab
Fall 2020  ME716O 7160  Nonlinear Dynamics & Vib ME  Mechanical and Materials Engg 3  The behavior of nonlinear mechanical systems is analyzed with numerical, symbolic, graphic, and analytical methods. Equal emphasis is placed on understanding nonlinear effects and methods of analysis.  GR  LE  Lecture
Fall 2020  PLS6822 6822  Congress Dist 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.  GR  IN  Internship
Fall 2020  NUR7903 7903  Practicum/School Nursing NUR  Nursing 1  Focus is on clinical application of relevant theories and research findings for health promotion, disease prevention, and health maintenance for children and adolescents in schools. Emphasis is on the development of a comprehensive school health program. Seminar synthesizes previous learning with application to the role of school nurse. Clinical practicum required.  GR  PR  Practicum
Fall 2020  SOM4701 701  Year 4 Medical Study SOM  School of Medicine 24  
Fall 2020  EES3450 3450  Concepts EES FICE/MCE EES  Earth & Environmental Sciences 4  Introductory survey of geoscience. Rocks and minerals, plate tectonics, geologic time, ornahmography and meteorology, 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 develop lesson plans on several topics.  UG  LE  Lecture  MD  OT  Other
Fall 2020  MP1800 1800  Motion Pictures Prod I MP  Motion Picture 3  Elements of motion pictures production including scripting, cinematography, and editing. Participation in projects from initial conception to final screening.  UG  LE  Lecture/Lab  Combination
Fall 2020  CHM4350 4350  Instrumental Analysis CHM  Chemistry 3  Theory and practice of modern chemical instrumentation. Elementary electronics, spectrophoto metric, atomic absorption, electro-chemical techniques, chromatography, and other instrumental techniques.  UG  LE  Lecture
Fall 2020  BMS8050 8050  Interell. Communication BMS  Biomedical Sciences 3  Introduces the concepts of interpersonal communication through an interdisciplinary presentation of immune and neuroendocrine system functions. Emphasizes the similarities between the systems and the multidisciplinary approaches used to study each.  GR  LE  Lecture
Fall 2020  URS4960 4960  Transit Internship URS  Urban Affairs 3  Senior-level internship in the offices of a local public transit agency.  UG  IN  Internship
Fall 2020  BBO3130 3130  Plant Biology BBO  Biology 5  Overview of plant biology, including algae, fungi, mosses and vascular plants. Basic plant structure and metabolism. Taxonomy of plants and representative plant families. Labs include demonstrations, experimental manipulations of plants, aspects of structure and function, and outdoor labs.  UG  LE  Lecture
Fall 2020  BBO6460 6460  Advanced Cell Biology BBO  Biology 3  Students will gain a thorough understanding about eukarystic cell structures and functions including the organization of the cell nuclecs, DNA replication, the multiple steps of gene expression, membrane composition and dynamics, and the importance of the cytoskeleton for cell motility, cell division and cell adhesion.  GR  LE  Lecture
Fall 2020  BBO3460 3460  Concepts Bio II EEC/MCE BBO  Biology 4  Concepts and applications of biology formatted to model implications of state and national pedagogical standards, aimed specifically at preparing students for biology teaching in Grades 4-9. For Middle Childhood Education majors only. Integrated lecture/lab.  UG  LE  Lecture/Lab  Combination
Fall 2020  FAS420O 4200  Food Product Development FAS  Food and Agricultural Systems 3  A capstone project using food science knowledge and skills to develop a new food product.  UG  LE  Lecture/Lab  Combination
Fall 2020  PSY6520 6520  Prejudice Research Cap PSY  Psychology 3  Discusses research on the topics of stereotyping, prejudice, discrimination, and related phenomena.  GR  SE  Seminar
Fall 2020  FIN4160 4160  Retirement Planning FIN  Finance 3  Retirement planning and employee benefits and the application of these concepts to overall financial planning for individuals and small businesses.  UG  LE  Lecture
Fall 2020  ML2030 2030  Spanish Culture ML  Modern Languages 3  Introduction to Spain's history, cultures (Spanish as well as non-Spanish), and customs.  UG  LE  Lecture
Fall 2020  ED6740 6740  AYA: Int Lang Art: C&M II ED  Education 3  Provides developing professional educators with advanced discussion and practice in the teaching/learning of grades 7-12 language arts.  GR  LE  Lecture
Fall 2020  BME3211 3211  Biomechanics I BME  Biomedical Engineering 4  Basic static considerations, human systems and mechanics.  UG  LE  Lecture
Fall 2020  PSY5040 5040  Industrial and Org Psy PSY  Psychology 3  Scientific psychological principles, procedures, and methods applied to human behavior in organizations.  GR  LE  Lecture
Fall 2020  SAAn6660 6660  Helping Skills for S/AHE SAA  Student Affairs in Higher Ed 3  Designed to help apply various psychological theories, models and counseling techniques to enhance helping relationships formed in student affairs work.  GR  LE  Lecture
Fall 2020  EE7920 7920  Part-Time CPT in EE EE  Electrical Engineering 1  Practical work experience in graduate level electrical engineering.  GR  IN  Internship
Fall 2020  SOC6811 6811  Independent Study in Soc SOC  Sociology 1  Research project in an area of specialized interest in Sociology.  GR  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  Lang 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  ME6260L  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  OHS2400  2400  Independent Study  OHS  Office Information Systems  1  Directed study on selected topics.  UG  IS  Independent Study

Fall 2020  BI04340  4430  Vertebrate Histology  BIO  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, proteomics, and web-based bioinformatic tools.  GR  LE  Lecture

Fall 2020  BME6450  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  ED7860  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 K-12 classroom.  GR  LE  Lecture

Fall 2020  EE5620  620  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 tetralimination of Earth. Phylogenic and molecular analysis, and recent discoveries in the field of Eos-Devo will be employed to determine the origin and diversification of major vertebrate groups, and uncover connections between macroevolutionary trends and paleoenvironmental changes.  GR  LB  Lab

Fall 2020  ENG4050  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.  GR  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.  GR  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 & Filh 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 approach. Ergonomic analysis of assembly, machining and manual material 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.  GR  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.<b>Department Managed Prerequisite(s): Undergraduate level ENG 7200 Minimum Grade of B-</b>  GR  LE  Lecture
Fall 2020
KNSH1040B 1040B  Army Fitness Training  KNSH  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  LR  Lecture/Recitation Combination
Fall 2020
ME4260L 4260L  Intro Robotics Lab  ME  Mechanical and Materials Engr  1  First exposure to plant moduling 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 dislocation transformations.<b>Department Managed Prerequisite(s): Undergraduate level ME 3750 Minimum Grade of D or Graduate level ME 3750 Minimum Grade of D-</b>  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
EDO490 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
KNSH1820A 1820A  Winter Camping  KNSH  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
STT6260 6260  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.<b>Department Managed Prerequisite(s): Undergraduate level STT 3610 Minimum Grade of D or Undergraduate level STT 5610 Minimum Grade of D-</b>  GR  LE  Lecture
Fall 2020
REL5490 5490  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
CEG7580 7580  Digital Image Processing  CEG  Computer 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
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. Service-learning intensive course (110 field hours).  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&N6860 8660  Prin Biomedical Research  P&N  Physiology & Neuroscience  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  
**PSY9180**  9180  Integrative Assessment  
**PSI**  Professional Psychology  
3  Provides a format for integrating various psychological tests into a coherent battery. In addition to addressing the evaluation of various psychological disorders, an approach is provided for constructing batteries for unique populations.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**REL3210**  3210  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.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**EES6060**  6060  Earth Sys for Educators  
**EES**  Earth & Environmental Sciences  
3.5  The course investigates the 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.  
**GR**  
**LE**  
**Lecture/Lab Combination**

Fall 2020  
**PN7010**  7010  Sel Topics in Physiology  
**PN**  Physiology & Neuroscience  
1  A selected area of physiology is discussed in greater detail than in basic physiology courses. Some topics may include laboratory.  
**GR**  
**LL**  
**Lecture/Lab Combination**

Fall 2020  
**PTX8006**  8006  Case Study Chem Defenac  
**PTX**  Pharmacology/Toxicon  
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.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**BIO4720**  4720  Ornithology  
**BIO**  Biology  
4  Introduction to the world of birds. Covers a range of scales from genetics that underlie evolution and phylogeny to global ecology and conservation. Students are 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.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**CS2570R**  2570R  Recitation for MTH 2570  
**CS**  Computer Science  
1  Recitation for MTH 2570.  
**UG**  
**RE**  
**Recitation**

Fall 2020  
**ITL4890**  4890  Infl Contl'd Registration  
**ITAL**  Infl Continuned Registration  
0  International students in undergraduate programs who need to complete incomplete coursework or degree requirements may register for ITL 4890. This course is not graded and does not carry a tuition charge.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**SLI3400**  3400  Linguistics of ASL  
**SLI**  Sign Language Interpreting  
3  Linguistic analysis of American Sign Language and spoken languages. Includes the study of phonology, morphology, syntax, semantics and other linguistic topics.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**CHE3020**  3020  Advanced Chinese II  
**CHI**  Chinese  
3  Further development of advanced linguistic proficiency and complex conversation skills with emphasis on cultural aspects of communication. Taught in Chinese. If prerequisite not met, contact instructor for permission.  
**GR**  
**LL**  
**Lecture/Lab Combination**

Fall 2020  
**HST7700**  7700  Research in Local Hist  
**HST**  History  
3  Defines and discusses the origin and development of local history. Identification, location and use of primary and secondary sources on a variety of local history topics.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**CHM5510R**  5510R  Physical Chemistry Lab I  
**CHM**  Chemistry  
0  Required recitation for CHM 5510L.  
**GR**  
**RE**  
**Recitation**

Fall 2020  
**BIO4470**  4470  Pop & Comm Ecology  
**BIO**  Biology  
3  Use of deterministic and stochastic models to characterize populations and quantitative methods for analyzing community structure, composition, and dynamics.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**ART150**  6150  Adv Modern/Contemp Art  
**ART**  Art  
3  Intensive studies of the period, major movements, and artists of the time.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**HST4450**  4450  Middle Eastern History  
**HST**  History  
3  Examines the Middle East from the 7th century to the present. Topics vary. Integrated Writing course.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**PLS4900**  4900  Globalization  
**PLS**  Political Science  
3  The political economy of globalization as it affects local, national, and international political processes. Integrated Writing course.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**PHI1400**  4140  Philosophy of Law  
**PHI**  Philosophy  
3  Survey of the important theories concerning the nature and justification of law, liberty, justice, responsibility, and punishment.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**CNL6700**  6700  Counseling Workshop  
**CNL**  Counseling  
0.5  Intensive study of selected areas in counseling to meet the particular needs of participating students, schools, and agencies. Topics vary.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**FAS2690**  2690  Ag Science Topics  
**FAS**  Food and Agricultural Systems  
1  Focused study in an area of interest in agricultural science.  
**UG**  
**LL**  
**Lecture/Lab Combination**

Fall 2020  
**LDR8700**  8700  Workshop in Leadership  
**LDR**  Leadership  
1  Small group learning for graduate students interested in exploring a topic in leadership.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**PSY7100**  7100  Clinical Psy Career Prep  
**PSY**  Psychology  
1  A learning and supportive environment for students who want to pursue a career in clinical psychology or related mental health fields.  
**UG**  
**LE**  
**Lecture**

Fall 2020  
**PSW910**  910  Consultation  
**PSY**  Professional Psychology  
3  Explores consultation as a core competency for the professional psychologist. Consultation is a planned, collaborative interaction that is an explicit intervention process based on principles and procedures found within psychology and related disciplines in which the psychologist does not have direct control of the change process (NE:SPP).  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**ANT5120L**  5120L  Human ANT & Phys II Lab  
**ANT**  Anatomy  
0  Required Laboratory for ANT 5120. Laboratory exercises use human donors.  
**GR**  
**LB**  
**Lab**

Fall 2020  
**SW6740**  6740  Child Welfare II  
**SW**  Social Work  
3  Addresses the developmental and permanence needs of children in the child welfare system.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**EDS6080**  6080  Dyal Multi Sensory Instruction  
**EDS**  Education - Special Education  
3  Provides insight/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.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**PLS4825**  4825  Washington DC Internship  
**PLS**  Political Science  
3  Internships in Washington, DC 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.  
**UG**  
**IN**  
**Internship**

Fall 2020  
**MUA4100**  4100  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  
**PPH7230**  7230  HP with Indv with Disab  
**PPH**  Population & Public Health  
3  This course introduces the health disparities experience by individuals and explores the unique social, physical and political needs for health promotion interventions.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**PSY9040**  9040  Neural Networks  
**PSY**  Psychology  
3  Examines neural networks as models of perception and cognition. Topics include perceptions, pattern associators, backpropagation, and self-organizing networks. Students apply neural networks to a topic of their interest using MATLAB.  
**GR**  
**LE**  
**Lecture**

Fall 2020  
**KNEH720A**  720A  Tennis  
**KNEH**  Kinesiology & Health  
1  Fundamental skills and knowledge of Tennis. Competency-based approach. Course may accommodate disabled students when appropriate.  
**UG**  
**LB**  
**Lab**

Fall 2020  
**GER5260**  5260  Business German II  
**GER**  German  
3  An advanced study of the language of business German with insight into Germany's place in the global economy.  
**GR**  
**LE**  
**Lecture**
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

Fall 2020  ME3760  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. <b>Department Managed Prerequisite(s): Undergraduate level ME 3750 Minimum Grade of D-<b>/GR<br>

Fall 2020  EC7150  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/nur-profit firms. <b>Department Managed Prerequisite(s): Graduate level MBA 5200 Minimum Grade of C of and Undergraduate level EC 1050 Minimum Grade of C-/GR<br>

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  LE  Lecture

Fall 2020  NUR8840  8840  UHI Care Informatics Intro 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  Student teachers 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  MIS7900  7900  IS Mgt Research Project  MIS  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 fail 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. <b>Department Managed Prerequisite(s): Undergraduate level ENG 2100 Minimum Grade of C-/GR<br>

Fall 2020  BIO1120B  1120B  Genes & Cells Recitation  BIO  Biology  3  Optional recitation for BIO 1120. Mentions 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  ED8200  8200  Adv Situ Sem II: Captain  ED  Education  2  Seminar will focus on the master's captain over and other program key assessments. GR  SE  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, styles, 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 of 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. <b>Department Managed Prerequisite(s): Undergraduate level ARA 2010 Minimum Grade of D-/GR<br>

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  1  Based on technique covered in MUS 1310, this class concentrates on note-reading, more chords, and accompanying styles. UG  LE  Lecture

Fall 2020  RHB1380  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's 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. UG  LE  Lecture

Fall 2020  BMB4444  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  ENG9020  9020  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. <b>Department Managed Prerequisite(s): Undergraduate level ENG 3610 Minimum Grade of D or Graduate level ENG 5610 Minimum Grade of D-/GR<br>

Fall 2020  KNH1290B  1290B  H20 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  PSY1000  1000  PSY Capstone Topics  PSY  Psychology  1  A selected psychology capstone topic. Topics vary. GR  SE  Seminar

Fall 2020  URS3700  3700  Budgeting & Fiscal Mgt  URS  Urban Affairs  3  Focuses on budget processes and financial management practices in the public and nonprofit sectors. UG  LE  Lecture

Fall 2020  BIE7950  7950  Thesis Research in BIE  BIE  Industrial & Hus Fac Engr  1  M.S. Thesis Research in Industrial and Human Factors Engineering GR  IS  Independent Study
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT1010</td>
<td>Community Leadership</td>
<td>1</td>
<td>Lecture</td>
<td>Provides experimental 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. Graded pass/unsatisfactory.</td>
</tr>
<tr>
<td>GEO2200</td>
<td>Human Geography</td>
<td>3</td>
<td>Lecture</td>
<td>Introduction to key themes and perspectives in human geography. Examines social, economic, environmental, and political challenges confronting people and societies. Themes include globalization, nature and sustainability, food and agriculture, political borders, urbanization and development, and other issues pertaining to the livability of the planet.</td>
</tr>
<tr>
<td>NEU4040</td>
<td>Sr Cap Neuro Exp Des</td>
<td>4</td>
<td>Lecture</td>
<td>Provides experiential learning opportunities that align with the capstone experiences component of the major.</td>
</tr>
<tr>
<td>RHB6631</td>
<td>Behavioral Analysis II</td>
<td>3</td>
<td>Lecture</td>
<td>Development of applied behavioral analysis plans and assessing intervention strategies.</td>
</tr>
<tr>
<td>MUS6800</td>
<td>Workshops in Music</td>
<td>6-8</td>
<td>Lecture</td>
<td>Selected topics or problems in music, or special areas of music teaching. Titles vary.</td>
</tr>
<tr>
<td>CS7210</td>
<td>Network Science</td>
<td>7-12</td>
<td>Lecture</td>
<td>Emphasizes theoretical concepts that underpin the study of network or relational data emerging in any field of interest. Topics may include network representations, statistical network modeling, structural measures, node ranking and similarity, social network analysis, graph partitioning and community detection, large-scale networks, and diffusion processes.</td>
</tr>
<tr>
<td>PSI8970</td>
<td>AIDS: Clinical Issues</td>
<td>9-12</td>
<td>Lecture</td>
<td>Explores the physiological, psychological, social, economic, and political aspects of HIV infection and AIDS. May include an emphasis on the unique role of the psychologist as one of the many health care professionals with whom PLWAs and their families interact.</td>
</tr>
<tr>
<td>SAA7630</td>
<td>Diversity Issues</td>
<td>7-8</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>EES4550</td>
<td>Aquatic Environ Geochem</td>
<td>4-5</td>
<td>Lecture</td>
<td>Interactions between natural fresh waters and their geologic environments. Includes chemical equilibrium, modeling using PHREEQC, carbonate system, water-rock interactions, sorption isotherms, redox reactions, biologic influences on aqueous geochemistry, and applications of environmental isotopes.</td>
</tr>
<tr>
<td>ART4050</td>
<td>Studies in Sculpture</td>
<td>4-5</td>
<td>Lecture</td>
<td>Opportunities to explore problems and approaches to sculpture. May include cross-media and interdisciplinary studies.</td>
</tr>
<tr>
<td>MUS3350</td>
<td>Guitar Pedagogy</td>
<td>1</td>
<td>Seminar</td>
<td>The study of materials, equipment, and class instruction on guitar for the elementary teacher.</td>
</tr>
<tr>
<td>CEG9910</td>
<td>PhD Seminar in CEG</td>
<td>9-12</td>
<td>Seminar</td>
<td>Seminar discussion of current research in computer engineering.</td>
</tr>
<tr>
<td>BME3520L</td>
<td>Microsystems for BME Lab</td>
<td>3-5</td>
<td>Lab</td>
<td>Required laboratory for BME 3520.</td>
</tr>
<tr>
<td>ED6270</td>
<td>Literacy Lessons Training II</td>
<td>6-8</td>
<td>Lecture</td>
<td>Overview of the major themes of fish evolution, anatomy, physiology, and ecology, with special emphasis on species diversity and adaptation to different environments.</td>
</tr>
<tr>
<td>BFO4750</td>
<td>Ichthyology</td>
<td>4</td>
<td>Lecture</td>
<td>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.</td>
</tr>
<tr>
<td>RHH7110</td>
<td>Voc Eval &amp; Assessment</td>
<td>6-8</td>
<td>Lecture</td>
<td>Project planning and management, design specifications, implementation, testing and evaluation, electronic documentation, written and oral reports. Integrated Writing course.</td>
</tr>
<tr>
<td>EE4920</td>
<td>Elec Eng Senior Des II</td>
<td>4-5</td>
<td>Lecture</td>
<td>A project–oriented design course integrating design methodology with the principles of major electrical engineering disciplines: project planning and management, design specifications, implementation, testing and evaluation, electronic documentation, written and oral reports. Integrated Writing course.</td>
</tr>
<tr>
<td>SW6610</td>
<td>SW Field Ed I</td>
<td>6-8</td>
<td>Lecture</td>
<td>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, encountering diversity, and growing self-awareness and abilities to help clients of various backgrounds.</td>
</tr>
<tr>
<td>PL6750</td>
<td>Weapons of Mass Destruction</td>
<td>6-8</td>
<td>Lecture</td>
<td>Examines various issues relating to weapons of mass destruction, including their manufacture, use, effects, and the politics surrounding decisions to acquire them.</td>
</tr>
<tr>
<td>URS6920</td>
<td>Issues in Urb. Mgt.</td>
<td>6-8</td>
<td>Lecture</td>
<td>Explores issues and topics related to the administration of community development agencies and local governments in metropolitan areas.</td>
</tr>
<tr>
<td>PSY5430L</td>
<td>Developmental Psych Lab</td>
<td>3-5</td>
<td>Lab</td>
<td>Required laboratory for PSY 5430. Integrated Writing course.</td>
</tr>
<tr>
<td>KNSH2100</td>
<td>Army Fitness Training IV</td>
<td>2</td>
<td>Lab</td>
<td>Required laboratory for KNSH 2100. Integrated Writing course.</td>
</tr>
<tr>
<td>UG</td>
<td>International Studies</td>
<td></td>
<td>Lecture</td>
<td>Provides experiential learning opportunities that align with the capstone experiences component of the major.</td>
</tr>
<tr>
<td>LE</td>
<td>Independent Study</td>
<td></td>
<td>Lecture</td>
<td>Provides experiential learning opportunities that align with the capstone experiences component of the major.</td>
</tr>
</tbody>
</table>
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  PLS6871  6871  Fundamentals of Intel  PLS  Political Science  3  Immerse 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 Web languages and protocols; search engines, social networking, Web2.0, 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 encountered 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  SLI4520  4520  Ed Interp: 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 geologic history of the Earth. Paleoecological 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 modes, 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 Flight Training program. Training is cadet-led. Requires participation in two weekly physical training sessions.  UG  LB  Lab

Fall 2020  NUR313  313  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 Manuscr  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 Mt & 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 education majors a foundation in wind and percussion pedagogy, hand teaching techniques, methodology, and resources.  UG  LL  Lecture/Lab  Combination

Fall 2020  EE4420L  4420L  Microwave Egr I Lab  EE  Electrical Engineering  1  Hands-on experience with microwave devices, microwave testing equipment and representative microwave systems. Lecture: Department Managed Prerequisite(s): Undergraduate level EE 3450 Minimum Grade of D and Undergraduate level EE 3450L Minimum Grade of D- or B-.  UG  LB  Lab

Fall 2020  DAN4330  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  Slt Tchng: 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 in Integrated Language Arts. Areas studied include, but are not limited to, hyperbaric/hypobaric, aerosomedical evacuation/transfer, centrifuge, microgravity, spaceflight launch/landing, EVA, survival, fitness to fly evaluations, aircraft hygiene and international travel and disease mitigation operations.  GR  IN  Internship

Fall 2020  MUS6810  6810  Adv Studies in Spec. Subj  MUS  Music  1  Study in selected subjects.  GR  IS  Independent Study

Fall 2020  ASM7573  7573  Aerospace Skills III  ASM  Aerospace Medicine  2  A course in the use of traditional didactic knowledge obtained in the classroom with the post-graduation operational aerospace environment. Areas studied include, but are not limited to, hyperbaric/hypobaric, aerosomedical evacuation/transfer, centrifuge, microgravity, spaceflight launch/landing, EVA, survival, fitness to fly evaluations, aircraft hygiene and international travel and disease mitigation operations.  GR  SE  Seminar

Fall 2020  EDL7970  7970  Data Driven Dec-Mkg: Schl  EDL  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 I 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.  PHY  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  EDL9450  9450  Adv Curricullm Theory  EDL  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
Fall 2020
MIS4700 4700 Data Science for Bus App
MIS Management Information Systems 3 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, test, and network analytic methods will be discussed. Must be enrolled in CoBA. UG LE Lecture

Fall 2020
ART6080 6080 Studies in Photography
ART Art 3 Provides opportunities to explore special problems and approaches that might involve cross-media and interdisciplinary studies. Titles vary. GR LB Lab

Fall 2020
MGIT7060 7060 Orga Dev and Change
MGT Management 3 A detailed analysis of planned organizational change. GR LE Lecture

Fall 2020
GER5520 5520 Survey of German Lit II
GER German 3 Historical survey of German Literature. Classical, Romanticism, Poetic Realism and Modern Period. Department Managed Prerequisite(s): Graduate level GER 5310 Minimum Grade of D-. GR LE Lecture

Fall 2020
URS4990 4990 Applied Research Project
URS Urban Affairs 3 Involves students in the process of researching and writing a senior seminar paper. Integrated Writing course. UG SL Seminar

Fall 2020
SAA5960 7690 Design Diverse Learn Exp
SAA Student Affairs in Higher Ed 3 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. GR LE Lecture Lab Combination

Fall 2020
ISEE211 3211 Human Biomechanics I
ISE Industrial & Systems Eng 4 Mechanical engineering statics and deformation concepts are applied to problems involving human systems. IG LE Lecture

Fall 2020
ECOS540 5540 Eco and World Hist
ECO Center for Economic Educ 2 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 teachers in grades 6-12 with integrating economic concepts into an existing world history curriculum. This course has a fee that is non-refundable once the term begins. GR LL Lecture Lab Combination

Fall 2020
ANT5120 5120 Adv Hum Str & Func II
ANT Anatomy 4 Detailed study of the structure and function of the human body. The course begins with the endocrine system and moves onto the cardiovascular system and lymphatic system. 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. GR LE Lecture

Fall 2020
WGS6600 6700 Research Methods
WGS Women, Gender, and Sexuality 3 Examines feminist methodologies and methods of research with emphasis on qualitative inquiry and/or mixed methods. GR LE Lecture

Fall 2020
ART2310 2310 Painting for Non-Majors
ART Art 3 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, texture, color mixing and composition. UG ST Studio

Fall 2020
EE5030L 5030L Circuit Analysis II Lab
EE Electrical Engineering 1 Application of AC concepts, computer-aided circuit analysis, two-port networks, and power theory. GR LB Lab

Fall 2020
PLS3450 3450 Public Administration
PLS Political Science 3 Nature and scope of public administration, law, and public interest in the administrative process. UG LE Lecture

Fall 2020
WGS5500 4560 Topics Feminist Theory
WGS Women, Gender, and Sexuality 3 Issues, approaches and topics in feminist theory. Titles and topics vary. Integrated Writing. UG LE Lecture

Fall 2020
IT2360 2360 Found of Package Design
IT Information Technology 3 Fundamental concepts and applications of package design. History of field and useful package patterns. Hands-on experience in formulating package design. UG LE Lecture

Fall 2020
PHL6710 6710 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 important theories, discoveries and disputes, as well as the difference between science and pseudo science. GR LE Lecture

Fall 2020
SOC6410 6410 Application of Methods
SOC Sociology 3 Advanced course in social research techniques providing students the opportunity to design and carry out full-scale research projects related to their major interest areas. UG LL Lecture Lab Combination

Fall 2020
EC4810 4810 Independent Reading
EC Economics 1 Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area. UG IS Independent Study

Fall 2020
PSLS6880 6880 Conflict Resolution
PSLS 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. GR SE Seminar

Fall 2020
PSLS6660 6660 Politics in South Asia
PSLS Political Science 3 Examines political institutions and political, economic, security and international relations issues in India, Pakistan, Sri Lanka, Bangladesh and Nepal. GR SE Seminar

Fall 2020
IE7000 7000 International Education
IE International Education 3 Placement holder 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. GR IS Independent Study

Fall 2020
KNH6880 6880 Independent Study
KNH Kinesiology & Health 1 Independent reading, writing, and/or reporting in an area related to health, physical education, or recreation. Titles vary. GR IS Independent Study

Fall 2020
ABST711 7110 Research Methods II
ABST Applied Behavioral Science 3 Analysis and interpretation of data in social research, with emphasis on multivariate statistical techniques. GR LE Lecture

Fall 2020
MTH3100 3100 Math Modeling Beh Sci
MTH Mathematics 3 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. Considers both discrete and continuous models. UG LE Lecture

Fall 2020
SOC6420 6420 Ethnographic Methods
SOC Sociology 3 Explores the meaning, scope and dilemmas of ethnography using both a hands-on ethnographic project and a wide array of readings. GR LE Lecture

Fall 2020
MKT3400 3400 Integrated Marketing Comm
MKT Marketing 3 Introduces integrated marketing communications including advertising, direct marketing, public relations and sales promotion. Includes discussion of creative and media strategies. UG LE Lecture

Fall 2020
URS3460 3460 Public Personnel Admin
URS Urban Affairs 3 Methods of employment, training, compensation, and employee relations in various levels of civil service. Examines organizations of public employment. UG LE Lecture

Fall 2020
PLS3410 3410 Fund Crim Investigation
PLS Political Science 3 Survey of investigative techniques focusing on specific problems and crimes to illustrate proper methods and procedures of criminal investigations. UG LE Lecture

Fall 2020
ENG6720 6720 History of Engl Language
ENG English 3 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. GR LE Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS6860</td>
<td>6860 Model United Nations Sem</td>
<td>PLS Political Science</td>
<td>Model UN is an experiential learning opportunity built around this seminar, with intensive training in research, public speaking, bargaining and conflict resolution. Culinates at the national conference in New York, simulating the U.N.</td>
</tr>
</tbody>
</table>
| CS7120     | 7120 Functional & Logic Prog               | CS Computer Science             | This course will discuss concepts of functional programming such as recursive definitions, polymorphic type inference, abstract data types, induction, etc. and concepts of logic programming such as model-theoretic semantics, logical deduction, backtracking, negation as failure, etc. The programming exercises will illustrate the utility of list-processing, pattern matching, abstraction of data/control, typing, etc. for problem solving.
|            |                                            |                                 | Department Managed Prerequisite(s): Undergraduate level CS 3180 Minimum Grade of D or Graduate level CS 3180 Minimum Grade of D.                        |
| KHN1820    | 1820 Winter Camping                        | KHN Kinesiology & Health       | 1 Fundamental skills and knowledge of Winter Camping. Competency-based approach. Course may accommodate disabled students when appropriate. |
|            |                                            |                                 | Department Managed Prerequisite(s): Undergraduate level MTH 3180 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 MTH 1600 Minimum Grade of D or Undergraduate level MTH 2640 Minimum Grade of D. |
| BIO6030    | 6030 Topics in Biology                    | BIO Biology                    | Advanced topics in modern biology of current interest. Topics vary. |
| LDR7070    | 7070 Teamwork & Collaboration             | LDR Leadership                  | This course focuses on theory, research, and current trends related to group dynamics and communication processes used to build organizational effectiveness in a diverse, multicultural workplace. |
| CS1160     | 1160 Intro to Comp Program                | CS Computer Science             | 4 Basic concepts of programming using the Python programming language. Department Managed Prerequisite(s): Undergraduate level MTH 3180 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 MTH 1600 Minimum Grade of D or Undergraduate level MTH 2640 Minimum Grade of D. |
| ASL2020    | 2020 Intermediate ASL II                  | ASL American Sign Language     | 4 An expansion of the conversational skills and knowledge of American Sign Language that continues to develop expressive and receptive fluency, knowledge of grammatical features and the Deaf community and its cultural aspects. Outside activity required. |
| URS6200    | 6200 Public Mgt. Strategies               | URS Urban Affairs              | Investigative urban management and various techniques to achieve public service goals, including efficiency, quality, and effectiveness. Study of program design, planning, fiscal management, resource allocation through budgeting, program development, and organizational development. |
| ED4010     | 4010 Adv Read in Content Area             | 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. |
| EES6510    | 6510 Scientific Communication             | EES Earth & Environmental Science | 3 Fundamentals of effective scientific communication in written and conference presentation formats. Basics of good scientific prose, manuscript and figure preparation and submission, pointer and platform presentations, job interviews, research proposals, and communication with non-scientists. |
| ISE3540L   | 3540L Intro to Comp for ISE Labs          | ISE Industrial & Systems Engr  | 0 Required laboratory for ISE 3540. |
| ED4590     | 4590 Undergraduate Practicum AYA          | ED Education                   | 2 Educators with prior teaching license(s), under the direct supervision of an experienced classroom teacher, are assigned to a school for a field experience in grades 7-12 and their concentration area. |
| ISM8200    | 8200 Semester Internship                  | ISM Intern. Appl. Sci and Math | 3 This course will expose students to the expectations of the professional workforce while learning how to apply scientific knowledge in a professional research and development environment. It will also give students the opportunity to test their interest in and aptitude for a particular career path outside of academia. This internship will take place at an off-campus public or private entity engaged in work relevant to ISM Program-oriented research topics. |
| BMS3740    | 7340 Adv Inorganic Chem II                | BMS Biomedical Sciences        | 2 Thorough examination of the chemistry of metals stressing the transition elements, ligand field theory, and mechanisms of inorganic reactions. |
| BST7220    | 7220 Sem Modern Ear Hist                  | BST History                    | 3 Examinations of group dynamics in biological, political, and societal settings. |
| EE2000L    | 2000L Dig Design with HDL Lab             | EE Electrical Engineering      | 1 Hands-on experience with CAD Tools, simulation of FPGA's, and hardware description languages in a laboratory environment. Department Managed Prerequisite(s): Undergraduate level MTH 1280 Minimum Grade of C or Undergraduate level MTH 1330 Minimum Grade of C or Undergraduate level MTH 1600 Minimum Grade of C. |
| DG7200     | 7200 Ther Found of Gifted & Talent        | BSG Intervention Specialist Gifted | 3 Historical perspective, characteristics and major theories of these gifted and talented educational needs. |
| SOC3740    | 3740 Penology & Corrections               | SOC Sociology                  | 3 Historical development and critical assessment of penal institutions. Field visits to selected institutions. |
| REL5740    | 5740 Prophets and History                 | REL Religion                   | 3 Examinations historical context of Biblical prophets and prophecies in terms of historical, religious, national, and moral implications. |
| NUR7123    | 7123 Pedi Pharm                            | NUR Nursing                    | 3 Focuses on the prescriptive knowledge of pharmacologic agents used in the treatment of common pediatric health care problems and stable chronic disease states of children. Emphasis will be placed on indications, mechanisms of action, drug interactions, side effects and parent and child communication. |
| MKT7970    | 7970 MS in Marketing Capstone             | MKT Marketing                  | 3 The course provides students with experience of working with a real dataset to complete a thorough data analysis, interpretation, and data-driven recommendations, suitable for a business. Typically, the data involves a real business situation or challenges. Department Managed Prerequisite(s): Graduate level MBA 7600 Minimum Grade of C and Graduate level MKT 7800 Minimum Grade of C and Graduate level MKT 7950 Minimum Grade of C. |
| BME4910    | 4910 BME Design I                         | BME Biomedical Engineering     | 3 Segment one of the BME senior design sequence. Introduction to patents and engineering ethics included. Practicum results in the definition of the capstone design project to be completed in BME 4920. Integrated Writing course. |
Fall 2020  BMB6001  6001  Fundamentals of Biochemistry  BMB  Biochemistry & 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-BMB graduate students and will analyze the structure, metabolism, and function of biological compounds.  GR  LE  Lecture  

Fall 2020  CHM3520L  3520L  Physical Chem Lab II  CHM  Chemistry 2  Experimental methods of physical chemistry. Integrated Writing course.  UG  LB  Lab  

Fall 2020  AVI2001  2001  Priv Pilot Grad School  AVI  Aviation 3  Conduct flight training in a single engine land airplane. Preparation for computer-based private pilot knowledge test.  UG  LE  Lecture  

Fall 2020  BMS8370  8370  Human Gross Anatomy  BMS  Biomedical Sciences 6  (Also listed as ANT 7110.) Lectures and dissection of human cadaver donor.  GR  LL  Lecture/Lab Combination  

Fall 2020  CNL6020  6020  Techniques of Counseling  CNL  Counseling 3  Laboratory practice in individual counseling techniques; focuses on the development of basic skills and procedures.  GR  LL  Lecture/Lab Combination  

Fall 2020  ATH3710  3710  Ethnographic Fieldwork  ATH  Anthropology 3  Explores the meaning, scope, and dilemmas of ethnography using both a hands-on ethnographic project and a wide array of readings. Integrated Writing course.  UG  LE  Lecture  

Fall 2020  PLS4270  4270  Urban Policy Analysis  PLS  Political Science 3  (Also listed as URS 4270.) Study of selected urban problems and their relationship to the political environment. Use of simulation gaming to understand community development processes.  UG  LE  Lecture  

Fall 2020  MUS4460  4460  Medieval & Renaissance Music  MUS  Music 3  Study of music and critical analysis of representative works from major composers of Medieval and Renaissance music.  UG  LE  Lecture  

Fall 2020  ENG4110  4110  Literature Practicum  ENG  English 3  Opportunities to use and refine the skills of Literary Study in specific applied contexts.  UG  PR  Practicum  

Fall 2020  SAA4110  4110  Special Topics: Campus Pomp  SAA  Student Affairs in Higher Ed 1  Topics related to the development of student organizations and student leaders.  GR  LE  Lecture  

Fall 2020  ART3180  3180  Art Theory & Criticism  ART  Art 3  Historical surveys and intensive studies of art theory and criticism. Integrated Writing course.  UG  LE  Lecture  

Fall 2020  EDL8710  8710  Management of the School  EDL  Educational Leadership 3  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.  GR  LE  Lecture  

Fall 2020  TIS470  3470  One Person Shows  TIS  Theatre 2  Elements necessary in the development of a one person show resulting in a solo performance.  UG  LL  Lecture/Lab Combination  

Fall 2020  ME6680  6680  Experimental Nanoscience  ME  Mechanical and Materials Engineering 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, terahertz spectroscopy, electrochemical analyses etc; and 3) computational modeling of nanoscale physical phenomena.  GR  PKG  Combination  

Fall 2020  OSIS2400  2480  Capsule  ORS  Office Information Systems 2  Comprehensive project in office applications.  UG  IS  Independent Study  

Fall 2020  SLI4510  4510  Ed Interp. Eng. to Sign  SLI  Sign Language Interpreting 3  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) test.  UG  LE  Lecture  

Fall 2020  PSY4140  6140  Cord and Learning Cap  PSY  Psychology 3  Communication-intensive seminar integrating knowledge within conditioning and learning.  GR  SE  Seminar  

Fall 2020  CS4990  4990  Undergraduate Thesis  CS  Computer Science 3  Completion of a computer science research project. Writing and defending a thesis that describes the research and summarizes the results.  GR  SE  Seminar  

Fall 2020  NUR4420C  4420C  Cri Care Across Lifespan Clin  NUR  Nursing 0  Required clinical for NUR 4420.  UG  CL  Clinical  

Fall 2020  SOC4810  4810  Health Vulnerable Pops  SOC  Sociology 3  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.  UG  LE  Lecture  

Fall 2020  ENG7420  7420  Seminar: Wtg Practices  ENG  English 3  Reading, practice, research and discussion of writing practices in academic and non-academic genres for pedagogical purposes. Focus on topics such as ethnography, mido-game writing, new media literacies.  GR  SE  Seminar  

Fall 2020  SPN2500  2500  Int Span II Study Abroad  SPN  Spanish 3  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.  UG  LE  Lecture  

Fall 2020  PSY6440  6440  Work Stress Capstone  PSY  Psychology 3  Communication-intensive seminar integrating knowledge on work stress.  GR  SE  Seminar  

Fall 2020  EC7810  7810  Research in Economics I  EC  Economics 1  Titles vary. Intensive reading or research in selected fields of advanced economics. <b>Department Managed Prerequisite(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.  GR  IS  Independent Study  

Fall 2020  PSY4360  4360  Development Psych Cap  PSY  Psychology 3  Communication-intensive seminar integrating knowledge on current topics, research, and applied issues in selected aspects of development across the lifespan. Topics will vary. Integrated Writing course.  UG  SE  Seminar  

Fall 2020  MGT4300  4300  Conflict & Negotiation  MGT  Management 3  This course will cover some very basic work in the factors that cause conflict especially when dealing with managers, co-workers, employers, customers and all stakeholders in the business world, and most importantly provide techniques for resolving conflict.  UG  LE  Lecture  

Fall 2020  ACC7800  7800  Special Topics in ACC  ACC  Accounting 3  Titles vary. Seminar in accounting topic of current interest.  GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Department</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME6190</td>
<td>6150</td>
<td>Intro to Egr Lubrication</td>
<td>ME</td>
<td>Egr Mechanical and Materials Engineering</td>
</tr>
<tr>
<td>PPI6300</td>
<td>6300</td>
<td>Environmental Health</td>
<td>PPH</td>
<td>Population &amp; Public Health</td>
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<tr>
<td>SLI900</td>
<td>3900</td>
<td>Interpreter Prof Readiness</td>
<td>SLI</td>
<td>Sign Language Interpreting</td>
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<tr>
<td>BME4450</td>
<td>4450</td>
<td>Tissue Egr &amp; Regen Med</td>
<td>BME</td>
<td>Biomedical Engineering</td>
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<tr>
<td>PHY3220</td>
<td>3220</td>
<td>Applied Optics</td>
<td>PHY</td>
<td>Physics</td>
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<tr>
<td>LAS2810</td>
<td>2810</td>
<td>Intro Precision Ag</td>
<td>FAS</td>
<td>Food and Agricultural Systems</td>
</tr>
<tr>
<td>SOC3410</td>
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<td>Intro Research Methods</td>
<td>SOC</td>
<td>Sociology</td>
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<tr>
<td>PSY4600</td>
<td>4600</td>
<td>Human Factors Cup</td>
<td>PSY</td>
<td>Psychology</td>
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<tr>
<td>MUA1210</td>
<td>1210</td>
<td>Applied Music</td>
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<td>STT4620</td>
<td>4620</td>
<td>Theory of Statistics II</td>
<td>STT</td>
<td>Statistics</td>
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<tr>
<td>TH1190</td>
<td>1190</td>
<td>Singing for the Actor II</td>
<td>TH</td>
<td>Theatre</td>
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<td>ENG6110</td>
<td>5610</td>
<td>Technical Writing</td>
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<td>English</td>
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<tr>
<td>ME4520</td>
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<td>Hydropower</td>
<td>ME</td>
<td>Mechanical and Materials Engineering</td>
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<td>TH3380</td>
<td>3380</td>
<td>Acting Muniversal Theatre II</td>
<td>TH</td>
<td>Theatre</td>
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<tr>
<td>EES3160</td>
<td>3160</td>
<td>Stratigraphy &amp; Sediment</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
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<tr>
<td>MKT4900</td>
<td>4900</td>
<td>Marketing Strategy</td>
<td>MKT</td>
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<tr>
<td>PHY5990</td>
<td>5990</td>
<td>Spec Problem in Physics</td>
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<td>Physics</td>
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<tr>
<td>UVC1010</td>
<td>1010</td>
<td>First Year Seminar</td>
<td>UVC</td>
<td>University College</td>
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<tr>
<td>EC3700</td>
<td>3700</td>
<td>Environ &amp; Ecol Economics</td>
<td>EC</td>
<td>Economics</td>
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<tr>
<td>ITN1450B</td>
<td>1450B</td>
<td>Rape Def Strat Basic</td>
<td>ITN</td>
<td>Kinesiology &amp; Health</td>
</tr>
<tr>
<td>AES3320</td>
<td>3320</td>
<td>ICL Lab</td>
<td>AES</td>
<td>Aerospace Studies</td>
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<td>NUR3460</td>
<td>3460</td>
<td>Nursing Care of Children</td>
<td>NUR</td>
<td>Nursing</td>
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<tr>
<td>ANT3990</td>
<td>3990</td>
<td>Anatomy Research</td>
<td>ANT</td>
<td>Anatomy</td>
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<tr>
<td>EGR2980L</td>
<td>2980L</td>
<td>Special Topics in Egr Lab</td>
<td>EGR</td>
<td>Engineering</td>
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</tbody>
</table>

**Fall 2020**

- **ME6190**: Intro to Egr Lubrication
- **PPI6300**: Environmental Health
- **SLI900**: Interpreter Prof Readiness
- **BME4450**: Tissue Egr & Regen Med
- **PHY3220**: Applied Optics
- **LAS2810**: Intro Precision Ag
- **SOC3410**: Intro Research Methods
- **PSY4600**: Human Factors Cup
- **MUA1210**: Applied Music
- **STT4620**: Theory of Statistics II
- **TH1190**: Singing for the Actor II
- **ENG6110**: Technical Writing
- **ME4520**: Hydropower
- **TH3380**: Acting Muniversal Theatre II
- **EES3160**: Stratigraphy & Sediment
- **MKT4900**: Marketing Strategy
- **PHY5990**: Spec Problem in Physics
- **UVC1010**: First Year Seminar
- **EC3700**: Environ & Ecol Economics
- **ITN1450B**: Rape Def Strat Basic
- **AES3320**: ICL Lab
- **NUR3460**: Nursing Care of Children
- **ANT3990**: Anatomy Research
- **EGR2980L**: Special Topics in Egr Lab

**Winter 2020**

- **ITN1450B**: Rape Def Strat Basic
- **AES3320**: ICL Lab
- **NUR3460**: Nursing Care of Children
- **ANT3990**: Anatomy Research
- **EGR2980L**: Special Topics in Egr Lab

**Spring 2020**

- **ME6190**: Intro to Egr Lubrication
- **PPI6300**: Environmental Health
- **SLI900**: Interpreter Prof Readiness
- **BME4450**: Tissue Egr & Regen Med
- **PHY3220**: Applied Optics
- **LAS2810**: Intro Precision Ag
- **SOC3410**: Intro Research Methods
- **PSY4600**: Human Factors Cup
- **MUA1210**: Applied Music
- **STT4620**: Theory of Statistics II
- **TH1190**: Singing for the Actor II
- **ENG6110**: Technical Writing
- **ME4520**: Hydropower
- **TH3380**: Acting Muniversal Theatre II
- **EES3160**: Stratigraphy & Sediment
- **MKT4900**: Marketing Strategy
- **PHY5990**: Spec Problem in Physics
- **UVC1010**: First Year Seminar
- **EC3700**: Environ & Ecol Economics
- **ITN1450B**: Rape Def Strat Basic
- **AES3320**: ICL Lab
- **NUR3460**: Nursing Care of Children
- **ANT3990**: Anatomy Research
- **EGR2980L**: Special Topics in Egr Lab
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Grade Level</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNH1980</td>
<td>1980 Zumba</td>
<td>1</td>
<td>UG</td>
<td>Fundamentals and skills of dance. Course may accommodate disabled students when appropriate.</td>
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<tr>
<td>EES6350</td>
<td>Field Mapping</td>
<td>2</td>
<td>GR</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>BIE6400</td>
<td>6400 Engr Econ</td>
<td>2</td>
<td>LE</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.</td>
</tr>
<tr>
<td>PTX8500</td>
<td>8500 Good Laboratory Practice</td>
<td>3</td>
<td>GR</td>
<td>GLP 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 pharmacology studies.</td>
</tr>
<tr>
<td>NUR7513</td>
<td>Practicum for ACNP</td>
<td>6</td>
<td>LE</td>
<td>Focus is on models of practice in providing health care to infants, children and adolescents within the full scope of advanced practice. Exploring the challenges of care delivery, service delivery, and the impact of care delivery on patient outcomes.</td>
</tr>
<tr>
<td>WS6800</td>
<td>Selected Subjects</td>
<td>3</td>
<td>GR</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>3</td>
<td>LE</td>
<td>Topics in statistics and probability.</td>
</tr>
<tr>
<td>PSI9750</td>
<td>Forensic Psychology</td>
<td>3</td>
<td>IS</td>
<td>Introduction to the legal system including an overview of legal and political systems and processes, and the relevance of legal issues for practitioners and clients. Topics range from correctional psychology to competency issues.</td>
</tr>
<tr>
<td>ED5280</td>
<td>6280 Sttl Tchn. ECIS</td>
<td>8</td>
<td>IN</td>
<td>Candidates, under the direct supervision of an experienced intervention specialist, are assigned for intensive teaching experience in grades preK-3rd special education. 7 weeks in pK-K and 7-8 weeks in 1st-3rd grades.</td>
</tr>
<tr>
<td>BMB4010</td>
<td>Topics in BMB</td>
<td>4.5</td>
<td>IS</td>
<td>Review of current literature or current research techniques in Biochemistry and Molecular Biology.</td>
</tr>
<tr>
<td>BMS8380</td>
<td>Human Microanatomy</td>
<td>3</td>
<td>LL</td>
<td>Detailed microanatomy of human cells, tissues, and organ systems.</td>
</tr>
<tr>
<td>ANT7310</td>
<td>Human Neurobiology</td>
<td>4</td>
<td>LL</td>
<td>An introduction to the brain, body and behavior.</td>
</tr>
<tr>
<td>PSY2910</td>
<td>Drugs and Behavior</td>
<td>3</td>
<td>LE</td>
<td>Course introduces the major classes of psychoactive drugs, their behavioral effects and mechanisms of action. The impact of these drugs on the brain, body, and behavior.</td>
</tr>
<tr>
<td>ASM7472</td>
<td>Social Behavioral Scienc</td>
<td>3</td>
<td>LE</td>
<td>This course takes a look at combined 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>3</td>
<td>LE</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. We will then study the most popular cognitive architectures and will learn to develop a few simple models that account for human behavior in a number of classic paradigms from experimental psychology.</td>
</tr>
<tr>
<td>ATH2500</td>
<td>Cultural Anth Hls Care</td>
<td>3</td>
<td>LE</td>
<td>Basic concepts, ideas, issues and debates in cultural anthropology, drawing from examples of Asia, Africa, Latin America, Native North America and the Middle East.</td>
</tr>
<tr>
<td>HST4840</td>
<td>Religious History</td>
<td>3</td>
<td>LE</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>3</td>
<td>ST</td>
<td>Advanced stitching techniques necessary for costume construction.</td>
</tr>
<tr>
<td>FAS2110</td>
<td>Food Processing Unit Op</td>
<td>3</td>
<td>LE</td>
<td>A study of selected food processes and the underlying principles behind their operation.</td>
</tr>
<tr>
<td>KNH4800</td>
<td>Coaching Theory</td>
<td>3</td>
<td>LE</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>4020 Ballet JV</td>
<td>3</td>
<td>ST</td>
<td>Advanced work in classical ballet technique stressing the development of musicality and virtuosity.</td>
</tr>
<tr>
<td>EE7330</td>
<td>7330 Modern Radar Theory</td>
<td>3</td>
<td>LE</td>
<td>Application of probability and random process to the performance characterization of rangefinder radar. Development of the concepts of resolution, S/N, ambiguity function, and pulse compression, and their applications to radar system design. Consideration is also given to coherent imaging radar.</td>
</tr>
<tr>
<td>ABS7120</td>
<td>7120 Applied Methodology</td>
<td>3</td>
<td>LE</td>
<td>Addresses issues pertaining to contemporary research writing in the areas of problem statement, literature review, presentation of methodology, data summary, conclusions, and ethical issues.</td>
</tr>
<tr>
<td>ME4990</td>
<td>Independent Study in ME</td>
<td>1</td>
<td>IS</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>3</td>
<td>LE</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>3</td>
<td>LE</td>
<td>Lean Six Sigma principles and practices and implementation of Lean Six Sigma initiatives in a food manufacturing environment.</td>
</tr>
<tr>
<td>Course Code</td>
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<td>Title</td>
<td>Department</td>
<td>Type</td>
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<td>IT3400</td>
<td>3</td>
<td>3D Digital Modeling</td>
<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>CHM1210</td>
<td>12</td>
<td>General Chemistry I</td>
<td>CHM</td>
<td>Chemistry</td>
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<td>LDR9990</td>
<td>9990</td>
<td>Thesis</td>
<td>LDR</td>
<td>Leadership</td>
</tr>
<tr>
<td>BMS7412</td>
<td>7412</td>
<td>Rehab Eng Design II</td>
<td>BMS</td>
<td>Biomedical Sciences</td>
</tr>
<tr>
<td>EC7310</td>
<td>7310</td>
<td>Economics Public Finance</td>
<td>EC</td>
<td>Economics</td>
</tr>
<tr>
<td>PSY2640</td>
<td>2640</td>
<td>Evolution and Psychology</td>
<td>PSY</td>
<td>Psychology</td>
</tr>
<tr>
<td>GER3310</td>
<td>3310</td>
<td>Survey of German Lit</td>
<td>GER</td>
<td>German</td>
</tr>
<tr>
<td>ART3110</td>
<td>3110</td>
<td>Ancient/Classical Art</td>
<td>ART</td>
<td>Art</td>
</tr>
<tr>
<td>LE1040</td>
<td>1040</td>
<td>Crime Investigation</td>
<td>LE</td>
<td>Law Enforcement</td>
</tr>
<tr>
<td>MTH4400</td>
<td>4400</td>
<td>History of Mathematics</td>
<td>MTH</td>
<td>Mathematics</td>
</tr>
<tr>
<td>MUS4400</td>
<td>4400</td>
<td>Classic &amp; Romantic Music</td>
<td>MUS</td>
<td>Music</td>
</tr>
<tr>
<td>KNH1510</td>
<td>1510</td>
<td>Scube: Advanced Diver</td>
<td>KNH</td>
<td>Kinesiology &amp; Health</td>
</tr>
<tr>
<td>KNE2600</td>
<td>2600</td>
<td>First Aid and CPR</td>
<td>KNH</td>
<td>Kinesiology &amp; Health</td>
</tr>
<tr>
<td>MTH8800</td>
<td>8800</td>
<td>Topics in Algebra</td>
<td>MTH</td>
<td>Mathematics</td>
</tr>
<tr>
<td>EE6120L</td>
<td>6120</td>
<td>Industrial Controls Lab</td>
<td>EE</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>EGR4980</td>
<td>4980</td>
<td>Special Topics in EGR</td>
<td>EGR</td>
<td>Engineering</td>
</tr>
<tr>
<td>ES7900</td>
<td>7900</td>
<td>Set Topics in Env Sci</td>
<td>ES</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>DO90070</td>
<td>9070</td>
<td>Multivariate Statistics</td>
<td>DOS</td>
<td>Doctor of Science Studies</td>
</tr>
<tr>
<td>PSB9510</td>
<td>9510</td>
<td>Child Assessment</td>
<td>PSI</td>
<td>Professional Psychology</td>
</tr>
<tr>
<td>PL5470</td>
<td>5470</td>
<td>Public Policy</td>
<td>PL5</td>
<td>Political Science</td>
</tr>
<tr>
<td>M&amp;I6720</td>
<td>6720</td>
<td>Pathogenic Microbiology</td>
<td>M&amp;I</td>
<td>Microbiology &amp; Immunology</td>
</tr>
<tr>
<td>EE7630</td>
<td>7630</td>
<td>Stochastic Signal Proc</td>
<td>EE</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>RHB3720</td>
<td>3720</td>
<td>International Counseling</td>
<td>RHB</td>
<td>Rehabilitation</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Department</td>
<td>Credits</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ME6220</td>
<td>Mech Sys Model &amp; Design</td>
<td>ME</td>
<td>2</td>
<td>This course will introduce intensive teaching experience in grades p-12 in Multi-Age World Languages.</td>
</tr>
<tr>
<td>EED4200</td>
<td>Russian/Soviet History</td>
<td>HST</td>
<td>2</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. Integrated Writing course.</td>
</tr>
<tr>
<td>EES1010</td>
<td>Sustainable Earth Lab</td>
<td>EES</td>
<td>3</td>
<td>Study of the issues governing curriculum planning, including the relationship.</td>
</tr>
<tr>
<td>CSE5710</td>
<td>Computer Organization and Networking</td>
<td>CSE</td>
<td>3</td>
<td>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 decision making affect global and international health. Students will also explore best practices approaches to health systems both at national and global levels.</td>
</tr>
<tr>
<td>MTH4070</td>
<td>Optimization Techniques</td>
<td>MTH</td>
<td>3</td>
<td>Algorithms for optimizing real functions of several variables subject to equality and inequality constraints.</td>
</tr>
<tr>
<td>PHL3130</td>
<td>Metaphysics</td>
<td>PHL</td>
<td>3</td>
<td>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-realist debate.</td>
</tr>
<tr>
<td>ED2100</td>
<td>Education in a Democracy</td>
<td>ED</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>PST4020</td>
<td>ParProg Many-Core GPUs</td>
<td>CS</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CHM5210</td>
<td>Inorganic Chemistry</td>
<td>CHM</td>
<td>2</td>
<td>A thorough examination of the chemistry of the metals forming the transition elements, ligand field theory and mechanisms of inorganic reactions.</td>
</tr>
<tr>
<td>REL1010</td>
<td>Intro to World Religions</td>
<td>REL</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CHM4210</td>
<td>Inorganic Chemistry II</td>
<td>CHM</td>
<td>3</td>
<td>Principles and concepts of inorganic chemistry including coordination chemistry, reactions of coordination compounds and organometallic chemistry.</td>
</tr>
<tr>
<td>HST650</td>
<td>Museum Admin Collections</td>
<td>HST</td>
<td>3</td>
<td>Introduction to museums and their management and to collections theory and practice. Includes collection policies; accessioning, deaccessioning and loans; management. Integrated lecture and lab.</td>
</tr>
<tr>
<td>ENG3430</td>
<td>Seminar: Comp. Theories</td>
<td>ENG</td>
<td>3</td>
<td>Reading, research and discussion of current theories in the field of composition and rhetoric focusing on topics such as composition studies, literacy studies, social nature of language, and politics of assessment.</td>
</tr>
<tr>
<td>SOC6200</td>
<td>Elite Crime</td>
<td>SOC</td>
<td>3</td>
<td>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 of which curriculum is formed and developed.</td>
</tr>
<tr>
<td>HEA9210</td>
<td>Curriculum in Higher Ed</td>
<td>HEA</td>
<td>3</td>
<td>Theoretical and critical examination of the extent, cost, and control of elite crime and deviance.</td>
</tr>
<tr>
<td>ED6570</td>
<td>AYA Int P&amp;I II: Std T WL</td>
<td>ED</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 p-12 in Multi-Age World Languages.</td>
</tr>
</tbody>
</table>
Interpreting information for identification/placement of individuals with exceptional learning needs within the University Honors Program. Planning, financing, programming, and management are studied, as well as the role of athletics within the educational experience.

Physiological mechanisms of behavior. Basic neuromotor and neurophysiology, neural development and function, psychopathology, reproduction, learning, sleep, and stress.

Major trends in the development of psychology from its beginning to the present. Planning, financing, programming, and management are studied, as well as the role of athletics within the educational experience.

Basic adaptive mechanisms and their coordination in the activities of the metazoa. Interdependency of form and function, psychopathology, reproduction, learning, sleep, and stress.

Advanced strategies for writing nonfiction for non-academic purposes and audiences in various styles, genres, and media.

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.

Theoretical study of music through written exercises including melody, harmony, rhythm, form and analysis. Planning, financing, programming, and management are studied, as well as the role of athletics within the educational experience.

Guidelines and strategies for developing and teaching courses on writing for nonfiction for non-academic purposes and audiences in various styles, genres, and media. Planning, financing, programming, and management are studied, as well as the role of athletics within the educational experience.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Type</th>
<th>Lectures/Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDS6610</td>
<td>Education - Special Education</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>BH3570</td>
<td>Singing Mus Theatre V</td>
<td>2</td>
<td>Laboratory</td>
<td>Lecture</td>
</tr>
<tr>
<td>HST4680</td>
<td>History and New Media</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>CS4950</td>
<td>Dissertation Research</td>
<td>1</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>PL4250</td>
<td>Metro Studies Seminar</td>
<td>3</td>
<td>Seminar</td>
<td>Lecture</td>
</tr>
<tr>
<td>PL6590</td>
<td>Contemporary Brazil</td>
<td>3</td>
<td>Seminar</td>
<td>Lecture</td>
</tr>
<tr>
<td>BMS9910</td>
<td>Special Topics</td>
<td>1</td>
<td>Lecture</td>
<td>Lab</td>
</tr>
<tr>
<td>PL7982</td>
<td>Intell and Homeland Sec</td>
<td>3</td>
<td>Seminar</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>IT3410</td>
<td>Virtual Rly Instr Dgn</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>ME6150</td>
<td>Mechanical Design II</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>ENG6200</td>
<td>Studies in British Lit</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>PTX8300</td>
<td>Integ Pharm/Tox Methods</td>
<td>3</td>
<td>Lecture/Lab</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>PL4821</td>
<td>Pre-Law Internship</td>
<td>3</td>
<td>Internship</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>EE4700</td>
<td>Intern Career Analysis</td>
<td>1</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY9900</td>
<td>Independent Research</td>
<td>1</td>
<td>Lecture</td>
<td>Lecture/Lab</td>
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<tr>
<td>EC5550</td>
<td>ECO &amp; US History</td>
<td>2</td>
<td>Lecture</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>NUR7352</td>
<td>Adv Clin Prac Experience</td>
<td>3</td>
<td>Lecture</td>
<td>Lectural</td>
</tr>
<tr>
<td>IB4810</td>
<td>Intl Business Practicum</td>
<td>3</td>
<td>Lecture</td>
<td>Clinical</td>
</tr>
<tr>
<td>PSI9580</td>
<td>Forensic Intervention</td>
<td>3</td>
<td>Lecture</td>
<td>Practicum</td>
</tr>
<tr>
<td>ATH100</td>
<td>Spec Topics-Cultural ATH</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
<tr>
<td>CS2160</td>
<td>Visual Basic Programming</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture/Lab</td>
</tr>
<tr>
<td>SPN3810</td>
<td>Applied Elec Spin Instr</td>
<td>1</td>
<td>Spanish</td>
<td>Lecture</td>
</tr>
<tr>
<td>MG4200</td>
<td>Positive Grp &amp; Org Dvlpt</td>
<td>2</td>
<td>Management</td>
<td>Lecture</td>
</tr>
<tr>
<td>EE5110L</td>
<td>Devices and Circuits Lab</td>
<td>1</td>
<td>Lecture</td>
<td>Lab</td>
</tr>
<tr>
<td>ME5360</td>
<td>Heat Transfer</td>
<td>3</td>
<td>Lecture</td>
<td>Lecture</td>
</tr>
</tbody>
</table>

**Prerequisites:**
- Undergraduate level ME 1020 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D
- Undergraduate level SPN 3120 Minimum Grade of B or Undergraduate level SPN 3210 Minimum Grade of B or Undergraduate level SPN 3250 Minimum Grade of B or Undergraduate level SPN 3260 Minimum Grade of B
- Undergraduate level SPN 3010 Minimum Grade of B or Undergraduate level SPN 3310 Minimum Grade of B or Undergraduate level SPN 3340 Minimum Grade of B
- Undergraduate level SPN 3150 Minimum Grade of B or Undergraduate level SPN 3350 Minimum Grade of B
- Undergraduate level SPN 3200 Minimum Grade of B or Undergraduate level SPN 3250 Minimum Grade of B or Undergraduate level SPN 3260 Minimum Grade of B
- Undergraduate level SPN 3310 Minimum Grade of B or Undergraduate level SPN 3340 Minimum Grade of B
- Undergraduate level SPN 3150 Minimum Grade of B or Undergraduate level SPN 3350 Minimum Grade of B
- Undergraduate level SPN 3200 Minimum Grade of B or Undergraduate level SPN 3250 Minimum Grade of B
- Undergraduate level SPN 3260 Minimum Grade of B or Undergraduate level SPN 3310 Minimum Grade of B
- Undergraduate level SPN 3340 Minimum Grade of B or Undergraduate level SPN 3350 Minimum Grade of B

**Topics Covered:**
- Introduction to programming concepts.
- Introduction to object-oriented programming.
- Introduction to graphical user interfaces.
- Development of programming skills using an object-oriented approach.
- Introduction to forensic intervention with adult and juvenile populations.
- Introduction to event-driven programming.
- Use of a 3D graphics engine.
- Study of the movement of energy due to temperature difference.
- Detailed look at heat transfer equations.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Level</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE4420</td>
<td>Microwave Egr I</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>3</td>
<td>Transmission line theory and application, wave propagation in rectangular waveguides, microwave network analysis, matching network design, microwave component and resonator design, and introduction of electromagnetic compatibility.</td>
</tr>
<tr>
<td>SOC5710</td>
<td>Comparative CJ</td>
<td>SOC</td>
<td>Sociology</td>
<td>3</td>
<td>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, trafficking, drug smuggling and organized crime networks.</td>
</tr>
<tr>
<td>EDT8900</td>
<td>Internship</td>
<td>EDT</td>
<td>Educational Technology</td>
<td>1</td>
<td>Students are assigned for a maximum of 100 hours to a library, learning center, computer facility, or video operation to gain practical experience under supervision and guidance.</td>
</tr>
<tr>
<td>ED6975</td>
<td>Cont Sem: MACIS</td>
<td>ED</td>
<td>Education</td>
<td>3</td>
<td>Seminar accompanying Multi 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.</td>
</tr>
<tr>
<td>EED4700</td>
<td>4700 Workshop Ed Tech</td>
<td>EDT</td>
<td>Educational Technology</td>
<td>1</td>
<td>Study of selected areas in educational technology. Titles vary.</td>
</tr>
<tr>
<td>ME4680</td>
<td>Experimental Nanoscience</td>
<td>ME</td>
<td>Mechanical and Materials Engineering</td>
<td>3</td>
<td>Laboratory experiments 1) fabrication of nanomaterials; 2) characterization of physical and chemical properties; and 3) computational modeling of nanoscale physical phenomena.</td>
</tr>
<tr>
<td>PSY3040</td>
<td>Industrial and Org Psy</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>Scientific psychological principles, procedures, and methods applied to human behavior in organizations.</td>
</tr>
<tr>
<td>EE3520</td>
<td>3520 Dig &amp; Feedback Contr Sys</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>3</td>
<td>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 piping and instrumentation controllers.</td>
</tr>
<tr>
<td>CS1030</td>
<td>Survey of CS and CEG</td>
<td>CS</td>
<td>Computer Science</td>
<td>1</td>
<td>Provides broad introduction to the fields of computer science and engineering. Explores resources designed to enhance new student success.</td>
</tr>
<tr>
<td>BME6310</td>
<td>Ergonomics</td>
<td>BME</td>
<td>Biomedical Engineering</td>
<td>3</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 workstation and equipment design.</td>
</tr>
<tr>
<td>STT5600</td>
<td>Applied Statistics I</td>
<td>STT</td>
<td>Statistics</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. Uses computer software packages for simulating, summarizing, and displaying data.</td>
</tr>
<tr>
<td>BIO7000</td>
<td>Peer Instruction Biology</td>
<td>BIO</td>
<td>Biology</td>
<td>1</td>
<td>Survey of available instructional materials and discussion of educational theory and techniques leading to more effective instruction.</td>
</tr>
<tr>
<td>EEDL7700</td>
<td>Ed Lead Schl Counselors</td>
<td>EDL</td>
<td>Educational Leadership</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>BBO3320</td>
<td>Human Biomechanics</td>
<td>BBO</td>
<td>Biology</td>
<td>4</td>
<td>Analysis of muscular interrelationships in basic body movements; analysis of principles of mechanics as they relate to fundamental and complex motor skills.</td>
</tr>
<tr>
<td>ED4520</td>
<td>AYA Science Methods</td>
<td>ED</td>
<td>Education</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>LDR8011</td>
<td>Prog Eval Implementation</td>
<td>LDR</td>
<td>Leadership</td>
<td>3</td>
<td>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 programs.</td>
</tr>
<tr>
<td>BBO4660</td>
<td>Intern Appl Physiology</td>
<td>BBO</td>
<td>Biology</td>
<td>1</td>
<td>A capstone practicum experience involving work site training or a research project.</td>
</tr>
<tr>
<td>PSY5590</td>
<td>Topics in Indus/Organiz Psychol</td>
<td>PSY</td>
<td>Psychology</td>
<td>2</td>
<td>Seminars with in-depth coverage of special topics in industrial or organizational psychology. Topics vary.</td>
</tr>
<tr>
<td>TH2020</td>
<td>Sound Design</td>
<td>TH</td>
<td>Theatre</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CS6810</td>
<td>Bioinformatic Algorithms</td>
<td>CS</td>
<td>Computer Science</td>
<td>3</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 contemporary approaches to solving specific computational problems in molecular genetics.</td>
</tr>
<tr>
<td>OHS1030</td>
<td>Professional Devel III</td>
<td>OIS</td>
<td>Office Information Systems</td>
<td>1</td>
<td>Professional development in office procedures, dress, personality, leadership, and other aspects of business development.</td>
</tr>
<tr>
<td>KNE2840</td>
<td>Practicum in HPR</td>
<td>KNE</td>
<td>Kinesiology &amp; Health</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>OLS3030</td>
<td>Interpersonal Leadership</td>
<td>OL</td>
<td>Organizational Leadership</td>
<td>3</td>
<td>Focus on developing and using emotional intelligence (EI) competencies for effectively leading others.</td>
</tr>
<tr>
<td>SLL4800</td>
<td>Advanced Interpreting II</td>
<td>SLL</td>
<td>Sign Language Interpreting</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>PSY4370</td>
<td>Psychology of Aging Cap</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>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.</td>
</tr>
</tbody>
</table>
Fall 2020  CEG6180  6130  Obj-Dirent Prog & Desig  CEG  Computer Engineering  3  Topics emphasize the core concepts of encapsulation, inheritance, polymorphism, and dynamic binding. Additional topics include class organization, software maintenance, and design of testable components. <br/>GR LE Lecture

Fall 2020  PSY8610  8610  Personnel Psychology  PSY  Psychology  4  In-depth review of the psychological basis of personnel selection including recruitment techniques, criterion development, performance evaluation, validity generalization, and instruments. Theoretical, practical, and legal issues are covered. <br/>GR SE Seminar

Fall 2020  BME4710  4710  Optical Imaging  BME  Biomedical Engineering  3  Biophotonics and optical imaging concepts. Basic optics, light propagation in tissue, modern microscopy techniques, and use of lasers (biological, optical spectroscopy, optical imaging). <br/>UG LE Lecture

Fall 2020  MUS3270  3270  March Band/Jazz Ensembles  MUS  Music  2  Methodology, techniques, and strategies required for success with marching band and jazz ensemble. <br/>UG LE Lecture

Fall 2020  URS7020  7020  Planning and Evaluation  URS  Urban Affairs  3  Addresses the theory and practice of strategic thinking, planning, and management in public and nonprofit organizations and familiarizes students with the major concepts, skills and approaches to program evaluation. <br/>GR LE Lecture

Fall 2020  PSY2610  2610  Behavior Modification  PSY  Psychology  3  Introduces procedures used in the field of behavior modification. <br/>UG LE Lecture

Fall 2020  PSY4450  4450  Chemical Dependency  PSI  Professional Psychology  3  The purpose and main objective of this course is to enhance the skill set of pre-doctoral graduate students in the field of substance abuse and dependence. Historical understandings, models of recovery, treatment settings, assessment strategies, and prevention/treatment modalities will all be addressed in detail. Each participant will also have an opportunity to increase understanding of the major drugs of choice. Emphasis will be on culture, outreach and the needs of unique populations. <br/>GR LE Lecture

Fall 2020  ABS7601  7601  Sem C Joseph  ABS  Applied Behavioral Science  1  In-depth coverage of special topics in applied behavioral science/criminal justice with an emphasis on theory, methods, and research. Topics vary. 1-2 credit hours <br/>GR LE Lecture

Fall 2020  ANT3100L  5100L  Adv Hum Str & Func I Lab  ANT  Anatomy  0  Required Laboratory for ANT 5100: Laboratory exercises use human donors. <br/>GR LB Lab

Fall 2020  CHM1670  6170  Applied Chemical Spectro  CHM  Chemistry  2  Practical applications of various spectrophotometric techniques (mass spectrometry, infrared spectrometry, ultraviolet spectrometry, and nuclear magnetic resonance) are integrated for the explanation of the structure of organic molecules. A problem-solving approach is used. <br/>GR LE Lecture

Fall 2020  FIN6130  6130  Derivatives  FIN  Finance  3  The course will deal with (a) the structure and operation of derivative markets (options, forward contracts, futures, swaps and other derivatives), (b) the valuation of derivatives, (c) hedging using derivatives, and (d) applications of derivatives in the areas of risk management, portfolio insurance, and financial engineering. Participants will develop 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. For advanced ESL students. This course has a fee that is non-refundable once the term begins. <br/>UG LL Lecture/Lab Combination

Fall 2020  BIO6101L  6101L  The Aquatic Environment Lab  BIO  Biology  0  Required laboratory for BIO 6110. <br/>GR LB Lab

Fall 2020  OIS1260  1260  Spreadsheet Applications  OIS  Office Information Systems  3  Prepares students to understand and use spreadsheets for office applications using Microsoft Excel. <br/>UG LE Lecture

Fall 2020  ENG7140  7140  WMS: Theory & Literature  ENG  English  3  Explores gender and other variables of identity (e.g. ethnicity, class, sexuality, religious affiliation, disability) and their relationship to the production/consumption of texts. Readings include literary texts and feminist theory. <br/>GR SE Seminar

Fall 2020  REL3760  3760  The Four Gospels  REL  Religion  3  Literary and historical study of the four Gospels in the Christian Bible, aiming to discern their purposes in writing, reconstrcut their communities, and reflect on the meaning of their presentations of Jesus. Some attention to the problem of the historical Jesus. <br/>UG LE Lecture

Fall 2020  PSY4440  8440  Psychodyn & Interp Ther  PSI  Professional Psychology  3  Covers origins and recent trends in dynamic therapies, including brief dynamic therapies and interpersonal theories and therapies and Interpersonal Psychotherapy. <br/>GR LE Lecture

Fall 2020  ED7901  7901  Co-Teaching Practices  ED  Education  1  Centers on the effective implementation of the co-teaching model. Practicing classroom teachers will gain a comprehensive understanding of underlying components of the co-teaching model and their practical application in PK-12 classrooms. <br/>GR SE Seminar

Fall 2020  TH4350  4350  Portfolio Preparation  TH  Theatre  3  Prepares upper-division students for the professional world. Portfolio formats, both traditional and digital. Effective techniques for the presentation of portfolios and employment strategies. <br/>UG ST Studio

Fall 2020  BIO6040  6040  Topics in Biology  BIO  Biology  1  Advanced topics in modern biology of current interest. Topics vary. <br/>GR LE Lecture

Fall 2020  CHM7010  7010  Thesis  CHM  Chemistry  1  The collection, organization and description of chemical data for the process of writing a thesis. <br/>GR LE Lecture

Fall 2020  ED7905  7905  Instruct Practices inTech  ED  Education  1  Centers on the effective implementation of various instructional practices that utilize technology, the evidence behind the practices, and their practical application in PK-12 classrooms. <br/>GR SE Seminar

Fall 2020  EDE6580  6580  Sadt Tchnq. MA/Via Arts  ED  Education  8  Candidates, under the direct supervision of an experienced classroom teacher, are assigned to a school for intensive teaching experience grades p-12 in Multi-Age Visual Arts. <br/>GR IN Internship

Fall 2020  EES6380  6380  Seismic Interpretation  EES  Earth & Environmental Sciences  4  Students learn the theory and practice of seismic reflection data interpretation. Principles of seismic reflection data interpretation, and data as well as pitfalls, are examined in the context of both structural geologic and stratigraphic settings. <br/>GR LL Lecture/Lab Combination

Fall 2020  PHN4880  4880  Int Reading - Physiology  P&N  Physiology & Neuroscience  1  Various physiology topics will be discussed with an assigned faculty advisor. <br/>UG IS Independent Study

Fall 2020  MUE2950  2950  Chamber Singers  MUE  Music: Ensembles  1  Development of advanced choral and vocal skills. Emphasis on advanced vocal chamber literature from 15th through 20th centuries. Audition required. <br/>UG LL Lecture/Lab Combination

Fall 2020  HST6490  6490  Asian History  HST  History  3  Examines various periods of Chinese, Japanese, and other Asian histories. Topics vary. <br/>GR LE Lecture

Fall 2020  CEG6350L  2350L  O/S Concepts and Usage Lab  CEG  Computer Engineering  0  Required laboratory for CEG 2350: <br/>UG LB Lab
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Type</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HST6840</td>
<td>Religious History</td>
<td>Lecture</td>
<td>3</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.</td>
</tr>
<tr>
<td>BIE6711L</td>
<td>Optics Meth Lab</td>
<td>Lecture</td>
<td>0</td>
<td>Required laboratory for BIE 6711.</td>
</tr>
<tr>
<td>MUS1510</td>
<td>Music</td>
<td>Lecture</td>
<td>1</td>
<td>The study of sight singing and techniques for hearing and notating melody and harmony.</td>
</tr>
<tr>
<td>CS5300</td>
<td>Comp Sys &amp; Structures</td>
<td>Lecture</td>
<td>3</td>
<td>This is an Online/Distance Education course primarily designed for working professional/non-traditional students/entry into university for advanced studies in Computer Science.</td>
</tr>
<tr>
<td>TH1240</td>
<td>Theatre Graphics I</td>
<td>Lecture</td>
<td>3</td>
<td>Drawing for the theatrical designer with emphasis on fundamentals.</td>
</tr>
<tr>
<td>ART4000</td>
<td>Art Seminar</td>
<td>Lecture</td>
<td>3</td>
<td>Group discussions of contemporary writings in art and critiques of student work in a per sitting with faculty and visiting artists participating on an informal basis.</td>
</tr>
<tr>
<td>KNH1180</td>
<td>Dance: Swing</td>
<td>Lecture</td>
<td>1</td>
<td>Fundamental skills and knowledge of Dance: Swing. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>BBO3130L</td>
<td>Plant Biology Lab</td>
<td>Lecture</td>
<td>4</td>
<td>Required laboratory for BBO 3130.</td>
</tr>
<tr>
<td>BMB6760</td>
<td>Mol Basis Inherited Dis</td>
<td>Lecture</td>
<td>3</td>
<td>An intensive course on human diseases at all levels; replicational, transcriptional, translational, protein expression, protein folding and processing, protein structure and function, cellular metabolic changes, nuclear and cellular phenotypic changes, symptoms, and putative diseases.</td>
</tr>
<tr>
<td>BIO3810</td>
<td>Intro to Bioinformatics</td>
<td>Lecture</td>
<td>3</td>
<td>Tool-oriented approach to bioinformatic methods 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.</td>
</tr>
<tr>
<td>PL6180</td>
<td>Politics and Ethics</td>
<td>Lecture</td>
<td>3</td>
<td>Philosophical and legal foundations for regulating ethics among public officials.</td>
</tr>
<tr>
<td>PTH8120</td>
<td>Med. Bio. Defense</td>
<td>Lecture</td>
<td>3</td>
<td>This course will provide an in depth understanding of biological warfare threat agent pathogenesis, toxology, 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.</td>
</tr>
<tr>
<td>BME4550</td>
<td>Bioinstrumentation</td>
<td>Lecture</td>
<td>3</td>
<td>Various electrodes, transducers, chemical sensors, special circuits, devices and methods for measuring biological signals and variables; therapeutic and prosthetic devices; electrical safety.</td>
</tr>
<tr>
<td>KNH1755</td>
<td>Marathon Training</td>
<td>Lecture</td>
<td>2</td>
<td>Fundamental skills and knowledge of marathon training. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>KNH1660B</td>
<td>Swimming: Beginning</td>
<td>Lecture</td>
<td>1</td>
<td>Fundamental skills and knowledge of Swimming: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>WGS5050</td>
<td>Topics Sexuality Studies</td>
<td>Lecture</td>
<td>3</td>
<td>Issues, approaches, and topics in the field of sexuality studies. Titles and topics vary.</td>
</tr>
<tr>
<td>CEG1170</td>
<td>Intro to C Prog for S&amp;E</td>
<td>Lecture</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>PPH7130</td>
<td>Geospatial Tech in P H</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>EC4090</td>
<td>Intro. to Econometrics</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>HST4860</td>
<td>History and New Media</td>
<td>Lecture</td>
<td>3</td>
<td>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. Produces presentations in a variety of media. Integrated Writing course.</td>
</tr>
<tr>
<td>ME6140</td>
<td>Mechanical Design I</td>
<td>Lecture</td>
<td>3</td>
<td>Fundamental concepts in design for both static and fatigue loading, with application to selected mechanical components and systems.</td>
</tr>
<tr>
<td>ATH5600</td>
<td>Special Topics/Archaeology</td>
<td>Lecture</td>
<td>3</td>
<td>Intensive graduate-level study of selected topics in archaeology. Topics vary.</td>
</tr>
<tr>
<td>ART4090</td>
<td>Studies in Art</td>
<td>Lecture</td>
<td>3</td>
<td>Problems and approaches to art. Includes cross-media and interdisciplinary studies.</td>
</tr>
<tr>
<td>SOC3110</td>
<td>Medical Sociology</td>
<td>Lecture</td>
<td>3</td>
<td>Introduction to the social dimensions of health and illness; consideration of patterns of disease, along with the organization, provision, and delivery of medical services.</td>
</tr>
<tr>
<td>SOC4400</td>
<td>Qualitative Methods</td>
<td>Lecture</td>
<td>3</td>
<td>Qualitative research methods, including interviews, focus groups, case studies, and observational research. Integrated Writing course.</td>
</tr>
<tr>
<td>BME6850</td>
<td>Six Sigma for Engineers</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
</tbody>
</table>

*GR* - Graduate, *UG* - Undergraduate, *LE* - Lecture, *Lab* - Lab, *Combination* - Lecture/Lab
Fall 2020  MTH7710  7710  Topology  MTH  Mathematics  4  Topological spaces, continuous maps, open and closed maps, Connectedness, Separation Axioms, Convergence, Compactness, Homotopy, Basic concepts of algebraic topology. <b>GR</b>: Department Manager Prerequisite(s): Undergraduate level MTH 4320 Minimum Grade of D or Graduate level MTH 620 Minimum Grade of D/.<b>UG</b>: Lecture

Fall 2020  EES4400  4400  Glacial Landforms  EES  Earth & Environmental Sciences  2  Field trip to the Finger Lakes (New York) to examine the landforms, processes, and deposits associated with Pliocene continental glaciation, as well as subsequent post-glacial modifications. <b>UG</b>: Lecture/Lab Combination

Fall 2020  BME4241  6421  Biotransport  BME  Biomedical Engineering  3  Behavior of fluids as encountered in everyday life, general and biomedical engineering applications. Properties of body fluids, solute mass transport in biological systems, fluid mechanics of blood and other fluids, oxygen mass transport. <b>GR</b>: Department Manager Prerequisite(s): Undergraduate level MTH 3350 Minimum Grade of D and (Undergraduate level ANT 2120 Minimum Grade of D or Undergraduate level ANT 3120 Minimum Grade of D).</b><b>UG</b>: Lecture

Fall 2020  BMB4750  4750  Molec Biology of Cancer  BMB  Biochem & Molecular Biology  3  A broad overview of the molecular basis of cancer. Weekly discussion of one or more of the molecular changes that cells need to acquire to become cancerous. <b>UG</b>: Lecture

Fall 2020  TH4370  4370  Musical Actor Seminar  TH  Theatre  3  Mastery of professional placement and career development skills in musical theatre and other acting professions. Includes preparation of varied audition selections and promotional materials. <b>UG</b>: SI Seminar

Fall 2020  KNH1310  7130  Teach Adjt Phys Acts  KNH  Kinesiology & Health  3  Provides an overview of disability sport and physical activity including roles and certification requirements of the various athletic opportunities for exceptional populations. Includes discussions of adapted devices, technology, and special facilities used for disability sports. <b>UG</b>: LE Lecture

Fall 2020  SOC6620  6620  Elite Crime  SOC  Sociology  3  Theoretical and critical examination of the extent, cost, and control of elite crime and deviance. <b>GR</b>: LE Lecture

Fall 2020  KNH5750  7530  Assessment in Adapted PE  KNH  Kinesiology & Health  3  Provides an overview of developing and diagnosing diverse motor, physical, and sensory deficiencies in exceptional children. Administrative procedures and interpretation of numerous assessment instruments will be covered. <b>GR</b>: LE Lecture

Fall 2020  CSD3230  3230  Health Care Finance Mgt  CSD  Community Services Development  3  Financial principles and concepts in health care management organizations. <b>UG</b>: LE Lecture

Fall 2020  CS1160L  1160L  Intro to Comp Prog Lab  CS  Computer Science  0  Required laboratory for CS 1160. <b>UG</b>: LB Lab

Fall 2020  ME5350  5350  Fluid Dynamics  ME  Mechanical and Materials Engr  3  Study of fluid properties, fluid statics, incompressible flows, real fluid flows, and flow measurement. <b>GR</b>: Department Manager Prerequisite(s): Undergraduate level ME 3310 Minimum Grade of C or Graduate level ME 5310 Minimum Grade of C/.<b>UG</b>: LE Lecture

Fall 2020  GEO4990  4990  Special Topics  GEO  Geography  1  Projects involve spatial analyses of economic, social and cultural phenomena. <b>UG</b>: LE Lecture

Fall 2020  SCM3070  3070  Ops & Supply Ch Mgt  SCM  Supply Chain Management  3  Examine the major management decision areas in the design and offering of goods and services. Major topics include: operations strategy, planning and control systems, quality management, and project management. <b>UG</b>: LE Lecture

Fall 2020  ISE4980  4980  Special Topics in ISE II  ISE  Industrial & Systems Engr  1  Undergraduate independent studies in advanced Industrial and Systems Engineering. Topics vary. <b>UG</b>: LE Lecture

Fall 2020  ME7060  7060  Structural Reliability  ME  Mechanical and Materials Engr  3  Analyze the uncertainties associated with mechanical and structural design. Methods to model various uncertainties in a design using probabilistic analysis tools. Computation of safety index and structural reliability using efficient techniques for implicit functions. <b>GR</b>: Department Manager Prerequisite(s): Graduate level ME 7100 Minimum Grade of D and Graduate level ME 6120 Minimum Grade of D/.<b>UG</b>: LE Lecture

Fall 2020  MLB4811  4811  Basic Immunohem Lab  MLB  Medical Laboratory Science  1  Use of antigens and antibodies in blood grouping and transfusion medicine. This course has a fee that is non-refundable once the term begins. <b>UG</b>: LB Lab

Fall 2020  REL3820  3820  Sociology of Religion  REL  Religion  3  (Also listed as SOC 3110) General treatment of religion as a social institution, examining the influence of religious ideas and organizations on other social institutions and the influence of society on religion. <b>UG</b>: LE Lecture

Fall 2020  MET6430  6430  Alg Func Mid Schl Tchr  MTE  Mathematics Teacher Education  4  Algebraic principles and linear functions are reviewed with respect to their usage in middle school classrooms. Polynomial, rational, exponential, logarithmic, and trigonometric functions are studied from a perspective appropriate for a middle school teacher. Students explore how properties of functions appear in various representations by means of technological tools. <b>GR</b>: LE Lecture

Fall 2020  PPH7310  7310  Public Hlth Ethics & Pol  PPH  Population & Public Health  3  This is a general introduction to the ethical and legal foundations underlying public health in the United States and internationally. The goal is to equip students with the basic conceptual tools they will need as professionals, whether they work in medicine, law, or public service. The readings offer a range of perspectives each week, and are essential background for Team-Based Learning activities and discussions. Written assignments include two short research papers and a final exam. <b>GR</b>: LE Lecture

Fall 2020  RHB5610  5610  Rehab Services for Vsts  RHB  Rehabilitation  3  Background information on military services, specific issues related to active military service, services for veterans, and disability factors. <b>UG</b>: LE Lecture

Fall 2020  PSY4020  4020  Adv Exp Design Programs  PSY  Psychology  4  Methods and techniques necessary for more advanced statistical applications, as well as those specific to computer programs instrumental in the design, analysis, and interpretation of behaviorally oriented research. <b>UG</b>: LL Lecture/Lab Combination

Fall 2020  EES7810  7810  MST Project  EES  Earth & Environmental Sciences  3  Students develop an independent capstone science or education research project. <b>GR</b>: IS Independent Study

Fall 2020  PPH7220  7220  Issues in Aging  PPH  Population & Public Health  3  Multidisciplinary approaches to the challenges and opportunities of communities and/or families faced with providing health care and social services to a growing number of older adults. Students will work in multidisciplinary teams for class projects. <b>GR</b>: SE Seminar

Fall 2020  EE7440L  7440L  RF Power Amplifiers Lab  EE  Electrical Engineering  1  Required lab for EE 7440 <b>GR</b>: LB Lab

Fall 2020  PN6300  6300  Med Cell Bio & Phys  PN  Physiology & Neuroscience  3  This is an interdisciplinary course that brings together fundamental concepts of biochemistry, molecular biology, cell biology and cell physiology of eukaryotic cells and applies this knowledge to explaining disease mechanisms. <b>GR</b>: LE Lecture

Fall 2020  MUE4950  4950  Chamber Singers  MUE  Music: Ensembles  1  Development of advanced choral and vocal skills. Emphasis on advanced vocal chamber literature from 15th through 20th centuries. Audition required. <b>UG</b>: LL Lecture/Lab Combination

Fall 2020  EES6640  6640  Risk Assessment & Comm  EES  Earth & Environmental Sciences  3  Studies the determination of quantitative risk to humans and the environment. Approaches currently used in regulatory activities are described, showing method of hazard identification, sampling, data evaluation, exposure assessment, toxicity assessment, and risk characterization. <b>GR</b>: LE Lecture
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.

This course has a fee that is non-refundable once the term begins. This course is limited to students who have completed the prerequisite(s). Undergraduate level ART 2060 Minimum Grade of D-<b>Department Managed</b>.

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.

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. This course has a fee that is non-refundable once the term begins. A maximum of 6 credits may be counted toward the MS degree.

This course examines how states respond to terrorism. It covers topics such as international law, U.S. law, and international organizations. It also explores the psychological and social factors that influence terrorism.

A course that introduces students to principles of effective written communication and critical reading, with an emphasis on genres and strategies that are employed. Students may apply to business and organizational settings. Integrated Writing course.

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. A maximum of 6 credits may be counted toward the MS degree.

Students pursue a narrow topic on a tutorial basis or be trained in a specific laboratory or computational technology and societal connections. 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.
This course 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 up until shut down. Topics include Privilege Escalation, Buffer Overruns, Network Packet Manipulation, Session Hijacking, Firewalls, and ethics. Lab work uses tools such as nmap and BackTrack Linux. (3-0) Department Managed Prerequisite(s): Graduate level CEG 6350 Minimum Grade of D-<b>-</b>

This course 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 up until shut down. Topics include Privilege Escalation, Buffer Overruns, Network Packet Manipulation, Session Hijacking, Firewalls, and ethics. Lab work uses tools such as nmap and BackTrack Linux. (3-0) Department Managed Prerequisite(s): Graduate level CEG 6350 Minimum Grade of D-<b>-</b>

This course 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 up until shut down. Topics include Privilege Escalation, Buffer Overruns, Network Packet Manipulation, Session Hijacking, Firewalls, and ethics. Lab work uses tools such as nmap and BackTrack Linux. (3-0) Department Managed Prerequisite(s): Graduate level CEG 6350 Minimum Grade of D-<b>-</b>

This course explores consumer economic topics while assisting K-12 teachers with methods to introduce and teach them to students. This course has a fee that is non-refundable once the term begins. (2-0) Department Managed Prerequisite(s): Undergraduate level ARA 5210 Minimum Grade of D<br>

This course explores consumer economic topics while assisting K-12 teachers with methods to introduce and teach them to students. This course has a fee that is non-refundable once the term begins. (2-0) Department Managed Prerequisite(s): Undergraduate level ARA 5210 Minimum Grade of D<br>

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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  P&N6990  6990  Lab Rotation  P&N  Physiology & Neuroscience  3  Provides experience in laboratory rotation.  GR  IS  Independent Study

Fall 2020  PSY9025  9025  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  ARA4410  4410  Intro to Arabic Fiction  ARA  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-.  UG  LE  Lecture

Fall 2020  PSY3330  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 its 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  MSDS 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 globe.  UG  LE  Lecture

Fall 2020  ENG6950  6950  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 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-.  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 Select 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  ED53990  5990  Lang/Placa for Lrnrs 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, log-linear models and repeated measurements. Computer software is used to analyze the data sets. <br> Department Managed Prerequisite(s): (Graduate level STT 6620 Minimum Grade of D and Graduate level STT 6680 Minimum Grade of D-) or <br> UG  LE  Lecture

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
Fall 2020  FAS2060  2060  Agriculture Study Tour  FAS  Food and Agricultural Systems 1  Exploration of economic, social, and agricultural production issues in a region (or regions) of the United States or abroad. Tours include agriculture business operations, farm/ranches, community/government tours, and cultural or historical components of significance.  UG  LL  Lecture/Lab Combination

Fall 2020  CEG4110  4110  Intro to Software EGR  CEG  Computer Engineering 3  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 a means illustrating the software engineering process. Integrated Writing course.  UG  LE  Lecture

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  GEO4100  4100  Remote Sensing  GEO  Geography 3  Survey of remote sensing spatial analysis. Applications, technology, and spatial measurements used to interpret remote sensed images.  UG  LE  Lecture

Fall 2020  ATH4210  4210  Biomedical Anthropology  ATH  Anthropology 3  An anthropological perspective of human health integrating biological and socio-cultural dimensions of health and illness in selected societies of the contemporary world and in the past.  UG  LE  Lecture

Fall 2020  BME7133  7133  Nuc Magnetic Res in Med  BME  Biomedical Engineering 3  Principles of imaging and spectroscopy of nuclear magnetic resonance in their applications to medicine. Topics include magnetization models, material and spatial encoding, cardiac MRI, perfusion imaging, functional MRI etc.  GR  LE  Lecture

Fall 2020  EE6600  6600  UAV Flight Control  EE  Electrical Engineering 3  Introductory course of UAV autopilot design. Major topics include quadrotor 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.  GR  LE  Lecture

Fall 2020  ED7600  7600  Topics & Issues in Lit  ED  Education 3  Examines current issues and topics in literacy and how these impact teaching and learning in K-12 education.  GR  LE  Lecture

Fall 2020  STT4300  4300  Biostatistics  STT  Statistics 3  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 t-tests, simple and multiple regression, and analysis of variance.  UG  LE  Lecture

Fall 2020  EDL9710  9710  School Dist Leadership  EDL  Educational Leadership 3  Superintendents, staff, school board, unions, and community strategic roles, limits, and responsibilities in light of federal, state, and local regulations and political pressures.  GR  LE  Lecture

Fall 2020  EDL2270  2270  MCE AVA Sci PCK  ED  Education 3  Teacher candidates will form a foundation for content pedagogical content knowledge. Readings, discussions, observations, and reflections on how students learn science and how best to teach it.  UG  SE  Seminar

Fall 2020  NUR8920  8920  DNP Scholarly Proj Pract  NUR  Nursing 1  This course is a guided, independent project applying the evidence-based practice process to health care delivery systems, nursing practice, and/or health policy to promote population outcomes.  GR  PR  Practicum

Fall 2020  MTH6820  6820  Applied Mathematics II  MTH  Mathematics 3  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.  GR  LE  Lecture

Fall 2020  LDR8020  8020  Strat Planning in Orgs  LDR  Leadership 3  Study of organizational strategic planning theory and practices. Includes development of strategic plans for organizations.  GR  LE  Lecture

Fall 2020  ART4140  4140  Adv Studies Baroque Art  ART  Art 3  Intensive studies of the period, major movements, and artists of the time.  LE  Lecture

Fall 2020  EDL7950  7950  Supervising Instr & Prsnl  EDL  Educational Leadership 3  The course content focuses on supervising and assessing curriculum, instruction, and personnel.  GR  LE  Lecture

Fall 2020  EE7430L  7430L  HF Mag Components Lab  EE  Electrical Engineering 1  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 be done. Evaluations of performance of integrated inductors will be performed.  GR  LB  Lab


Fall 2020  MTH6520  6520  Modern Algebra II  MTH  Mathematics 3  Examples and elementary properties of abstract algebraic structures: these include groups, rings, integral domains, and fields.  GR  LE  Lecture

Fall 2020  EC3150  3150  Internmed Microeconomics  EC  Economics 3  Develop the analytical tools of microeconomics, stressing market behavior of firms, industries, and consumers. Examine the production process and the operation of market mechanisms. Policy implications are emphasized.  UG  LE  Lecture

Fall 2020  NUR3420C  3420C  Nur Care Mental Health Clin  NUR  Nursing 0  Required clinical for NUR 3420.  UG CL  Clinical

Fall 2020  EDS2700  2700  Cultural Exploration  EDS  Education - Special Education 1  Using tutoring experiences to explore community differences in language and culture and the impact of these on the growth of development of students with exceptional learning needs. Seminar discussions required.  UG  SE  Seminar
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Credits</th>
<th>Level</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR2124C</td>
<td>Nursing</td>
<td>Required clinical for NUR 2124. Integrated Writing course.</td>
<td>0</td>
<td>UG</td>
<td>CL</td>
</tr>
<tr>
<td>PHY7540</td>
<td>Geophysics</td>
<td>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.</td>
<td>3</td>
<td>GR</td>
<td>SE</td>
</tr>
<tr>
<td>URS86340</td>
<td>Fundraising/Grant Write</td>
<td>Examines the concepts and processes fundamental to fundraising and grant writing. Explores tools, techniques and skills needed to raise funds and write grant proposals.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PLS8770</td>
<td>International Organizati</td>
<td>Examines the competing theoretical perspectives on international organization and analyzes the structure, functions, and the evolving role of key international organizations—IOs &amp; NGOs—in global governance; also explores their pathologies and prospects for reform.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>AFS6990</td>
<td>Special Topics</td>
<td>Selected topics relevant to historical and current issues in African and African American Studies.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>EDS4570</td>
<td>Just &amp; Behav Management IS</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 hour field experience required.</td>
<td>3</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>ECE3705</td>
<td>Writing Methods &amp; Mat</td>
<td>Study of emerging writing in early childhood and the methods and materials needed to facilitate oral and written communication.</td>
<td>4</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>DAN3010</td>
<td>Ballet III</td>
<td>Vocabulary, techniques, and theory of advanced ballet. Emphasis on body alignment and flexibility.</td>
<td>3</td>
<td>UG</td>
<td>ST</td>
</tr>
<tr>
<td>MUS3290</td>
<td>Choral Music Ed Math I</td>
<td>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.</td>
<td>1</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>MTH5720</td>
<td>Algebra II</td>
<td>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, cyclotomic, finite fields, and Wedderburn’s theorem.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>EDU2010</td>
<td>Studies in Humanities</td>
<td>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.</td>
<td>3</td>
<td>UG</td>
<td>SE</td>
</tr>
<tr>
<td>MUE2700</td>
<td>Univ Symphony Orchestra</td>
<td>Performs orchestral music of all styles and periods.</td>
<td>1</td>
<td>UG</td>
<td>LL</td>
</tr>
<tr>
<td>FAS3110</td>
<td>Agriculture Marketing</td>
<td>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.</td>
<td>3</td>
<td>UG</td>
<td>LL</td>
</tr>
<tr>
<td>FR5810</td>
<td>Applied Elem Fr Instr</td>
<td>Graduate students assist FR 1010 or FR 1020 course instructors in conducting French classes. Taught in French. Department Managed Prerequisite(s): Graduate level FR 5120 Minimum Grade of D or Graduate level FR 5210 Minimum Grade of D or Graduate level FR 5220 Minimum Grade of D or Graduate level FR 5310 Minimum Grade of D or Graduate level FR 5320 Minimum Grade of D or Graduate level FR 5390 Minimum Grade of D.</td>
<td>1</td>
<td>GR</td>
<td>IN</td>
</tr>
<tr>
<td>SPN6320</td>
<td>Sem in Spanish-Amer Lit</td>
<td>Readings and reports in the novel, poetry, and drama of selected Spanish-American authors. Representative works of Borges, Garcia Marquez, Rufus, Paz, Vargas Llosa, Sanchez, and others.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PHY7200</td>
<td>Many-Body Physics</td>
<td>Consideration of many body theory in Physics including phase space evolution, Liouville’s theorem, ensembles, the Boltzman equation, the H theorem, and approach to equilibrium, fluctuation phenomena. Non-equilibrium problems</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>BMB6990</td>
<td>Spec Problems in Biochem</td>
<td>Current problems in Biochemistry and Molecular Biology as assigned by BMB faculty members with approval of the Chair.</td>
<td>1</td>
<td>GR</td>
<td>IS</td>
</tr>
<tr>
<td>BIO3350L</td>
<td>Basic Cell Culture Tech Lab</td>
<td>Required laboratory for BIO 3250.</td>
<td>0</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>LEP0220</td>
<td>Writing Workshop Level 2</td>
<td>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.</td>
<td>0</td>
<td>UG</td>
<td>LL</td>
</tr>
<tr>
<td>KHE1670A</td>
<td>Swimming: Intermediate</td>
<td>Intermediate level of skills and knowledge in Swimming: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
<td>1</td>
<td>UG</td>
<td>LB</td>
</tr>
<tr>
<td>PLS5390</td>
<td>Biotechnics and Law</td>
<td>Legal implications of new biological technologies, particularly mind and behavior control, genetic engineering, birth and death control, and organ transplantation.</td>
<td>3</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>EGR2940</td>
<td>Internship I</td>
<td>First internship course. Students are supervised via weekly seminars and regular feedback from employers. Department Managed Prerequisite(s): Graduate level EGR 1900 Minimum Grade of D or Graduate level EGR 1950 Minimum Grade of D or Graduate level EGR 1951 Minimum Grade of D or Graduate level EGR 1952 Minimum Grade of D or Graduate level EGR 1953 Minimum Grade of D or Graduate level EGR 1954 Minimum Grade of D.</td>
<td>1</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>EDR7300</td>
<td>Research Design Methods</td>
<td>Research method design for personal or professional goals; culminates in the analysis of existing research data.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>PTX8200</td>
<td>Communications in Scienc</td>
<td>A crash course in bringing clarity, plain language and fun to scientific communications.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>CNL6200</td>
<td>Clin Pathology in Counsel</td>
<td>Introduces students in human services to basic phychopathology, factors influencing the behavior of individuals and methods a counselor may use in observing, analyzing and improving attitudes and behavior.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>SLI2990</td>
<td>Skill Development in SLI</td>
<td>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.</td>
<td>3</td>
<td>GR</td>
<td>LE</td>
</tr>
<tr>
<td>ECE4400</td>
<td>Assess Methods in ECE</td>
<td>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.</td>
<td>3</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>EE4000</td>
<td>Linear Systems II</td>
<td>Discrete time signals and systems theory, the z-transform theory, input/output relationships, discrete Fourier transform, IIR and FIR filter design, and sampling.</td>
<td>3</td>
<td>UG</td>
<td>LE</td>
</tr>
<tr>
<td>MUS6460</td>
<td>Medieval &amp; Renaissance</td>
<td>Study of music and critical analysis of representative works from major composers of Medieval and Renaissance music.</td>
<td>3</td>
<td>UG</td>
<td>LE</td>
</tr>
</tbody>
</table>
Fall 2020  PLS4310  4310  Cyber Crime  PLS  Political Science  3  Political and legal issues in computer- and Internet-based crime; including child pornography, computer fraud, and identity theft; prevention of cyber crime and responsibilities of computer owners and Internet servers.  UG  LE  Lecture
Fall 2020  BME4440  4440  Biomaterials  BME  Biomedical Engineering  4  Application of materials in different biomedical fields; Design and analyses.  UG  LL  Lecture/Lab Combination
Fall 2020  MUE6680  6680  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.  GR  LL  Lecture/Lab Combination
Fall 2020  EES3700  3700  HAZWOPER Refresher  EES  Earth & Environmental Sciences  1  Refresher training covering management of hazardous materials and emergency response in the workplace, at spills, or at hazardous waste sites. Satisfies the requirements for 8 hours of refresher training specified under OSHA 29 CFR 1910.120.  UG  LE  Lecture
Fall 2020  ATR3500  3700  Orthopedic Assessment  ATR  Athletic Training  5  Pathology, assessment, and initial management of orthopedic injuries seen in the physically active population across the lifespan.  GR  LE  Lecture
Fall 2020  MTE5880  6880  Ind Reading Math Stat Ed  MTE  Mathematics Teacher Education  1  Selected topics from the research literature on a particular topic in mathematics and statistics education.  GR  IS  Independent Study
Fall 2020  SLI4550  4550  Deaf-Blind Interpreting  SLI  Sign Language Interpreting  3  Overview of role of the interpreter and necessary skills when working with individuals who are Deaf-Blind. Introduction to etiology of deaf-blindness, its impact on communication, and basic sighted-guide techniques. Focus on tactile interpreting skills.  UG  LE  Lecture
Fall 2020  EES1180L  3180L  Water & the Environment Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 3180.  UG  LB  Lab
Fall 2020  MP4810  4810  Practicum in Filmmaking  MP  Motion Picture  3  Credit for professional-caliber production work in a chosen role which may include developing a fully formed feature documentary treatment; writing a feature-length screenplay; or working on a senior practicum production as writer and/or director, director of photography, art director or editor.  UG  PR  Practicum
Fall 2020  PSI8080  8080  Affective Bases of Behavior  PSI  Professional Psychology  3  The purpose of this course is to introduce students to the major issues and important concepts in emotion and cognition. In addition, we will examine how these two domains of human functioning mutually influence each other. Students will learn how basic, complex, and social emotions may be experienced, interpreted, expressed, or regulated. The relationship between emotional and cognitive processes such as attention, learning, memory, and decision making will be explored. Finally, students will learn about cultural presentations and differences in cognitive and affective behavior.  GR  LE  Lecture
Fall 2020  ME4190  4190  Intro Engr Lubrication  ME  Mechanical and Materials Engineering  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 dependences on pressure as well as temperature, non- & Newtonian behavior, Reynolds equation; solve governing equations for elasto- & hydrodynamic lubrication; introduce egr approaches for lubrication performance assessment in machine elements. Required for Professional Psychology (Undergraduate level MTH 2550 Minimum Grade of D or (Undergraduate level MTH 2530 Minimum Grade of D and Undergraduate level MTH 2530 Minimum Grade of D and Undergraduate level MTH 2320 Minimum Grade of D and Undergraduate level ME 3350 Minimum Grade of D) or) Department Managed Prerequisite(s)
Fall 2020  NUR8007  8007  QM and I for HC Org  NUR  Nursing  3  Examines the principles and practice of quality management in health care organizations and clinical performance in care delivery and outcomes. Focus is on the role and accountability of the advanced practice nurse working with a collaborative team for maintaining patient safety and improving quality of care.  GR  LE  Lecture
Fall 2020  MKT4650  4650  Mix Analytics  MKT  Marketing  3  Analysis of online and internal company data, with an emphasis on application and recommendations.  UG  LE  Lecture
Fall 2020  EC5090  5090  Statistics for Economics  EC  Economics  3  Elementary statistical concepts for economic applications.  GR  LE  Lecture
Fall 2020  MIS4600  4600  GIS for Business  MIS  Management Information Systems  3  Principles, tools, and techniques of geographic information systems. Creation, management, and use of geographic data in business-related decision making.  UG  LL  Lecture/Lab Combination
Fall 2020  PSY5150  5150  Social Psychology  PSY  Psychology  3  Current theories and experimental findings examining the situational and social causes underlying people's attitudes, beliefs, and behaviors.  GR  LE  Lecture
Fall 2020  AFS4010  4010  Senior Research Project  AFS  Afr /Afr Amer Studies  3  Two-semester research project focusing on one specific aspect of African or African American life.  UG  IN  Internship
Fall 2020  HIST2200  2200  Seminar in Ancient Hist  HST  History  3  Examines selected problems in Greek or Roman history to the death of Constantine in A.D. 337. Topics vary.  GR  SE  Seminar
Fall 2020  EBE6620  6620  Digital Circuit Design  EE  Electrical Engineering  3  Digital design, 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 buses will be used in lab portion of the course. Topics include registers, counters, memory devices, register-level design, microcomputer system organization. Students must show competency in the design of digital systems.  GR  LE  Lecture
Fall 2020  RBH4070  4070  Print of Rehab Counseling  RBH  Rehabilitation  3  Focuses on the development of basic skills and attitudes associated with rehabilitation counseling. Interview style and format are examined along with listening and responding techniques associated with holistic approaches.  UG  LL  Lecture/Lab Combination
Fall 2020  DAN1310  1310  Intermediate Jazz I  DAN  Dance  2  First-year intermediate jazz dance technique. Emphasis on technical proficiency and versatility and the development of intricate rhythms, syncopation, coordination, musicality, and variation of style. Focuses on increasing body strength, flexibility, and kinesiethic awareness.  UG  ST  Studio
Fall 2020  CS2210  2210  Logic for Comp Scientist  CS  Computer Science  3  Fundamental material in foundations of logic most relevant to Computer Science. Propositional logic, predicate logic, modeling of knowledge, and algorithms for logical reasoning.  UG  LE  Lecture
Fall 2020  EE3260  3260  Random Signals and Noise  EE  Electrical Engineering  3  Practical introduction to 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.  UG  LE  Lecture
Fall 2020  ATH6100  6100  Spec Topics-Cultural ATH  ATH  Anthropology  3  Intensive study of selected topics in graduate-level cultural anthropology. Topics vary.  GR  LE  Lecture
Fall 2020  MKT3500  3500  Mitt Bach Decision Making  MKT  Marketing  3  Provides the process and techniques of marketing research. Formulation of projects and evaluation of research results. Basic skills needed to become a practicing marketing researcher.  UG  LE  Lecture
Fall 2020  
EE4800L  4800L  Special Topics in EE Lab  EE  Electrical Engineering  1  
Special topics in electrical engineering lab.  UG  LB  Lab

Fall 2020  
BI04840  4840  Biogeography  BIO  Biology  3  
Introduction to the factors affecting the distribution of plants and animals.  UG  LE  Lecture

Fall 2020  
TH1060  1060  Music Theory for Actors  TH  Theatre  2  
Introduction to the basics of rhythm, melody, sight-reading, and musical theatre piano in a group class.  UG  LL  Lecture/Lab Combination

Fall 2020  
BMS7315  7315  Ergonomic Engineering  BMS  Biomedical Sciences  3  
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  
KRBH1700A  1700A  Tai Chi  KNH  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  
BD06540  6540  Amazon Expedition  BIO  Biology  4  
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 Combination

Fall 2020  
FIN2210  2210  Financial Management I  FIN  Finance  3  
Introduction to 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  4420  Ctr 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  3260  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 equation are also solved numerically. -b) Department Managed Prerequisite(s): (Undergraduate level CS 1140 Minimum Grade of D or Undergraduate level CS 1180 Minimum Grade of D or 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 2530 Minimum Grade of D+)-b-

Fall 2020  
ISG7500  7500  Spec Studies in Gftd Ed  ISG  Intervention Specialist  1  
Independent Study in a selected area of intervention specialist gifted education  GR  IN  Internship

Fall 2020  
CHM4020L  4020L  Environmental Chemistry Lab  CHM  Chemistry  0  
Required laboratory for CHM 4020.  UG  LB  Lab

Fall 2020  
MTH2530  2530  Elementary Linear Alg  MTH  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  4711L  Optimization Methods Lab  ISE  Industrial & Systems Eng  0  
Required laboratory for ISE 4711.  UG  LE  Lecture

Fall 2020  
ENG6770  6770  ESL: Pre-K-12  ENG  English  3  
Focuses on ESL education in the U.S. and Ohio. Examines historical and legal precepts. Emphasizes components necessary for successful programs, including curricula, assessment, classroom dynamics, and parental involvement. -b) Department Managed Prerequisite(s): (Undergraduate level ENG 3400 Minimum Grade of D or Undergraduate level ENG 4710 Minimum Grade of D or Undergraduate level ENG 6710 Minimum Grade of D+)-b-

Fall 2020  
TH3280  3280  Decorative Style: Ages  TH  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  7380  Cloud Computing  CEG  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). -b) Department Managed Prerequisite(s): Undergraduate level CEG 5100 Minimum Grade of D or Undergraduate level CEG 6530 Minimum Grade of D+)-b-

Fall 2020  
CHM4680H  4680  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.  UG  PKG  Combination

Fall 2020  
MUE2990  2990  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 Combination

Fall 2020  
DAN4040  4040  Music Theatre Dance III  DAN  Dance  3  
Advanced group classes applying Ballet, Jazz and Modern Dance techniques to Musical Theatre Dance.  UG  ST  Studio

Fall 2020  
CRT1030  1030  Corr Management  CTR  Corrections  3  
Trends and developments in modern correctional management.  UG  LE  Lecture

Fall 2020  
HST7800  7800  Adv Prob Archival Work  HST  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  
URS3450  3450  Public Administration  URS  Urban Affairs  1  
Nature and scope of public administration, administrative law, and public interest in the administrative process.  UG  LE  Lecture

Fall 2020  
BMS8630  8630  Prin Biomedical Research  BMS  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.  GR  LE  Lecture

Fall 2020  
BMS9960  9960  Laboratory Rotation I  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.  GR  LB  Lab

Fall 2020  
HPR2120  2120  Adapted Phys Education  HPR  Health Phys 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 Combination

Fall 2020  
EES3250  3250  Climate Change  EES  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  EC5700  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 scarcity, 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 Practices 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  STT1860  8660  Ind Read Stat and Prob  STT  Statistics  3  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  EE5650L  6560L  Intro Robotics Lab  EE  Electrical Engineering  1  Laboratory supporting EE 6560. Students will experience hands on learning in lab environment.  GR  LB  Lab
Fall 2020  EE54610  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 electromagnetism. 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.  UG  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  DAN  Dance  1  Problems, approaches, and topics in the field of dance. Topics vary.  UG  LL  Lecture/Lab Combination
Fall 2020  SPN6310  6310  Semi in Spanish Lit  SPN  Spanish  3  Intensive study of selected topics in peninsular literature. Background lectures, oral reports, and discussions. Titles 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  LB  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.  UG  LL  Lecture/Lab Combination
Fall 2020  EDL5740  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  Facutly-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  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.  UG  LE  Lecture
Fall 2020  PLS4080  4080  Radical 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.  UG  LE  Lecture
Fall 2020  MKT7560  7560  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  LB  Lab
Fall 2020  CS7600  7660  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  ECE4210  4210  ECE Intern Pt I: Methods  ECE  Education - Early Childhood 1  Candidates, mentored by an early childhood educator, assume additional responsibilities in planning, organizing, delivering, and assessing instruction in a 1st-3rd grade setting applying pedagogical content knowledge from early childhood methods courses.  UG  PR  Practicum

Fall 2020  SPN6500  6500  Grad Research in Sp  SPN  Spanish 1  Topics vary.  GR  IS  Independent Study

Fall 2020  SPN7010  7010  Current Issues Amer Sp  SPM  Sports Management 3  This course identifies and analyzes the current issues affecting American sports. Emphasis is placed on how these issues and trends affect sport administration, coaches, and fans.  GR  SE  Seminar

Fall 2020  ART4170  4170  Adv Stud Non-Western Art  ART  Art 3  Intensive studies of periods, major movements, and artists in non-Western art.  UG  LE  Lecture

Fall 2020  CEG4242  4424  Security Attacks and Defenses  CEG  Computer Engineering 3  Introduction to attacks and their defenses. Reconciliation, penetration, denial of service, and covert channels. Topics include privilege escalation, hijacking, trusted booting, packet filtration, protocol scrubbing and honeypots.  UG  LE  Lecture

Fall 2020  PSS9972  9972  Practicum II  PSI  Professional Psychology 1  Field experience supervised by a licensed psychologist.  GR  IS  Independent Study

Fall 2020  ECE4100  4100  Science Methods in ECE  ECE  Education - Early Childhood 3  Curricula and materials for teaching early childhood science with emphasis on using an integrated constructivist approach to science teaching. Includes development of appropriate learning strategies, planning, implementation, evaluation, and trends in science education.  UG  LE  Lecture

Fall 2020  ECE3200  3200  Soc Stud Methods in ECE  ECE  Education - Early Childhood 3  Principles, resources, technology, critical thinking skills, and social science research for early childhood social studies, as well as the teaching of U.S. and Ohio history.  UG  LE  Lecture

Fall 2020  NUR6901  6901  School Nursing  NUR  Nursing 2  Roles and responsibilities of school nurses. Care of children in schools. Art, principles and strategies of promoting health in schools. Emphasis on preparation to assume role of school nurse.  GR  LE  Lecture

Fall 2020  ATH2100L  2100L  Lab in Biological Anthro  ATH  Anthropology 0  Laboratory exercises to accompany ATH 2100, Introduction to Biological Anthropology.  UG LB  Lab

Fall 2020  BIS04560  4560  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.  UG LE  Lecture

Fall 2020  PSY8780  8780  Organizational Theory  PSY  Psychology 2  Seminar with in-depth coverage of organizational theory.  GR SE  Seminar

Fall 2020  APS54010  4010  APS Legal Issues  APS  Applied Studies 3  A course to provide opportunities for students to gain knowledge, practice, and study in legal issues of applied business operations. Focus on fundamentals such as the legal systems, regulations, tort law, negligence, liability, contracts, insurance, and labor law, etc. as they apply to business and organizational settings.  UG LE  Lecture

Fall 2020  EC2900  2900  Global Econ Bus Social  EC  Economics 3  Analyzes diversity and controversy of opinions regarding global economic, business, and social issues, including social security, health care, poverty, labor discrimination, pollution, and business ethics. Integrated Writing course.  UG LE  Lecture

Fall 2020  EE6210L  6210L  Digital Comm Lab  EE  Electrical Engineering 1  Laboratory supporting EE 6210. Students will experience hands on learning in lab environment.  GR LB  Lab

Fall 2020  EEB6530L  6530L  Exercise Physiology Lab  EEB  Exercise Biology 0  Required laboratory for EBO 4430.  GR LB  Lab

Fall 2020  EC3510  3510  Labor Economics  EC  Economics 3  A study of labor market behavior and wage determination, addressing the impact of new technologies, global competition, and deindustrialization on American labor markets.  UG LE  Lecture

Fall 2020  MAMET26  7260  Immunology  M&I  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.  GR LE Lecture/Recitation Combination

Fall 2020  EGR2980  2980  Special Topics in EGR  EGR  Engineering 1  Special topics in Engineering and Computer Science.  UG LE  Lecture

Fall 2020  STT4260  4260  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.  UG LE  Lecture

Fall 2020  ME7400  7400  Hyperbolic Flows  ME  Mechanical and Materials Eng 3  Hyperbolic flow is studied from the viewpoint of its unique fluid dynamic attributes with emphasis on classic inviscid theories, chemical kinetics, and state-of-the-art development<. Department Managed Prerequisite(s): Undergraduate level ME 4330 Minimum Grade of D or Graduate level ME 6330 Minimum Grade of D or>

Fall 2020  PHY4320  4320  Lasers  PHY  Physics 3  Introductions to the physics of lasers including emission and absorption processes in lasers, the factors controlling laser gain, the properties of optical resonators, and a survey of salient features for principal types of lasers.  UG LE  Lecture

Fall 2020  MUS3310L  3310L  Adv Orch Cord Lab  MUS  Music 1  Builds upon the previously gained conducting experiences and knowledge.  GR LL  Lecture/Lab Combination

Fall 2020  MT2720  7270  Pathogenic Microbiology  MI  Microbiology & Immunology 4  (Also listed as BMS 8030) Microorganisms pathogenic for humans and animals using the organism 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 used.  GR LE Lecture/Recitation Combination

Fall 2020  MPJ3820  3820  Advanced MP Prod 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 free-lance motion pictures marketplace.  UG LL Lecture/Lab Combination

Fall 2020  COM1040  1040  Intro to Human Com  COM  Communication 3  Surveys major concepts, theories, and research approaches in the study of human communication. Assists students in developing an understanding of the foundation of communication theory in preparation for advanced study.  UG LE  Lecture

Fall 2020  PHY2410R  2410R  General Physics II Rec  PHY  Physics 0  Required recitation for PHY 2410.  UG RE  Recitation

Fall 2020  SW6990  6990  Independent Study SW  SW  Social Work 1  Independent research on social work topic.  GR IS  Independent Study

Fall 2020  MKT7050  7050  Consumer Behavior  MKT  Marketing 3  The fundamental goal of this course is to help students develop a strategic perspective for understanding and applying the psychological and sociological aspects of both industrial and consumer buyer behavior. Psychological, societal, and cultural influences on consumer decisions are examined. Marketing strategies implications of conceptual constructs are discussed.  GR LE  Lecture

Fall 2020  FAS2700  2700  Intro Int Pest Manage  FAS  Food and Agricultural Systems 3  Identification and management of diseases, insects, and weeds in crop production systems. Topics include pesticide safety, pesticide characteristics, pesticide handling, environmental stewardship, application methods, equipment calibration, laws and regulations, pest monitoring, and pest identification.  UG LL Lecture/Lab Combination

Fall 2020  CTE6450  6450  Essentials of CTE  CTE  Career and Technical Education 3  Explores a historical timeline from vocational apprentice to CTE, federal legislation, legal issues, special need, professional and student organizations, current issues, and the philosophy of CTE.  GR LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Title</th>
<th>Department</th>
<th>Instructor</th>
<th>Minimum Grade of D or Undergraduate level</th>
<th>Minimum Total Credit Hours</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB4820</td>
<td>4820</td>
<td>Int'l Business Abroad</td>
<td>IB</td>
<td>International Business</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>CS3970</td>
<td>3970</td>
<td>Independent Study</td>
<td>CS</td>
<td>Computer Science</td>
<td>1</td>
<td>Fall 2020</td>
<td>Independent study in computer science.</td>
</tr>
<tr>
<td>ENG2050</td>
<td>2050</td>
<td>African-American Lit</td>
<td>ENG</td>
<td>English</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>ED7500</td>
<td>7500</td>
<td>Literacy Assess and Eval</td>
<td>ED</td>
<td>Education</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
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<tr>
<td>ED5611</td>
<td>6110</td>
<td>SS Content Stands IS</td>
<td>EDS</td>
<td>Education</td>
<td>3</td>
<td>Fall 2020</td>
<td>Introduction to Ohio Department of Education K through 12th grade social studies content standards. Addresses social studies knowledge, pedagogy, and PRAXIS exam expectations.</td>
</tr>
<tr>
<td>ME4620</td>
<td>4620</td>
<td>Mech and Mat Test Lab</td>
<td>ME</td>
<td>Mechanical and Materials</td>
<td>2</td>
<td>Fall 2020</td>
<td>Introduces experimental methods needed to perform mechanical testing and the impact of microstructure on the mechanical properties of materials. Material lab reports. Department Managed Pre-requisite(s): Undergraduate level ME 2750 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of D and Undergraduate level ME 3600 Minimum Grade of D=3.</td>
</tr>
<tr>
<td>SPN3550</td>
<td>3550</td>
<td>SPN Serv Learning Abroad</td>
<td>SPN</td>
<td>Spanish</td>
<td>3</td>
<td>Fall 2020</td>
<td>Students engage in an international service learning project in teaching, translation or interpreting in a Hispanic country. Must be enrolled in a Wright State sponsored Ambassador Program to a Spanish-speaking country, such as Mexico, Puerto Rico, Spain. Department Managed Pre-requisite(s): Undergraduate level SPN 2020 Minimum Grade of D=3.</td>
</tr>
<tr>
<td>FR3500</td>
<td>3500</td>
<td>French Ambassador Prog</td>
<td>FR</td>
<td>French</td>
<td>3</td>
<td>Fall 2020</td>
<td>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. Department Managed Pre-requisite(s): Undergraduate level FR 2020 Minimum Grade of D=3.</td>
</tr>
<tr>
<td>TH3190</td>
<td>3190</td>
<td>Stage Lighting II</td>
<td>TH</td>
<td>Theatre</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>EES3000</td>
<td>6000</td>
<td>Environ Apps of GIS</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
<td>4</td>
<td>Fall 2020</td>
<td>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's ArcGIS is used for hands-on exercises and an independent mapping project with comprehensive coverage. Three hours lecture and two hours lab are combined.</td>
</tr>
<tr>
<td>ED56630</td>
<td>6630</td>
<td>Intro Aat Tech/Aug Comm</td>
<td>EDS</td>
<td>Education</td>
<td>3</td>
<td>Fall 2020</td>
<td>Assessment, use, and application of adaptive technology for persons with exceptionalities in all educational settings. Emphasis on experiences required with adaptive/augmentative aids/devices.</td>
</tr>
<tr>
<td>PN6100</td>
<td>6100</td>
<td>Human Physiology</td>
<td>PN</td>
<td>Physiology &amp; Neuroscience</td>
<td>4</td>
<td>Fall 2020</td>
<td>An overview of human/mammalian organ physiology. Fundamental mechanisms and the experimental basis for current understanding is emphasized. Pre-requisite: Introductory biology, chemistry, physics, or permission of instructor.</td>
</tr>
<tr>
<td>IB4770</td>
<td>4770</td>
<td>Indep Study/Intr Bus</td>
<td>IB</td>
<td>International Business</td>
<td>1</td>
<td>Fall 2020</td>
<td>Individualized program of study, agreed to between sponsoring faculty member and student and approved by the department chair.</td>
</tr>
<tr>
<td>SL3000</td>
<td>3000</td>
<td>Ethics &amp; Laws in Interp</td>
<td>SLI</td>
<td>Sign Language Interpreting</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>DAN1120</td>
<td>1120</td>
<td>Modern Dance I</td>
<td>DAN</td>
<td>Dance</td>
<td>3</td>
<td>Fall 2020</td>
<td>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>
</tr>
<tr>
<td>PSY6610</td>
<td>6610</td>
<td>Human-Comp Interface Cap</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>Fall 2020</td>
<td>Communication intensive seminar integrating knowledge on human-computer interface issues.</td>
</tr>
<tr>
<td>ISE3940</td>
<td>3940</td>
<td>Indus &amp; Sys Eng Intr I</td>
<td>ISE</td>
<td>Industrial &amp; Systems Eng</td>
<td>1</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>EES3620</td>
<td>3620</td>
<td>General Environ Health</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>PSY4270</td>
<td>4270</td>
<td>Cop Neuro Capsone</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>ED6990</td>
<td>6990</td>
<td>AYA/MA Capsone Project</td>
<td>ED</td>
<td>Education</td>
<td>1</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>IT2550</td>
<td>2550</td>
<td>Emerging Software Tech</td>
<td>IT</td>
<td>Information Technology</td>
<td>3</td>
<td>Fall 2020</td>
<td>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.</td>
</tr>
<tr>
<td>CHI4030</td>
<td>4030</td>
<td>Multimedia Chinese</td>
<td>CHI</td>
<td>Chinese</td>
<td>3</td>
<td>Fall 2020</td>
<td>Advanced Chinese language learning by exploration of cultural products in a variety of media and authentic online materials. Taught in Chinese. Department Managed Pre-requisite(s): Undergraduate level CHI 3020 Minimum Grade of D or Undergraduate level CHI 3110 Minimum Grade of D=3.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Title</td>
<td>Year</td>
<td>Semester</td>
<td>Credits</td>
<td>Description</td>
<td>Prerequisites</td>
<td></td>
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<tr>
<td>EE5000</td>
<td>Solid State EE Materials</td>
<td>Fall 2020</td>
<td>5000</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>EES4500</td>
<td>Carbonate Sediment-Petro</td>
<td>Fall 2020</td>
<td>4500</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
<td>4</td>
<td>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 carbonates facies.</td>
</tr>
<tr>
<td>EDT7230</td>
<td>SLM Resources for VA</td>
<td>Fall 2020</td>
<td>7230</td>
<td>EDT</td>
<td>Educational Technology</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>PL56900</td>
<td>Independent Reading</td>
<td>Fall 2020</td>
<td>6000</td>
<td>PLS</td>
<td>Political Science</td>
<td>1</td>
<td>Supervised individual readings on select topics.</td>
</tr>
<tr>
<td>MLL330</td>
<td>Russian Lit in Translation</td>
<td>Fall 2020</td>
<td>3300</td>
<td>ML</td>
<td>Modern Languages</td>
<td>3</td>
<td>Selected works of foreign literature studied in English translation. Russian literature.</td>
</tr>
<tr>
<td>PSY2410</td>
<td>Childhood &amp; Adolescence</td>
<td>Fall 2020</td>
<td>2410</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>PHY1120L</td>
<td>Physics Lab II</td>
<td>Fall 2020</td>
<td>1120L</td>
<td>PHY</td>
<td>Physics</td>
<td>1</td>
<td>Introductory-level laboratory problems.</td>
</tr>
<tr>
<td>EDT7240</td>
<td>Teach 21st Century Skill</td>
<td>Fall 2020</td>
<td>7240</td>
<td>EDT</td>
<td>Educational Technology</td>
<td>4</td>
<td>Teaching 21st century skills, collaborating with classroom teachers, standards alignment, and evidence-based practice. Includes field experience.</td>
</tr>
<tr>
<td>EED3400</td>
<td>Classroom Management P-5</td>
<td>Fall 2020</td>
<td>3400</td>
<td>EED</td>
<td>Elementary Education P-5</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>PLS4450</td>
<td>Adv-Criminal Investig</td>
<td>Fall 2020</td>
<td>4450</td>
<td>PLS</td>
<td>Political Science</td>
<td>3</td>
<td>Criminal investigative techniques including forensics, evidence, interviews, and interrogation as applied to specific types of crimes. Integrated Writing course.</td>
</tr>
<tr>
<td>ED7820</td>
<td>Literacy Inquiry Project</td>
<td>Fall 2020</td>
<td>7820</td>
<td>ED</td>
<td>Education</td>
<td>1</td>
<td>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 involve supervision.</td>
</tr>
<tr>
<td>URS4340</td>
<td>Fundraising/Grantwriting</td>
<td>Fall 2020</td>
<td>4340</td>
<td>URS</td>
<td>Urban Affairs</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>CS3180</td>
<td>Comparative Languages</td>
<td>Fall 2020</td>
<td>3180</td>
<td>CS</td>
<td>Computer Science</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>SW4740</td>
<td>Child Welfare II</td>
<td>Fall 2020</td>
<td>4740</td>
<td>SW</td>
<td>Social Work</td>
<td>3</td>
<td>Addresses the developmental and permanence needs of children in the child welfare system.</td>
</tr>
<tr>
<td>WGS3050</td>
<td>Topics Sexuality Studies</td>
<td>Fall 2020</td>
<td>3050</td>
<td>WGS</td>
<td>Women, Gender, and Sexuality</td>
<td>3</td>
<td>Issues, approaches, and topics in the field of sexuality studies. Titles and topics vary.</td>
</tr>
<tr>
<td>CNL6650</td>
<td>Practicum</td>
<td>Fall 2020</td>
<td>8650</td>
<td>CNL</td>
<td>Counseling</td>
<td>3</td>
<td>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. &lt;b&gt;Department-managed prerequisite(s):&lt;/b&gt; 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 6220 Minimum Grade of B and Graduate level CNL 7220 Minimum Grade of B and Graduate level CNL 7290 Minimum Grade of B and Graduate level CNL 7280 Minimum Grade of B and Graduate level CNL 7230 Minimum Grade of B.</td>
</tr>
<tr>
<td>EDL9970</td>
<td>Dist Lc/Lic Prog Exit</td>
<td>Fall 2020</td>
<td>9970</td>
<td>EDL</td>
<td>Educational Leadership</td>
<td>1</td>
<td>Focusing on understanding current district-level leadership concepts, topics, and issues within the context of the school organization.</td>
</tr>
<tr>
<td>IT2180</td>
<td>Found of Electronic Prod</td>
<td>Fall 2020</td>
<td>2180</td>
<td>IT</td>
<td>Information Technology</td>
<td>3</td>
<td>Streamlined processes for delivering electronic content. Topics include Mucs vs PCs, color depth, advantages and disadvantages of types of printers, magnetic and optical storage systems.</td>
</tr>
<tr>
<td>SOC6320</td>
<td>Neighborhoods &amp; Contr.</td>
<td>Fall 2020</td>
<td>6320</td>
<td>SOC</td>
<td>Sociology</td>
<td>3</td>
<td>Theoretical, methodological, and substantive issues related to neighborhoods and communities in social life. Emphasis on residential differentiation, segregation, neighborhood change, and neighborhood effects.</td>
</tr>
<tr>
<td>ME6300</td>
<td>Compressible Fluid Flow</td>
<td>Fall 2020</td>
<td>6300</td>
<td>ME</td>
<td>Mechanical and Materials Eng</td>
<td>3</td>
<td>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. &lt;b&gt;Department Managed Prerequisite(s):&lt;/b&gt; Undergraduate level ME 3350 Minimum Grade of D or Undergraduate level ME 5350 Minimum Grade of D.</td>
</tr>
<tr>
<td>TH5450</td>
<td>Speech II</td>
<td>Fall 2020</td>
<td>3540</td>
<td>TH</td>
<td>Theatre</td>
<td>2</td>
<td>Techniques in voice and speech to strengthen and expand the student's instrument and skills. Applications made to specified acting texts.</td>
</tr>
<tr>
<td>CHH3460</td>
<td>Concepts Chem II MCE</td>
<td>Fall 2020</td>
<td>3460</td>
<td>CHH</td>
<td>Chemistry</td>
<td>4</td>
<td>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>
</tr>
<tr>
<td>SPN3110</td>
<td>Spanish Conversation I</td>
<td>Fall 2020</td>
<td>5110</td>
<td>SPN</td>
<td>Spanish</td>
<td>3</td>
<td>Practice in the oral use of Spanish emphasizing the culture of the Hispanic world.</td>
</tr>
<tr>
<td>ATH4000</td>
<td>Political Anthropology</td>
<td>Fall 2020</td>
<td>4000</td>
<td>ATH</td>
<td>Anthropology</td>
<td>3</td>
<td>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>
</tr>
<tr>
<td>GER5820</td>
<td>Applied Elem Ger Instr</td>
<td>Fall 2020</td>
<td>5820</td>
<td>GER</td>
<td>German</td>
<td>1</td>
<td>Observe elementary classes and practice teaching mini-lessons.</td>
</tr>
<tr>
<td>PSY6300</td>
<td>Abnormal Psych Cap</td>
<td>Fall 2020</td>
<td>6300</td>
<td>PSY</td>
<td>Psychology</td>
<td>3</td>
<td>Writing and oral communication intensive seminar integrating knowledge on select topics within Abnormal Psychology. Topic will vary.</td>
</tr>
</tbody>
</table>
Fall 2020
PSY1010 1010  Intro to Psychology  PSY  Psychology 4  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.

Fall 2020
PLS4740 4740  Politics Women Terrorist  PLS  Political Science 3  Examines the violent and political behavior of women in terrorism, including ideology, gender, and case studies. Integrated Writing course.

Fall 2020
ME3750 3750  Thermo of Materials  ME  Mechanical and Materials Eng 3  Application of classical thermodynamics to engineering materials. Heats of formation and reaction; behavior of solutions; free energy concepts; thermodynamic fundamentals of phase equilibria.<br>Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of C-<br>

Fall 2020
MUS2620 2620  German Diction  MUS  Music 2  For students of singing. Application of the International Phonetic Alphabet to German. Includes intensive readings of song lyrics. Integrated Writing course.

Fall 2020
PHY4500 4500  Electricity Magnetism I  PHY  Physics 3  Fundamental laws of electricity and magnetism from viewpoint of fields. Review of vector analysis; electrostatics; special techniques in electrostatics; magnetostatics; and material properties. Integrated Writing course.

Fall 2020
ENG2040 2040  Great Books: Literature  ENG  English 3  Introduction to interpreting literature, using works from various periods and cultures, viewed in their social and historical contexts and read for their enduring interest. Integrated Writing course.

Fall 2020
EE4620L 4620L  Dig Integ Ckt Design Lab  EE  Electrical Engineering 1  Realizations, testing and evaluation of digital integrated circuits with particular emphasis on programmable logic devices.<br>Department Managed Prerequisite(s): Undergraduate level EE 2000 Minimum Grade of C and Undergraduate level EE 2000H, Minimum Grade of C and Undergraduate level EE 3210 Minimum Grade of C or Undergraduate level CEG 3320 Minimum Grade of D<br>

Fall 2020
LDR7030 7030  Bldg Leadership Capacity  LDR  Leadership 3  Students will explore leadership capacity from assessment through development and its alignment with leadership competencies. This course has a fee that is non-refundable once the term begins.

Fall 2020
PSY4440 4440  Work Stress Capstone  PSY  Psychology 3  Communication-intensive seminar integrating knowledge on work stress. Integrated Writing course.

Fall 2020
STT6210 6210  Sampling Design  STT  Statistics 3  Classical sampling designs including simple random sampling, stratified sampling, multi-stage sampling, cluster sampling, and systematic sampling. Using auxiliary information and ratio estimators. Unequal probability sampling, detectability and line transect methods; composite and ranked-set sampling.<br>Department Managed Prerequisite(s): Graduate level STT 6610 Minimum Grade of D<br>

Fall 2020
ART5110 5110  Nineteenth Century Art  ART  Art 3  General surveys and intensive studies of the period, major movements, and artists of the time. Titles vary.

Fall 2020
ME3400L 3400L  Exp. Mms. and Inst. Lab  ME  Mechanical and Materials Eng 0  Required laboratory for ME 3600. Integrated Writing course.

Fall 2020
ED6050 6050  Lit Amt & Int: Intr Spec  ED  Education 3  Utilizing a range of literacy assessment instruments to assess student reading and writing performance and to determine best practices interventions in order to meet student needs.

Fall 2020
SPN5310 5310  Survey of Spanish Lit  SPN  Spanish 3  Historical survey of Spanish literature from the Middle Ages to the present.

Fall 2020
ME3120 3120  Mechanics of Materials  ME  Mechanical and Materials Eng 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.<br>Department Managed Prerequisite(s): Undergraduate level ME 2120 Minimum Grade of C and Undergraduate level ME 1020 Minimum Grade of D and Undergraduate level CEG 2170 Minimum Grade of D or Undergraduate level CEG 2170 Minimum Grade of D or Undergraduate level CEG 3320 Minimum Grade of D or Undergraduate level CEG 3320 Minimum Grade of D<br>

Fall 2020
ABS7603 7603  Sem C Jssrs & Policy  ABS  Applied Behavioral Science 1  In-depth coverage of special topics in applied behavioral science/criminal justice with an emphasis on specific criminal justice issues and policies. Topics vary. 1-2 credit hours.

Fall 2020
ED56650 6650  Transitions Stu w/Except  EDS  Education - Special Education 3  Role of intervention specialists in shaping transition for students with exceptionalities; Focus on high school/adult transition with consideration of transitions at earlier levels. Ten hours field experience with student age 14-22 required.

Fall 2020
MB4440 4440  Sem Topics - MI  MI  Microbiology & Immunology 2  Molecular virology, viral oncology, immunology, transplantation immunology, tumor immunology, immune regulation, infection and immunity.

Fall 2020
EC4700 4700  Cost-Benefit Analysis  EC  Economics 3  Measurement of benefits and costs of both public and private projects with significant public implications. Includes conceptual issues and focuses on practical application, including specific cost-benefit studies.<br>Department Managed Prerequisite(s): Graduate level EC 5099 Minimum Grade of D and Graduate level EC 5210 Minimum Grade of D and Graduate level EC 5220 Minimum Grade of D or Graduate level ME 5220 Minimum Grade of D<br>

Fall 2020
CS6240 6240  Coding Theory  CS  Computer Science 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 code, Self-dual codes, weight enumerators and bounds.<br>Department Managed Prerequisite(s): Undergraduate level MTH 2510 Minimum Grade of D or<br>

Fall 2020
ENG1820 1820  Intro to Poetry Writing  ENG  English 3  Fundamentals of poetry writing; practice in traditional and contemporary concepts of poetic form; reading and discussion of a wide spectrum of traditional and modern poetry; and group discussions of student's poems.

Fall 2020
EE7400 7400  Information Theory  EE  Electrical Engineering 3  Development of communication channel model and use of information theory as means of quantifying that model. Investigation of various error correcting and detecting codes. The popular Viterbi coding algorithm is also covered.<br>Department Managed Prerequisite(s): Undergraduate level EE 3260 Minimum Grade of D

Fall 2020
PSY4120 4120  Applied Sports Psy Cap  PSY  Psychology 3  Communication-intensive seminar integrating knowledge within sports psychology. Integrated Writing course.

Fall 2020
LEP0210 0210  Grammar - Level 2  LEP  LEAP 0  Grammar for low-intermediate/intermediate ESL students. This course has a fee that is non-refundable once the term begins.

Fall 2020
FR5310 5310  Survey of French Lit  FR  French 3  Middle Ages to the present. An overview of trends, thoughts and style. Taught in French.

Fall 2020
FIN4210 4210  Financial Management III  FIN  Finance 3  Applies financial concepts and analytical techniques to financial decision making. Extensive use of cases.

Fall 2020
AES2210 2210  Evolution of USAF I  AES  Aerospace Studies 1  Air Force heritage and leaders; air and space power; communication skills. Leadership lab and two physical training sessions required per week.

Fall 2020
PLS4720 4720  Terrorism and Counterterrorism  PLS  Political Science 3  Surveys the phenomenon of terrorism: who employs it, how and why it occurs in international politics, and how states respond to terrorism. Integrated Writing course.
Fall 2020  
URS4210  4210  Pubic Leadership Change  URS  Urban Affairs  3  Examine leadership role of the public and nonprofit administrators in formulating programs, policies, and service delivery options. Explore topics such as managing internal and external environments, improving productivity and effectiveness, policy/program creation, and the dynamics of change.  
Fall 2020  
BHE6510  6510  Comp Appl in BIE  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 interfaces). -<b>Department Managed Prerequisite(s): Undergraduate level ISE 3340 Minimum Grade of D and (Undergraduate level ISE 4711 Minimum Grade of D or Graduate level BIE 6711 Minimum Grade of C)</b>  
Fall 2020  
BIO3450  3450  Concepts Bio I ECE/MCE  BIO  Biology  4  Introduces 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.  
Fall 2020  
AIS4330  4330  Prep for Active Duty II  AES  Aerospace Studies  3  Overview of the complex social and political issues facing the military profession.  
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.  
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.  
Fall 2020  
PTX2010  2010  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.  
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 learnence 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.  
Fall 2020  
PPH4990  4990  Undergraduate Research  PPH  Population & Public Health  1  Undergraduate biomedica 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.  
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.  
Fall 2020  
THI430  430  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.  
Fall 2020  
M&I8990  8990  Microbiology Research  M&I  Microbiology & Immunology  2  Supervised thesis research.  
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.<b> Department Managed Prerequisite(s): Undergraduate level WGS 3600 Minimum Grade of C</b>  
Fall 2020  
MIB6990  6990  Special Problems in MI  MI  Microbiology & Immunology  2  Study of the physiological and biochemical processes unique to microorganisms and the host response to microbes.  
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.  
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.<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</b>  
Fall 2020  
MTH7320  7320  Real Analysis II  MTH  Mathematics  4  Hilbert spaces, Riesz representation theorem, orthonormal bases. Banach spaces, dual spaces, weak convergence. Boundled linear operators, adjoint operators, compact operators. Applications.<b> Department Managed Prerequisite(s): Graduate level MTH 7310 Minimum Grade of D</b>  
Fall 2020  
HED3850  3850  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.  
Fall 2020  
EES4200L  4200L  Micropaleontology Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 4200. Integrated Writing course.  
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.<b> Department Managed Prerequisite(s): Undergraduate level CEG 2170 Minimum Grade of D or Undergraduate level ISE 3540 Minimum Grade of D</b>
Fall 2020
UG  LE  Lecture

Fall 2020
CS1161  1161  Intro to Comp Prog II  CS  Computer Science  4  Introduction to advanced programming concepts and techniques. Emphasis on object-oriented programming and graphical user interfaces.  Department Managed Prerequisite(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 Undergraduate level WSU Math Placement 04) or equivalent.  LR
UG  LL  Lecture/Lab Combination

Fall 2020
GR  LE  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.  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  Sec 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.  Presents 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
ISE3212  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.  Department Managed Prerequisite(s): Graduate level PSY 8620 Minimum Grade of D or equivalent.
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.
UG  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
EES6410  6410  Phy 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 4 one-day thematic field trips.
GR  LL  Lecture/Lab Combination

Fall 2020
SOC6670  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

Fall 2020
REL1370  1370  Prophets and History  REL  Religion  3  Historical context of Biblical prophecies.  GR  LE  Lecture

Fall 2020
UG  LL  Lecture/Lab Combination

Fall 2020
APS3030  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.
UG  LE  Lecture

Fall 2020
UG  LE  Lecture

Fall 2020
BMS8750  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 Wkgrp 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 & Apply  EDS  Education - Special Education  3  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 bioinformatics in the statistical software package R.
GR  LE  Lecture

Fall 2020
MGT3110  3110  Bus Ethics & Ld Dev  MGT  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 of variability, 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  6980  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

NUR3005  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 elecromechanical systems. <b>Department Managed Prerequisite(s): Undergraduate level EE 4150 Minimum Grade of D and Undergraduate level EE 4350L Minimum Grade of D</b>  UG  LB  Lab

Fall 2020

BME4460  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 covers nano-materials to bring out the unique properties of nanotechnology in nanomedicine. Cutting-edge nanotechnological tools for sensing and imaging, drug delivery, and therapeutic applications will be addressed. <b>Department Managed Prerequisite(s): Undergraduate level BME 4440 Minimum Grade of C- or Graduate level BME 6440 Minimum Grade of C</b> and <b>Undergraduate level ANT 2120 Minimum Grade of D or Undergraduate level ANT 3120 Minimum Grade of D or Graduate level ANT 3120 Minimum Grade of D</b>  GR  LE  Lecture

Fall 2020

SNL7520  7520  Coll Mental HHl Prac/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

EDS6707  5707  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

PSN9580  9580  Directed Study  PSI  Professional Psychology  1  Individualized course of readings completed under faculty supervision.  GR  IS  Independent Study

Fall 2020

EDL9910  9910  Dist Lic/Lic Prac/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  SE  Seminar

Fall 2020

SW6220  6220  SW Practice 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. <b>Department Managed Prerequisite(s): Graduate level SW 6210 Minimum Grade of D</b>  GR  LE  Lecture

Fall 2020

ATH6030  6030  Urban Anthropology  ATH  Anthropology  3  Explores the nature of city, confronting basic questions, such as: to what extent does the urbanite 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

BIO3450  3450  Concepts in Bio 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.  GR  LL  Lecture/Lab Combination

Fall 2020

ED6703  6703  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

ED6503  6503  Learners 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 undergraduates 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

ASL3020  3020  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

KIH3340  3340  Judo  KIH  Kinesiology & Health  1  Fundamental skills and knowledge of Judo. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Department</th>
<th>Type</th>
<th>Credit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEG1900</td>
<td>Internship</td>
<td>CEG</td>
<td>Internship</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>CEG4230</td>
<td>Intro Robotics</td>
<td>CEG</td>
<td>Computer Engineering</td>
<td>3</td>
<td>An introduction to robotics and the scientific status of qualitative research methods in psychology. Topics include elementary electronics, spectrophotometry, atomic absorption, electrochemical techniques, chromatography, and other instrumental techniques.</td>
</tr>
<tr>
<td>CHM6350</td>
<td>Instrumental Analysis</td>
<td>CHM</td>
<td>Chemistry</td>
<td>3</td>
<td>Introduction to the theory and practice of modern chemical instrumentation. Topics include elementary electronics, spectrophotometry, atomic absorption, electrochemical techniques, chromatography, and other instrumental techniques.</td>
</tr>
<tr>
<td>ARA2010</td>
<td>Intermediate Arabic I</td>
<td>ARA</td>
<td>Arabic</td>
<td>2010</td>
<td>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 in ARA 1020.</td>
</tr>
<tr>
<td>EC3280</td>
<td>Socialist &amp; Radical Econ</td>
<td>EC</td>
<td>Economics</td>
<td>3</td>
<td>Examine the economic theories of Karl Marx, including the labor theory of value, capital and surplus value, production under capitalism, the falling rate of profit, capital crises and socialism. Marx's views are contrasted with neoclassical theory and the neo-Keynesian synthesis.</td>
</tr>
<tr>
<td>KNE2420</td>
<td>Princ of Emergency Mgmt</td>
<td>KNH</td>
<td>Kinesiology &amp; Health</td>
<td>3</td>
<td>Focuses on the philosophical and theoretical underpinnings of emergency management and the principles that define effective practice.</td>
</tr>
<tr>
<td>PSY4070</td>
<td>Honors Research Project</td>
<td>PSY</td>
<td>Psychology</td>
<td>4070</td>
<td>Original problems for investigation leading to a psychology department honors thesis.</td>
</tr>
<tr>
<td>EDS6900</td>
<td>Teach-Indiv with Exempt.</td>
<td>EDS</td>
<td>Education - Special Education</td>
<td>6900</td>
<td>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.</td>
</tr>
<tr>
<td>MKT2500</td>
<td>Principles of Marketing</td>
<td>MKT</td>
<td>Marketing</td>
<td>2500</td>
<td>Study processes and 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.</td>
</tr>
<tr>
<td>ME2120</td>
<td>Statics</td>
<td>ME</td>
<td>Mechanical and Materials Engineering</td>
<td>2120</td>
<td>Forces, results, 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 in EGR 1010 and Undergraduate level PHY 2400 Minimum Grade of D in PHY 2400 and Undergraduate level ME 1040 Minimum Grade of D in ME 1040.</td>
</tr>
<tr>
<td>RST2920</td>
<td>Regional Studies</td>
<td>RST</td>
<td>Regional Studies</td>
<td>2920</td>
<td>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.</td>
</tr>
<tr>
<td>PHY6450</td>
<td>Integ Phy Sci &amp; Math I</td>
<td>PHY</td>
<td>Physics</td>
<td>6450</td>
<td>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.</td>
</tr>
<tr>
<td>PHL3120</td>
<td>History of Ethics</td>
<td>PHL</td>
<td>Philosophy</td>
<td>3120</td>
<td>Study of the development of ethical philosophy through a detailed investigation of such figures as Plato, Aristotle, Hobbes, Butler, Hume, Kant, Mill, and Nietzsche. Integrated Writing course.</td>
</tr>
<tr>
<td>ENG4950</td>
<td>TEEF Workshop</td>
<td>ENGL</td>
<td>English</td>
<td>4950</td>
<td>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 in ENG 2100.</td>
</tr>
<tr>
<td>BIO4920</td>
<td>Senior Seminar</td>
<td>BIO</td>
<td>Biology</td>
<td>4920</td>
<td>Literature survey, discussion, and oral presentations of selected topics in the biological sciences. Minimum GPA of 2.25.</td>
</tr>
<tr>
<td>BME4720</td>
<td>Biomedical Optics</td>
<td>BME</td>
<td>Biomedical Engineering</td>
<td>4720</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>
</tr>
<tr>
<td>EDL7675</td>
<td>Tchr Ldr Capstone Exit</td>
<td>EDL</td>
<td>Educational Leadership</td>
<td>7675</td>
<td>Focus on understanding current teacher leadership within the context of the school organization.</td>
</tr>
<tr>
<td>Semester</td>
<td>Course Code</td>
<td>Title</td>
<td>Credits</td>
<td>Type</td>
<td>Description</td>
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<tr>
<td>Fall 2020</td>
<td>LAT5530</td>
<td>5530 Readings in Roman Epic</td>
<td>LAT</td>
<td>Latin</td>
<td>3 Virgil's Aeneid, Ovid's Metamorphoses; Lucan, Statius, Valerius Flaccus, and Silius. Topics include intention and structure of the Aeneid, history and development of the Roman Epic, structure and transitional devices in the Metamorphoses, and the nature of rhetorical epic. Titles vary.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHY7520</td>
<td>7520 Mol. Spectra &amp; Structure</td>
<td>PHY</td>
<td>Physics</td>
<td>3 Theory of molecular spectra and structure with examination of experimental data as related to molecular spectra. Applications to the detection and analysis of molecules.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMS9030</td>
<td>9030 Human Neurobiology</td>
<td>BMS</td>
<td>Biomedical Sciences</td>
<td>4 (Also listed as ANT 7310). 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>Fall 2020</td>
<td>SOC4650</td>
<td>4650 Race, Labor Markets</td>
<td>SOC</td>
<td>Sociology</td>
<td>3 Involving African Americans' labor force participation/location and consequences for families in the Post-Civil Rights era. Topics include national employment statistics for African Americans and persons of color, race/ethnicity-based employment predictions, and statistics on the fastest growing occupations in the U.S. Integrated Writing course. Credits: 3. Department Managed Prerequisite(s): Undergraduate level SOC 3620 Minimum Grade of D (C-).</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PSI9450</td>
<td>9450 Feminist Psychotherapy</td>
<td>PSI</td>
<td>Professional Psychology</td>
<td>3 Addresses the theory underlying feminist therapy and focuses on applying that theory to clinical work by utilizing readings, videos, discussion, and role-plays. Students will practice conceptualizing from the feminist perspective.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHL3410</td>
<td>3410 Aesthetics &amp; Phil of Art</td>
<td>PHL</td>
<td>Philosophy</td>
<td>3 Exploration of philosophical theories of art. Students will critically examine their artistic experiences and prejudices to develop a richer sense of why we value the arts. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>IDL7230</td>
<td>7230 Understanding Edu Res.</td>
<td>IDL</td>
<td>Instructional Design &amp; Learning</td>
<td>3 Students will conceptually explore different research methodologies in relation to educational technology and instructional design.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>URS4900</td>
<td>4900 Special Topics</td>
<td>URS</td>
<td>Urban Affairs</td>
<td>1 Advanced study in selected topics in urban studies. Topics may include new developments in methodology or the various subfields of the discipline.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BMB2000</td>
<td>2000 Career Planning in BMB</td>
<td>BMB</td>
<td>Biochemistry &amp; Molecular Biology</td>
<td>1 Students will be exposed to multiple future career pathways available in BMB upon completion of their B.S. degree.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>COM6320</td>
<td>6320 Race, Class Gender Com</td>
<td>COM</td>
<td>Communication</td>
<td>3 Theoretical and pragmatic consideration of the impact of race, class, and gender on the communication process within society.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>MTH7510</td>
<td>7510 Algebra I</td>
<td>MTH</td>
<td>Mathematics</td>
<td>4 Groups: isomorphism theorems, Jordan-Hölder theorem, permutation groups, Sylow theorems, finitely generated Abelian groups, and free groups. Rings and Modules: homomorphism, ideals, principal ideal domains, the Euclidean algorithm, unique factorization, radicals. Credits: 3. Department Managed Prerequisite(s): Undergraduate level MTH 4520 Minimum Grade of D or Graduate level MTH 6520 Minimum Grade of D (C-).</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ED4500</td>
<td>4500 Independent Study in ED</td>
<td>ED</td>
<td>Education</td>
<td>0.5 Independent study in a selected area of education.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>LEP0050</td>
<td>0050 Lit &amp; Speak - Pre-LEAP</td>
<td>LEP</td>
<td>LEAP</td>
<td>0 Listening, speaking and pronunciation for low-beginning level ESL students. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GEO4860</td>
<td>4860 Foundations of Geography</td>
<td>GEO</td>
<td>Geography</td>
<td>3 Theories and methods comprising the field of geography. Development of the profession and paradigms and traditions of geographical study and analysis. Integrated Writing course.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>ECO5560</td>
<td>5560 Intntl ECO K-12 Teach</td>
<td>ECO</td>
<td>Center for Economic Educ.</td>
<td>2 This course is designed to provide teachers with little or no international economic education experience a road map to international economics. Available online resources will be explored for their use in providing a basic understanding of international economic concepts. This course will also aid teachers in presenting concepts covered on the state proficiency examinations. This course has a fee that is non-refundable once the term begins.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EE4242</td>
<td>4242 Intro to Geophysics</td>
<td>EES</td>
<td>Earth &amp; Environmental Sciences</td>
<td>4 Methods and concepts of practical exploration geophysics. Seismic reflection, seismology reflection, gravity methods, electrical methods, and magnetic methods. Requires Saturday field work in the vicinity of the campus.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>HST4450</td>
<td>4450 Middle Eastern History</td>
<td>HST</td>
<td>History</td>
<td>3 Examine the Middle East from the 7th century to the present. Topics vary.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHL4200</td>
<td>4200 Symbolic Logic II</td>
<td>PHL</td>
<td>Philosophy</td>
<td>3 Standard notation, principles of inference, formal systems, and methods of proof. Focus on first-order predicate logic. Students who have taken PHL 3230 cannot take PHL 4200.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PPH7160</td>
<td>7160 Adv Stat &amp; Epi with SPSS</td>
<td>PPH</td>
<td>Population &amp; Public Health</td>
<td>3 This class will introduce advanced statistical methods such as regression analysis applied in epidemiological research. Students will learn application of these methods using Statistical Package for Social Sciences (SPSS) to do data analysis.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>GER6030</td>
<td>6030 Adv. Studios: Lang &amp; C/</td>
<td>GER</td>
<td>German</td>
<td>3 Advanced level course on German or German-American literature, culture or film. Topics and Title vary. Taught in German. Credits: 3. Department Managed Prerequisite(s): Graduate level GER 5110 Minimum Grade of D or Graduate level GER 5120 Minimum Grade of D or Graduate level GER 5200 Minimum Grade of D (C-).</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>SPM7030</td>
<td>7030 Acad Assist Supp Athletes</td>
<td>SPM</td>
<td>Sports Management</td>
<td>1 This course will explore the academic experience of student athletes in the context of the demands of their sport and how support services are organized and delivered to address distinct academic needs.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>EDL8340</td>
<td>8340 Coaching and Mentoring</td>
<td>EDL</td>
<td>Educational Leadership</td>
<td>3 Developing knowledge, skills, and dispositions necessary for school leaders to provide effective coaching and mentoring focused on improving teaching and learning for all students.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PHY2420</td>
<td>2420 Intro to Modern Physics</td>
<td>PHY</td>
<td>Physics</td>
<td>3 Phenomenology and theoretical concepts of modern physics. Special theory of relativity, quantum theory, atomic and molecular structure and spectra, x-rays and solid state physics, nuclear physics, and instrumentation for nuclear physics research.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>BIO3000</td>
<td>3000 Graduate Seminar</td>
<td>BIO</td>
<td>Biology</td>
<td>1 Topics vary but will include extensive discussion of primary, research literature.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>HST4550</td>
<td>4550 U.S. Foreign Relations</td>
<td>HST</td>
<td>History</td>
<td>3 Examines current events, prominent issues, key individuals and major events in the history of U.S. relations with other countries and regions. Topics vary.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>PL6610</td>
<td>6610 Compar. Social Movements</td>
<td>PLS</td>
<td>Political Science</td>
<td>3 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.</td>
</tr>
<tr>
<td>Fall 2020</td>
<td>WGS3250</td>
<td>3250 Woman Multicultural Pers</td>
<td>WGS</td>
<td>Women, Gender, and Sexuality</td>
<td>3 Issues, approaches, and topics in women and gender studies. Explores racial, ethnic, cultural, and other differences among women within the U.S. Titles and topics vary. Integrated Writing course.</td>
</tr>
</tbody>
</table>
Fall 2020  HST2110  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. Mbl 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 CCRS 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. <b>Department Managed Prerequisite(s): Undergraduate level FR 1020 Minimum Grade of C or AP French Language 3 or above.</b>  UG  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  LE  Lecture/ Lab  Combination

Fall 2020  ED5050  5050  MCE Gen Sci 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  CNL6620  6620  Prog Stub 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 examined. The course also explores the impact of social learning on student behavior.  GR  LE  Lecture

Fall 2020  NUR7001  7001  Role Dev & Lifespan  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. <b>Department Managed Prerequisite(s): Undergraduate level MTH 2530 Minimum Grade of D or above.</b>  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.  UG  LB  Lab

Fall 2020  MBL4110  4110  Orientation Med Lab Sci  MBL  Medical Laboratory Science  1  Theory and application of lab safety, universal precautions, specimen collection, quality assurance, phlebotomy, and other techniques fundamental to medical laboratory.  UG  LE  Lecture

Fall 2020  CEG2900  2900  Spec Topics in Comp Egr  CEG  Computer Engineering  1  Special topics in Computer Engineering.  UG  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. <b>Department Managed Prerequisite(s): Undergraduate level EE 2010 Minimum Grade of C and Undergraduate level MTH 2350 Minimum Grade of D and Undergraduate level PHY 2410 Minimum Grade of D or above.</b>  UG  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-RIemann equations, Cauchy integral formula, Calculus of residues, Harmonic functions, Taylor series, Laurent series, Riemann Mapping Theorem <b>Department Managed Prerequisite(s): Undergraduate level MTH 4320 Minimum Grade of D or Graduate level MTH 6320 Minimum Grade of D or above.</b>  GR  LE  Lecture

Fall 2020  HED4360  4360  Sem Pub Health Ed  HED  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.  UG  SE  Seminar

Fall 2020  IC4250  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.  IG  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.  IG  IS  Independent Study

Fall 2020  KNH1500  1500  Scuba & Skin: Open Water  KNH  Kinesiology & Health  2  Fundamental skills and knowledge of Scuba & Skin: Open Water. Competency-based approach. Course may accommodate disabled students when appropriate. This course is a fee that is non-refundable once the term begins.  UG  LB  Lab

Fall 2020  PLS5750  5750  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 revolutions in economics, politics, religion and other phenomena that have shaped the Western world in our own time.  UG  LE  Lecture

Fall 2020  BIE7310  7310  Adv Ergon  BIE  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. <b>Department Managed Prerequisite(s): Graduate level IE 6310 Minimum Grade of D or above.</b>  GR  LE  Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Title</th>
<th>Department</th>
<th>Corequisite(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS88110</td>
<td>8110</td>
<td>Cognitive Assessment</td>
<td>PSI</td>
<td>Professional Psychology</td>
<td>3 presents basic intelligence, aptitude, and related assessment devices with clinical utility and theoretical understandings with adults, adolescents, and children.</td>
</tr>
<tr>
<td>GL60400</td>
<td>6940</td>
<td>Special Topics</td>
<td>PLS</td>
<td>Political Science</td>
<td>3 Advanced study of a selected topic of contemporary political significance.</td>
</tr>
<tr>
<td>ECE3210</td>
<td>3210</td>
<td>ECE Field Experience I</td>
<td>ECE</td>
<td>Education - Early Childhood</td>
<td>1 Candidates, mentored by an early childhood educator, assist in the planning, organizing, delivering, and assessing of instruction in a 16-3rd grade setting applying pedagogical content knowledge from early childhood methods courses.</td>
</tr>
<tr>
<td>SOC5730</td>
<td>5730</td>
<td>Courts, Law, &amp; Justice</td>
<td>SOC</td>
<td>Sociology</td>
<td>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.</td>
</tr>
<tr>
<td>EE3540</td>
<td>3450</td>
<td>Intro Electromagnetics</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>3 Electrostatics and magnetics; induced electro-motive force; Maxwell's equations and their physical interpretation and applications to transmission lines and antennas.</td>
</tr>
<tr>
<td>HST3900</td>
<td>3900</td>
<td>Global Encounters</td>
<td>HST</td>
<td>History</td>
<td>3 Examination of the social, cultural, economic, religious and/or political interactions between Western Europe and the non-Western world since 1500. Topics vary.</td>
</tr>
<tr>
<td>CMH3130</td>
<td>7350</td>
<td>Analytical Chemistry</td>
<td>CMH</td>
<td>Chemistry</td>
<td>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.</td>
</tr>
<tr>
<td>CTE6350</td>
<td>6350</td>
<td>Global Engagement</td>
<td>CTE</td>
<td>Career and Technical Education</td>
<td>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.</td>
</tr>
<tr>
<td>CHM4210R</td>
<td>4210R</td>
<td>Adv Inorganic Syn Rec</td>
<td>CHM</td>
<td>Chemistry</td>
<td>0 Required recitation for CHM 4210.</td>
</tr>
<tr>
<td>MKT4780</td>
<td>4780</td>
<td>Honors-Ind Study Market</td>
<td>MKT</td>
<td>Marketing</td>
<td>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.</td>
</tr>
<tr>
<td>GEO4990</td>
<td>4990</td>
<td>Applied Research Project</td>
<td>GEO</td>
<td>Geography</td>
<td>3 involves students in the process of researching and writing a senior seminar paper. Integrated Writing course.</td>
</tr>
<tr>
<td>EGR2980R</td>
<td>2980R</td>
<td>Special Topics in EGR Rec</td>
<td>EGR</td>
<td>Engineering</td>
<td>0 Required recitation for EGR 2980.</td>
</tr>
<tr>
<td>FR4940</td>
<td>4940</td>
<td>Cuisine et Film</td>
<td>FR</td>
<td>French</td>
<td>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.</td>
</tr>
<tr>
<td>PSY8640</td>
<td>8640</td>
<td>Res Methods I/O Psy</td>
<td>PSY</td>
<td>Psychology</td>
<td>4 The course focuses on the unique methodological challenges faced by I/O researchers. Theory, causation, and experimental variability 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.</td>
</tr>
<tr>
<td>MTH4150</td>
<td>4150</td>
<td>Scientific Computation</td>
<td>MTH</td>
<td>Mathematics</td>
<td>3 Modern computational techniques for simulating scientific phenomena.</td>
</tr>
<tr>
<td>RBH6700</td>
<td>6700</td>
<td>Rehab Workshop</td>
<td>RBH</td>
<td>Rehabilitation</td>
<td>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.</td>
</tr>
<tr>
<td>SW4700</td>
<td>4700</td>
<td>Soc and Econ Justice</td>
<td>SW</td>
<td>Social Work</td>
<td>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.</td>
</tr>
<tr>
<td>EE4700</td>
<td>4700</td>
<td>Introduction to MEMS</td>
<td>EE</td>
<td>Electrical Engineering</td>
<td>3 Overview of basic sensor technology including operating principles, electronics and measurement principles.</td>
</tr>
<tr>
<td>SLI4200</td>
<td>4200</td>
<td>Educational Interpreting</td>
<td>SLI</td>
<td>Sign Language Interpreting</td>
<td>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.</td>
</tr>
<tr>
<td>KHE1200</td>
<td>1200</td>
<td>Fencing: Beginning</td>
<td>KHE</td>
<td>Kinesthetics &amp; Health</td>
<td>1 Fundamental skills and knowledge of Fencing: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
</tr>
<tr>
<td>FR6650</td>
<td>6650</td>
<td>Topics in FR Lit &amp; Film</td>
<td>FR</td>
<td>French</td>
<td>3 Examination of selected topics in French literature and film. Investigation of various themes, myths, genres, literary movements or characters. Titles vary. Taught in French.</td>
</tr>
<tr>
<td>KNH7500</td>
<td>7500</td>
<td>Scientific Foundations</td>
<td>KNH</td>
<td>Kinesthetics &amp; Health</td>
<td>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.</td>
</tr>
<tr>
<td>ED8690</td>
<td>6890</td>
<td>AYAMA Capstone Research</td>
<td>ED</td>
<td>Education</td>
<td>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.</td>
</tr>
<tr>
<td>EGR4980R</td>
<td>4980R</td>
<td>Special Topics in EGR Rec</td>
<td>EGR</td>
<td>Engineering</td>
<td>0 Required recitation for EGR 4980.</td>
</tr>
<tr>
<td>SLI3800</td>
<td>3800</td>
<td>Advanced Interpreting</td>
<td>SLI</td>
<td>Sign Language Interpreting</td>
<td>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.</td>
</tr>
<tr>
<td>HST6750</td>
<td>6750</td>
<td>21st-Century History</td>
<td>HST</td>
<td>History</td>
<td>3 Examine particular stages of the 21st-century American experience or selected topics (e.g., the Iraq war). Topics vary.</td>
</tr>
<tr>
<td>HED7700</td>
<td>7700</td>
<td>Social Behavior Health</td>
<td>HED</td>
<td>Health Education</td>
<td>3 This course addresses the social-behavioral and behavioral determinants of health status and the role of theory-based interventions in altering health behavior and status.</td>
</tr>
<tr>
<td>DMV3010</td>
<td>3010</td>
<td>DMV Registration</td>
<td>DMV</td>
<td>DMV Consortium</td>
<td>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.</td>
</tr>
<tr>
<td>EC4820</td>
<td>4820</td>
<td>Independent Reading</td>
<td>EC</td>
<td>Economics</td>
<td>1 Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area.</td>
</tr>
</tbody>
</table>
Fall 2020  PLS6823  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."b"

UG  LB  Lab

Fall 2020  BIO6640  6640  Biograpyography  BIO  Biology  3  Introduction to the factors affecting the distribution of plants and animals.  GR  LE  Lecture

Fall 2020  M&T8909  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 disease (pathogenic).  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 Acadian and Quebecois poets, novelists and playwrights (such as Maffit, Tremblay, Thériault) and filmmakers (such as Forest, Chiasson, Bélanger, Mitrani, Sain, and Filiatrault). 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 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.

UG  LE  Lecture

Fall 2020  EDL7710  7710  Ldship Scll Improvement  EDL  Educational Leadership  3  The course focuses on the development of 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.

UG  LE  Lecture

Fall 2020  ME4180  4180  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; "b" Department Managed Prerequisite(s): Undergraduate level ME 2700 Minimum Grade of D."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: to1870  ENG  English  3  Representative works of major British writers of the latter 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  LE1150  1150  Police Academy 4  LE  Law Enforcement  3  Ohio Police Training Academy curriculum basic police training problems and procedures. Advanced human relations in special needs, domestic violence, crises, missing and abused children and prevention. Requires admission to Grand Lake Law Enforcement Academy.

UG  LE  Lecture/Lab Combination

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/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.

UG  LE  Lecture

Fall 2020  BIO6720  6720  Ornithology  BIO  Biology  4  This course 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.

UG  LE  Lecture

Fall 2020  HPR2810  2810  Physical & Hlth Ed - MCE  HPR  Health Phy Educ & Recreation  3  Curriculum teaching methods and materials, for 4th-9th grades, promoting a positive lifestyle. Comprehensive health education 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. Covers the types of editing, the production process, and issues in editing. "b" Department Managed Prerequisite(s): Undergraduate level ENG 3610 Minimum Grade of D. "b"

UG  LE  Lecture

Fall 2020  EE7590L  7590L  CMOS RF IC Design Lab  EE  Electrical Engineering  1  Required lab for EE 7590L. "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/Toxicology  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 practices that emphasize understanding, measuring, and improving processes.

GR  LE  Lecture

Fall 2020  CHM5510  5510  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  URS6230  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 governments.

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 | NUR5012 | 7512 | Acute Illness for ACPNP | NUR | Nursing | 5 | Emphasis on nursing management of complex acute illnesses and multi-system disorders for children/adolescents and their families. Clinical practice focuses on multi-disciplinary collaboration for the delivery of comprehensive health care, in high acuity settings. | GR | LE | Lecture |
| Fall 2020 | CEG632L | 632L2 | VLSI Design Lab | CEG | Computer Engineering | 1 | Work station based exercise designingasic devices for evaluation and testing. | GR | LB | Lab |
| Fall 2020 | ATH3001 | 3001 | 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 | NUR6202 | 8202 | Final Prac-Leadership | NUR | Nursing | 1 | Individually mentored 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 Magnetism II | PHY | Physics | 3 | Fundamental laws of electricity and magnetism from viewpoint of fields. Electromotive waves; time-dependent potentials and fields; radiation; resonant cavities; waveguides and transmission lines. | UG | LE | Lecture |
| Fall 2020 | CIL7650 | 7650 | Prin & Prac of Schl Coun | CIL | 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: Pract 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 | ED6731 | 6731 | Professional Seminar: MM | ED | 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 practical 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. | UG | LB | Lab |
| Fall 2020 | DAB2520 | 2520 | Dance History II | DAB | Dance | 3 | Survey of Western theatrical dance of the twentieth and twenty-first centuries. Integrated Writing course. | LL | Lecture/Lab Combination |
| Fall 2020 | ED7080 | 7080 | Literacy Research Fnmwk | 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: Hardware Security & 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 | EDL3202 | 3202 | 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 | ENS6600 | 6600 | Exp. Mss. and Instr. | ME | Mechanical and Materials Eng | 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. | GR | 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 |
Fall 2020

PHY1120 1120 Principles of Physics I PHY Physics 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

EE7540L 7540L VLSI Testing Design Lab EE Electrical Engineering 1 Required laboratory for EE 7540. Prerequisites: Undergraduate level EE 4540 Minimum Grade of D and Graduate level EE 4540L Minimum Grade of D or Undergraduate level EE 6540 Minimum Grade of D and Graduate level EE 6540L Minimum Grade of D. GR LB Lab

EE4290 4290 Remote Sensing of Earth EES Earth & Environmental Sciences 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

CEG4720 4720 Res Eng & Prog Analysis CEG Computer Engineering 3 This course will build on computer security topics discussed in CEG 6420. Host Computer Security and will involve discussion of lower-level computer security vulnerabilities, reverse engineering, malware analysis, vulnerability discovery, reverse engineering tool development, and advanced program analysis techniques. Department Manager Prerequisite(s): Graduate level CEG 6420 Minimum Grade of D. GR LE Lecture

MUS1010 1010 Theory of Music I MUS Music 3 Theoretical study of music through written exercises including melody, harmony, rhythm, form and analysis. UG LE Lecture

KNNH1160A 1160A Dance: Latin KNN Kinesiology & Health 1 Fundamental skills and knowledge of Dance: Latin. Competency-based approach. Course may accommodate disabled students when appropriate. UG LB Lab

SOC3720 3720 Policing in Society SOC Sociology 3 History and theories of policing and review of the role and function of police. UG LE Lecture

ENG6690 6690 Tech Writ & Skills Int'l ENG English 3 Writing 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

KNNH1440B 1440B Phys Ed for Disabled KNN 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

BIET300 3000 Res Meth in HFE BIE Industrial & Hum Fac Engr 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. Prerequisite(s): Department Manager Prerequisite(s): Graduate level BIE 6130 Minimum Grade of D or Graduate level EGB 7050 Minimum Grade of D. GR LE Lecture

PSY4240 4240 Attention & Perform Cap PSY Psychology 3 Communication-intensive seminar integrating knowledge on attention and performance. Integrated Writing course. UG SE Seminar

ATH4600 4600 African Oral Traditions ATH Anthropology 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. UG LE Lecture

IDL7120 7120 Instruct Design Digital Learn IDL Instructional Design & Learning 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." UG LE Lecture

ENG7900 7900 TEFL Practice & Material ENG English 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. Department Manager Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D or Undergraduate level ENG 6710 Minimum Grade of D. GR LE Lecture

NUR2100 2100 Hlth Pro & Assess Adults NUR Nursing 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. Prerequisites: 2 cr. Didactic; 1 cr. Assessment lab (2 hrs per week). UG LE Lecture

EED3750 3750 Writing Methods P-5 EED Elementary Education P-5 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

LA6000 6000 CELLA Internship LA Liberal Arts 1 Internship with a local arts organization under the auspices of CELLA, Wright State University’s Center of Excellence in Collaborative Education, Leadership and Innovation in the Arts. GR IN Internship

CTE6150 6150 CTE Practicum - Grad CTE Career and Technical Education 3 Teaching experience integrated with academic instruction; application of learned concepts to practical situations within the candidate’s teaching field. Coordinated by a university faculty member who observes the candidate in a school setting. GR PR Practicum

ARA6410 6410 Intro to Arabic Fiction ARA Arabic 3 A text-based course introducing students to the history and development of Arabic fiction through the study of classical and modern texts. Prerequisite(s): Undergraduate level ARA 3210 Minimum Grade of D or Undergraduate level ARA 3210 Minimum Grade of D. GR LE Lecture

HPR2020 2020 Teaching Fitness in PE HPR Health Phys Educ & Recreation 3 Develops fitness knowledge, skills and teaching strategies in future physical education teachers to enhance fitness and physical activity levels in Pre K-12 students. Students are required to demonstrate competency in fitness-related skills and a minimum level of health-related fitness. UG LL Lecture/Lab Combination

ME6490 6490 Aerospace Structures ME Mechanical and Materials Eng 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 structures. Prerequisite(s): Department Manager Prerequisite(s): Graduate level ME 5120 Minimum Grade of D. GR LE Lecture

MTH1440 1440 Math Modern World w/ Alg MTH 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

MTH7980 7980 Research in MI MI Microbiology & Immunology 1 Students will complete their research and/or thesis under the guidance of a faculty member. GR Lab Lab

PSY9430 9430 Physical Ergonomics PSY Psychology 2 This addresses the physical demands of work, with an emphasis on cognitive work in technical settings. GR SE Seminar

CNL5862 5862 Assess. & Diag. of PTSD CNL Counseling 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. UG LE Lecture
| Fall 2020 | DAN2010 | 2010 | Ballet II | DAN | Dance | 3 | Vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. | UG | ST | Studio |
| Fall 2020 | ENG4770 | 4770 | ESL: Pre-K-12 | ENG | 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. | UG | LE | Lecture |
| Fall 2020 | MUS6160 | 6160 | Piano Pedagogy | MUS | Music | 3 | Class offers a historical overview of keyboard pedagogy and examines anthologies, collections, and studies written for piano students at various performance levels. | GR | LE | Lecture |
| Fall 2020 | MUE2660 | 2660 | Concert Band | MUE | Music: Ensembles | 1 | Performs band music of all styles. Open to all students without audition. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | NUR8092 | 8092 | Population Health | NUR | Nursing | 3 | This course uses epidemiologic models to analyze and construct interventions for health care delivery systems. The focus is on safe, quality, culturally-appropriate advanced nursing practice activities to meet emerging world needs. | GR | LE | Lecture |
| Fall 2020 | EES6140 | 6140 | Sedimentary Petrology | EES | Earth & Environmental Sciences | 4 | Optical properties of common minerals. Survey of sedimentary rocks in hand sample, thin section and field occurrence. | GR | LL | Lecture/Lab Combination |
| Fall 2020 | LEP0020 | 0020 | Writing Workshop Level 3 | LEP | LEAP | 0 | Writing workshop (revision, editing and lab) for high-intermediate ESL students. This course has a fee that is non-refundable once the term begins. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | EDT8610 | 8610 | HPA Clinical Teaching | EDT | Educational Technology | 1 | 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. | GR | LL | Lecture/Lab Combination |
| Fall 2020 | PSY4220 | 4220 | Psycholinguistics Cap | PSY | Psychology | 3 | 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. | UG | SE | Seminar |
| Fall 2020 | MUS3430 | 3430 | Orchestration/Vocal Arr | MUS | Music | 3 | A study of tone quality, ranges, and transpositions of band and orchestral instruments; voice qualities and ranges of choral ensembles; orchestration and arranging techniques; and written assignments in each area. | UG | LE | Lecture |
| Fall 2020 | ENG6820 | 6820 | Adv Poetry Wrtg 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 discussion of modern poetry and poetry. | GR | SE | Seminar |
| Fall 2020 | BME4460 | 4460 | Nanomed Fundamentals | BME | Biomedical Engineering | 3 | Overview of the distinctive features of nanotechnology and their application to biomedical problems. Examines macro/micro/nano to bring out the unique properties of nanotechnology in nanomedicine. Cutting-edge nanomedical technologies for sensing and imaging, drug delivery, and therapeutic applications will be addressed. | UG | LE | Lecture |
| Fall 2020 | DEV0200 | 0200 | Found for Coll Algebra | DEV | Developmental Education | 2 | Continuation of DEV 0970 with intermediate algebra topics including: solving equations and inequalities, rational expressions, radicals, and quadratic equations. The content will be delivered to provide “just in time” remediation for MTH 1280. | UG | LL | Lecture/Lab Combination |
| Fall 2020 | ATH9900 | 9900 | Readings in Anthropology | ATH | Anthropology | 3 | Independent, intensive reading in a specific area of anthropology done under the guidance of a faculty member. Integrated Writing course. | UG | IS | Independent Study |
| Fall 2020 | KNH3290A | 3290A | 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 | BMS7600 | 7600 | Molec Bio of the Nucleus | BMS | Biomedical Sciences | 3 | (Also listed as BMB 760.) A literature-based course covering molecular events in the nucleus including DNA replication, repair, recombination, and transcription. | GR | LE | Lecture |
| Fall 2020 | KNH3150 | 3150 | Intro Distance Running | KNH | Kinesiology & Health | 2 | Fundamental skills and knowledge of distance running. Competency-based approach. Course may accommodate disabled students when appropriate. | UG | LB | Lab |
| Fall 2020 | BME3512 | 3512 | Bioelectronics II | BME | Biomedical Engineering | 4 | Modern electronic devices/circuits applied to human systems / biomedical applications, instrumentation, data collection. Reactive components, filters, semiconductors, operational amplifiers, digital 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 | MUS7800 | 7800 | Graduate Pedagogy | MUS | Music | 1 | Advanced course in techniques, practices, and materials for group and individual instruction. Musical styles and interpretation. Performance in instruments or voice. Titles vary. | GR | IS | Independent Study |
| Fall 2020 | EE4670 | 4670 | Antenna Theory & Design | EE | Electrical Engineering | 3 | Linear dipole antennas, antenna arrays, thin-line antennas, moment method analysis examples (yip 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. | GR | LE | Lecture |
| Fall 2020 | PL6100 | 6100 | Pol Psychology | PLS | Political Science | 3 | Introduces students to political psychology, with an emphasis on application to international politics. Students are provided with a broad survey of psychological theories, approaches and works, and how these perspectives are applied to foreign policy and world politics. | GR | SE | Seminar |
| Fall 2020 | BIO3850 | 3850 | Tropical Ecology | BIO | Biology | 3 | Introduction to tropical ecosystems. Structure, unique plants, climate, animals, topography, and high diversity. Understanding why these tropical regions need to be protected and preserved. | UG | LE | Lecture |
| Fall 2020 | LDR8600 | 8600 | Ind Study in Leadership | LDR | Leadership | 1 | For students interested in exploring independent study related to a topic in leadership. | GR | IS | Independent Study |
| Fall 2020 | URS4450 | 4450 | Community Development | URS | Urban Affairs | 3 | Development of community development theory and practice in the U.S. and the process of community building and asset-based community development in a service learning format. Develops understanding of how to help community members define community needs and identify community assets and learn how to analyze and present qualitative data. | UG | LE | Lecture |
| Fall 2020 | MTH4910 | 4910 | HS Math Adv Perspective | MTH | Mathematics | 3 | Mathematics for high school teachers from an advanced perspective: real and complex numbers, functions, equations, integers and polynomials, number system structures. Integrated Writing course. | UG | LE | Lecture |
| Fall 2020 | PSI9120 | 9120 | Neuropsych Assessment | PSI | Professional Psychology | 3 | Introduction to the field of clinical neuropsychological assessment. Students learn to select, administer, score, and interpret neuropsychological tests in different clinical situations. | GR | LE | Lecture |
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.  UG  LL  Lecture/Lab  Combination

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.  GR  LB  Lab

Fall 2020  NUR4980  4980  Honors Project Proposal  NUR  Nursing  2  Under the guidance of a faculty member, students develop an honors project.  UG  SE  Seminar

Fall 2020  NEU1020  1020  The Neuroscience of Learning  NEU  Neuroscience  1  Understand the neuroscientific principles that underlie learning and practice behaviors that further promote learning.  UG  LE  Lecture

Fall 2020  CHM7440  7440  Struct 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.  GR  LE  Lecture

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.  UG  LE  Lecture

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.  UG  LE  Lecture

Fall 2020  KNIH1380A  1380A  Kayaking: Recreational  KNIH  Kinesiology & Health  1  Fundamental skills and knowledge of kayaking: Recreational. 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  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).  GR  LE  Lecture

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.  UG  LE  Lecture

Fall 2020  PSY1010L  1010L  Intro to Psychology Lab  PSY  Psychology  0  Required laboratory for PSY 1010. Integrated Writing course.  UG  LB  Lab

Fall 2020  PLS4460  4460  Public Budgeting  PLS  Political Science  3  Also listed as URS 4230. Examines the major phases of the government 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.  UG  LE  Lecture

Fall 2020  KNHE890  890  Wdlsip 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.  GR  LE  Lecture

Fall 2020  EES6404L  6404L  Subsurface Fluid Flow Lab  EES  Earth & Environmental Sciences  0  Required laboratory for EES 6404.  GR  LB  Lab

Fall 2020  ANT4340  4340  Biological Safety  ANT  Anatomy  2  Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA.  UG  LE  Lecture

Fall 2020  DC00915  9015  Leadership Theories  DOS  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.  GR  LE  Lecture

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.  UG  LE  Lecture

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 Virginal music to the present time.  GR  LE  Lecture

Fall 2020  GER5320  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 by 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) or prerequisite 1 of the following: 1) GER 3200 2) GER 3220 3) GER 3250 4) GER 3280.  UG  LE  Lecture

Fall 2020  CHM6650  6650  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.  GR  LE  Lecture

Fall 2020  ED7970  7970  Lear 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.  GR  IS  Independent Study

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.  UG  LE  Lecture

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.  UG  LE  Lecture

Fall 2020  LDR7510  7510  Statistics and Research  LDR  Leadership  3  Introduction to basic statistical methods and data analysis for research and evaluation.  GR  LE  Lecture

Fall 2020  HST4400  4400  Asian History  HST  History  3  Examines various periods of Chinese, Japanese, and other Asian histories. Topics vary. Integrated Writing course.  UG  LE  Lecture

Fall 2020  ATH4400  4400  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.  UG  SE  Seminar
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ME4920</td>
<td>Capstone Design II</td>
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<td>Mechanical and Materials Engineering</td>
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<tr>
<td>MUS3210</td>
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<td>MUS</td>
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<td>PSY6210</td>
<td>Info Processing Cap</td>
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<td>Basic bionics technique and score reading for choral and instrumental conducting</td>
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<td>SLI</td>
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<td>EE6080</td>
<td>Special Topics in EE Lab</td>
<td>EE</td>
<td>3</td>
<td>Electrical Engineering</td>
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*Fall 2020*
Fall 2020  PLS4300  4300  American Govt 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  StruckProp 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. Prerequisites: Undergraduate level CHM 1210 Minimum Grade of D and Undergraduate level PHY 2400 Minimum Grade of D or better.  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. Prerequisites: Undergraduate level COM 1520 Minimum Grade of D or better.  UG  LE  Lecture  
Fall 2020  PHY2790  7890  Continuing Registration  PHY  Physics  1  Continuing Registration  GR  IS  Independent Study  
Fall 2020  DMY4010  4010  DMV Registration  DMY  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.  UG  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.  UG  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 SPN 3480 for credit. Prerequisites: Undergraduate level SPN 3210 Minimum Grade of C or Undergraduate level SPN 3250 Minimum Grade of C-.  UG  LE  Lecture  
Fall 2020  REL3500  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. Prerequisites: Undergraduate 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.  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 rhythm 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 Prof. 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 Phy 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
Fall 2020  FTN4220  4220  Analysis Corp Fin Info  FIN  Finance 3  Analysis of corporate financial information from an investment analyst perspective. Integrated Writing course.  UG  LE  Lecture

Fall 2020  EGR6980  8980  Special Topics in EGR  EGR  Engineering 1  Introduction to the diversity of fishes. This course will provide an overview of the major themes of fish evolution, anatomy, physiology, and ecology. This course will familiarize students with the most diverse group of vertebrates with special emphasis on fresh water taxa. Lecture topics are combined with field-based collections and lab activities to facilitate conceptual learning with practical field experience in collection, dissection, and identification.  GR  LE  Lecture

Fall 2020  BMS7462  7462  Rehab Eng Computers II  BMS  Biomedical Sciences 3  Continuation of BMS 7461. Focuses on development of computer application programs and assistive devices for people with disabilities.  GR  LE  Lecture

Fall 2020  PS6990  6990  Lab Rotation  PN  Physiology & Neuroscience 1  Special physiological problems or research designed for specific needs and talents of the student.  GR  IS  Independent Study

Fall 2020  ASM8990  8990  Aerorned Research Thesis  ASM  Aerospace Medicine 4  Under supervision of an advisor, students choose research problems, prepare bibliographic searches, plan experimental protocol, and conduct experimentation. A full report, consisting a thesis, is written and defended before a graduate committee.  GR  LE  Independent Study

Fall 2020  SOC4800  4800  Aging and HIV  SOC  Sociology 3  Socio-historical overview of the impact of HIV/AIDS on adults 50 and older.  UG  LE  Lecture

Fall 2020  MUS2550  2550  Piano for Music Ed I  MUS  Music 1  Class instruction in functional keyboard skills. Continuation of MUS 1560. Special emphasis on skills needed for vocal/choral music education.  UG  LE  Lecture

Fall 2020  MI4750  4750  Pathogenic Mechanisms  MI  Microbiology & Immunology 4  Human-microbial pathogen interactions, emphasizing the molecular basis of the pathogenic mechanisms. Complexities of interactions between microbes and their human hosts.  UG  LE  Lecture

Fall 2020  EDT6110  6110  Long in a Digital World  EDT  Educational Technology 3  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.  GR  LE  Lecture

Fall 2020  PSY4440  8440  Task Analysis/Work Anal  PSY  Psychology 3  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.  GR  SE  Seminar

Fall 2020  KNE1360B  1360B  Karate  KNE  Kinesiology & Health 1  Fundamental skills and knowledge of Karate. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab

Fall 2020  BMS8720  8720  Mechanisms of Cell Death  BMS  Biomedical Sciences 2  Signalling and Molecular mechanisms of Apoptotic Cell Death and relationship to human diseases.  GR  LE  Lecture

Fall 2020  REL5600  5600  Topics in Am Religion  REL  Religion 3  Examination of selectd topics related to the history and practice of religion in America.  GR  LE  Lecture

Fall 2020  MGT3100  3100  Mgt & Org Behavior  MGT  Management 3  Understanding the behavior of people within a work setting and the development of management competencies.  UG  LE  Lecture

Fall 2020  EES430  6430  Analy & Pred Complex Sys  EES  Earth & Environmental Sciences 3  Explores quantitative analysis and probabilistic forecasting of the behavior of complex nonlinear natural and human systems. Methods of analysis include fractals to quantify spatial, spatial and temporal scaling and chaos to study sensitivity to initial conditions and feedback. Modeling includes self-organization and cellular automatons. Systems studied include ecosystem, chemistry, biodynamics, hydrology, medicine, geography, and coupled human and natural systems.  GR  LE  Lecture

Fall 2020  EDL9880  9880  Research & Educ Leader  EDL  Educational Leadership 3  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.  GR  LE  Lecture

Fall 2020  SOC3210  3210  Sociology of Deviance  SOC  Sociology 3  Extensive exploration of the various sociological approaches to the study of deviance and social disorganization with emphasis on sociological theory and research.  UG  LE  Lecture

Fall 2020  ED6180  6180  Asaas Med/Lit Eduacts  ED  Education 3  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.  GR  LE  Lecture

Fall 2020  ANT7020  7020  Special Dissection  ANT  Anatomy 1  An independent study course in advanced anatomical dissection. Students undertake special cadaver donor dissections for use in the anatomy courses. => Department Managed Prerequisite(s). Graduate level ANT 7110 Minimum Grade of C-<=>  GR  LB  Lab

Fall 2020  PSY3630  8630  Psychometrics  PSY  Psychology 2  => Department Managed Prerequisite(s). Graduate level PSY 7100 Minimum Grade of D-<=>  GR  SE  Seminar

Fall 2020  PSY9960  9960  Behav Embry & Terat Cap  PSY  Psychology 3  Communication-intensive seminar integrating knowledge on behavioral embryology and teratology.  GR  SE  Seminar

Fall 2020  BIO7502  7502  Intro Research Biology  BIO  Biology 1  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.  GR  LE  Lecture

Fall 2020  EED3650  3650  Phonics & Word Study P-5  EED  Elementary Education P-5 3  An in-depth analysis of how children in P-5 learn phonics and word study, and use this knowledge while reading and writing.  UG  LE  Lecture

Fall 2020  SCM7810  7810  Special Studies in SCM  SCM  Supply Chain Management 1  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.  GR  IS  Independent Study

Fall 2020  PHL3050  3050  19th Century Philosophy  PHL  Philosophy 3  Study of 19th century European philosophy. Topics include the absolutist 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.  GR  LE  Lecture

Fall 2020  EED7210  7210  Curr Design for Tchr  EDL  Educational Leadership 3  Management and leadership skills as related to developing and organizing curriculum and materials relating to implementing the learning program with students.  GR  LE  Lecture

Fall 2020  ART5110  6110  Adv St Ancient Classical  ART  Art 3  Intensive studies of the period, major movements, and artists of the time. Tities vary.  GR  LE  Lecture

Fall 2020  EE6470L  6470L  Antenna Thry Design Lab  EE  Electrical Engineering 1  Required laboratory for EE 6470.  GR  LB  Lab

Fall 2020  CNL7800L  7800L  Sys Tech in Marr & Fam Lab  CNL  Counseling 0  Required laboratory for CNL 7800.  GR  LB  Lab
Fall 2020  
CEG4420  4420  Host Computer Security  
CEG  Computer Engineering  3  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.

UG  LE  Lecture

Fall 2020  
BMST410  7410  Struc Concept Org Chem  
BMS  Biomedical Sciences  2  Study of molecular orbital theory, reactive species, theories of acids and bases, and an introduction to stereochemistry.

GR  LE  Lecture

Fall 2020  
MUA1120  1120  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  
LDR7100  7100  Develop Interpers Compet  
LDR  Leadership  3  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.

GR  LE  Lecture

Fall 2020  
EDO320  3020  Prin Pract & Learn 4 & S  
ED  Education  3  Development of the young child in pre-adolescence, developmentally appropriate pedagogical strategies and practices for effective teaching and learning.

UG  LE  Lecture

Fall 2020  
ATR7400  7400  Therapeutic Interventions  
ATR  Athletic Training  5  Principles and applications of therapeutic interventions utilizing exercise, manual therapy, and modalities, including, but not limited to, thermal, electromagnetic, and ultrasound agents.

GR  LE  Lecture

Fall 2020  
SPN3260  3260  Business Spanish II  
SPN  Spanish  3  Study of the business culture behind Spanish. Development of the communication skills and intercultural understanding. Use of Spanish in international business. Integrated Writing course. <b>Department Managed Prerequisite(s): Undergraduate level SPN 3250 Minimum Grade of D</b>.

UG  LE  Lecture

Fall 2020  
EDS6570  6570  Inst & Beh Mnt Scl  
EDS  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.

GR  LE  Lecture

Fall 2020  
ARA3120  3120  Levantine Arabic  
ARA  Arabic  3  An introduction to the spoken Arabic dialect of Syria, Lebanon, Jordan and Palestine for advanced speakers of Arabic. <b>Department Managed Prerequisite(s): Undergraduate level ARA 2020 Minimum Grade of D</b>.

UG  LE  Lecture

Fall 2020  
ME6260  6260  Intro Robotics  
ME  Mechanical and Materials Eng  3  (Also listed as CEG 6590 and ME 6586) An introduction to the mathematics of robots. Topics covered include coordinate systems and transformations, manipulator kinematics and inverse kinematics, Jacobians, dynamic and trajectory planning.

GR  LE  Lecture

Fall 2020  
GEO6100  6100  Remote Sensing  
GEO  Geography  3  Survey of remote sensing spatial analysis. Applications, technology, and spatial measurements used to interpret remote sensed images.

GR  LE  Lecture

Fall 2020  
ASM9791  9791  Aerospace Research I  
ASM  Aerospace Medicine  1  Introduction to Aerospace Medical Research I 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.

GR  SE  Seminar

Fall 2020  
EES6440  6440  Geophys Well Log Anal  
EES  Earth & Environmental Sciences  3  Theory, application, and interpretation of geophysical logs with emphasis on their use in correlation and determination of porosity, permeability, and fluid content of subsurface formations. Three hours lecture.

GR  LE  Lecture

Fall 2020  
DAN3070  3070  Interned Tap Dance I  
DAN  Dance  1  Group class exploring tap dance technique.

UG  ST  Studio

Fall 2020  
MUE4990  4990  Collegiate Choreol  
MUE  Music: Ensembles  1  Development of advanced choral and vocal skills. Emphasis on advanced choral concert repertoire representing a wide range of historical and compositional styles. Audition required.

UG  LL  Lecture/Lab Combination

Fall 2020  
PTX7000  7000  Biostats for Health Prof  
PTX  Pharmacology/Toxicology  2  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  
ISE4960  4960  Dept Honors Research ISE  
ISE  Industrial & Systems Eng  1  Research in industrial and systems engineering in fulfillment of departmental honors requirements. Topics vary.

UG  IS  Independent Study

Fall 2020  
GEO8000  8000  Biochemistry Seminar  
GEO  Biochemistry & Molecular Biology  1  Current departmental research in Biochemistry and Molecular Biology presented in an informal seminar format.

UG  LE  Lecture

Fall 2020  
GER4810  4810  Independent Rdg Adv Stud  
GER  German  3  Topics vary. <b>Department Managed 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</b>.

UG  IS  Independent Study

Fall 2020  
OIS1150  1150  Business/Office Corres  
OIS  Office Information Systems  3  Study of terminology and formats used in business communication: letters, reports, memos, diction, grammar, sentence construction, punctuation, and spelling.

UG  LE  Lecture

Fall 2020  
SLI3550  3550  Interpreter Mentoring  
SLI  Sign Language Interpreting  3  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.

UG  LE  Lecture

Fall 2020  
EDT3930  3930  Inst Design Online Learn  
EDT  Educational Technology  3  Use learning theory and instructional design principals develop high quality, engaging online instruction.

GR  LL  Lecture/Lab Combination

Fall 2020  
ACC5010  5010  Intermediate Account I  
ACC  Accountancy  3  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.

UG  LE  Lecture

Fall 2020  
ENG6850  6850  Sp Topic 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.

GR  LE  Lecture

Fall 2020  
KHN3500  3500  Tech & Emergency Mgmt  
KHN  Kinesthesiology & Health  3  Explores technology applications of emergency management.

UG  LE  Lecture

Fall 2020  
CHM5520  5520  Physical Chemistry II  
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  
MIL1010  1010  Ldsrp & Prsld Develop  
MIL  Military Science  3  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, and stress management, to leadership, self-acceptance, and the Army profession. Contracted students are required to participate in two-hour lab, physical fitness program and weekend training exercises.

UG  LE  Lecture
Overview of mathematical topics from a perspective appropriate for early and middle childhood educators. Topics include switching algebra and switching functions, logic design of combinational and sequential circuits, storage elements, register-level design, and instrumentation. | 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

Fall 2020 MUA2420 2420 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. | LE Lecture

Fall 2020 EES4990 4990 Problems Earth & Env Sci EES Earth & Environmental Sciences 0.5 Research and problems designed for undergraduate students at the senior level. May be taken for a letter grade or pass/unsatisfactory. | IS Independent Study

Fall 2020 EES4250 4250 Diagenesis Sed Rocks EES Earth & Environmental Sciences 4 Diagenesis of ancient and modern sedimentary rocks. Theory and application of petrographic techniques with emphasis on process development and interpretation of diageneric environments. | LL Lecture/Lab Combination

Fall 2020 PSY3930L 3930L Beh Neuroscience Methods Lab PSY Psychology 0 Required laboratory for PSY 3930. | GB Lab

Fall 2020 FR3220 3220 Adv Writing in French FR French 3 Writing techniques and grammar review; literary and film analysis incorporating grammar points. Taught in French. Integrated Writing course. | LE Lecture

Fall 2020 EC7550 7550 Ec of Health & Health Pol EC Economics 3 Teaches students how alternative incentive systems and resource allocations affect the health services sector. Emphasis on current institutional arrangements, empirical studies, and policy alternatives. | LE Lecture

Fall 2020 MUS3650 3650 Business Processes RFID MIS Management Information Systems 3 Introduction to Radio Frequency Identification (RFID) with particular focus on business automation; hands-on experience with using RFID equipment and preparation for the RFID certification. | LL Lecture/Lab Combination

Fall 2020 BIO2200L 2200L Microbiology-Human Env Lab BIO Biology 0 Required laboratory for BIO 2200. | LB Lab

Fall 2020 LEP0010 0010 Writing - Pre-LEAP LEP LEAP 0 Writing for low-beginning ESL students. This course has a fee that is non-refundable once the term begins. | LE Lecture

Fall 2020 MUA4210 4210 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. | IS Independent Study

Fall 2020 DMV5010 5010 DMV Registration DMV DMV Consortium 0.5 | GR Lecture

Fall 2020 EDT7000 7000 Entry Seminar Ed Tech EDT Educational Technology 1 Introductory seminar for educational technology and library media programs. Students should take this class before or concurrently with their first educational technology or library media course. | SE Seminar

Fall 2020 KNE3840 3840 Practicum-Hlth, PE & Rec KNH Kinesiology & Health 1 Supervised field work for junior students seeking certification or a concentration in a specific area. Topics vary. Contact hours vary according to subject. May be taken for a letter grade or pass/unsatisfactory. | PR Practicum

Fall 2020 KNE140B 1140B Dance: Ballroom KNH Kinesiology & Health 1 Fundamental skills and knowledge of Dance: Ballroom. Competency-based approach. Course may accommodate disabled students when appropriate. | LB Lab

Fall 2020 CS5160 5160 Computer Science Fundam CS Computer Science 6 Hands-on survey of the fundamental concepts of computer science including: fundamentals of programming, algorithm design, analysis, and selection, computational complexity, and data structures. This class is a project-intensive boot camp for graduate students who need preparation in computer science fundamentals at the graduate level. | LL Lecture/Lab Combination

Fall 2020 BME7210 7210 Ortho & Prosthetic Engr BME Biomedical Engineering 3 The course enables the student to use engineering techniques in orthopaedic and prosthetic applications. Students also learn 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. | LE Lecture

Fall 2020 MKT7820 7820 Mitg Analytics Tools MKT Marketing 3 Explains the benefits of an analytical approach to marketing decision-making, and builds skills and knowledge in undertaking such analyses. Students will gain hands-on, computer-based experience with basic and advanced analytical tools to making marketing decisions that create value and build competitive advantage. Topics include demand estimation, segmentation, forecasting sales, and web/social media analytics. | LE Lecture

Fall 2020 MUE2690 2690 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. | LL Lecture/Lab Combination

Fall 2020 GEO4400 4400 Urban Geography GEO Geography 3 Spatial development of urban areas in United States and selected urban areas globally. Examines scale, characteristics, and interconnectedness of urban areas using location quotients, technology development, and population migration concepts. | LE Lecture

Fall 2020 TH2390 3290 Costume History TH Theatre 3 History of costume and fashion from prehistoric to modern times and fashion and how it relates to theatre. | LE Lecture

Fall 2020 MTH2435 2435 Elem Math Concepts Teachers 2 MTH Mathematics 4 Overview of mathematical topics from a perspective appropriate for early and middle childhood educators. Topics include ratio, proportion, simple probability, data analysis, area, volume, and basic transformational geometry. | LE Lecture

Fall 2020 SOC6100 6100 Political Anthropology SOC Sociology 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. | LE Lecture

Fall 2020 M&I340 340 Biological Safety M&I Microbiology & Immunology 2 Identification, handling, and containment of potentially hazardous biological materials, including microorganisms and recombinant DNA. | LE Lecture

Fall 2020 ART3150 3150 Studies in 19th Cent Art ART Art 3 General surveys and intensive studies of the period, major movements, and artists of the time. Integrated Writing course. | LE Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN2020</td>
<td>Intermediate Spanish II</td>
<td>2020</td>
<td>Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Taught in Spanish. &lt;br&gt; Department Managed Prerequisite(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 or AP Spanish Language 3. &lt;br&gt; &lt;br&gt; UG LE Lecture</td>
</tr>
<tr>
<td>REL6810</td>
<td>Independent Study</td>
<td>6810</td>
<td>Faculty-directed, individualized study on student-selected topics. Limited to advanced students. Permission of faculty and a minimum of 3.5 GPA required. &lt;br&gt; &lt;br&gt; GR IS Independent Study</td>
</tr>
<tr>
<td>BIE3760</td>
<td>Cognitive Systems Eng</td>
<td>7360</td>
<td>Students will acquire knowledge and experience that will aid 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. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
<tr>
<td>MUE6770</td>
<td>Chamber Orchestra</td>
<td>6770</td>
<td>Chamber orchestra &lt;br&gt; &lt;br&gt; 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. &lt;br&gt; &lt;br&gt; GR LL Lecture/ Lab Combination</td>
</tr>
<tr>
<td>STT4960</td>
<td>Topics in Stat and Prob</td>
<td>4960</td>
<td>Statistics 1 Topics in statistics and probability. &lt;br&gt; &lt;br&gt; UG IS Independent Study</td>
</tr>
<tr>
<td>NUR7304</td>
<td>Finan Resour Mgmt Nq Ad</td>
<td>7304</td>
<td>Nursing 5 Fiscal management concepts for nurse administrators. Content focuses on financial reporting function, resource allocation, managerial issues related to finance, financial planning and control in nursing administration. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
<tr>
<td>EES4450</td>
<td>Petroleum Geology</td>
<td>4450</td>
<td>Petroleum geology, oil and gas exploration techniques, geology of oil producing regions, well drilling, well interpretation, enhanced oil and gas recovery, CO2 sequestration, production equipment, oil and gas sales and marketing. &lt;br&gt; &lt;br&gt; UG LE Lecture</td>
</tr>
<tr>
<td>COM4570</td>
<td>Intercultural Comm</td>
<td>4570</td>
<td>Communication 3 Emphasis on research and theory to better understand the complexity of intercultural communication interactions. &lt;br&gt; &lt;br&gt; UG LE Lecture</td>
</tr>
<tr>
<td>EG5990</td>
<td>Full-time CPT in CEG</td>
<td>7990</td>
<td>Computer Engineering 0 Practical work experience in graduate level Computer Engineering. &lt;br&gt; &lt;br&gt; GR IN Internship</td>
</tr>
<tr>
<td>EED5210</td>
<td>P-5 Meth Field Expr</td>
<td>3210</td>
<td>Elementary Education P-5 1 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 courses. &lt;br&gt; &lt;br&gt; UG PR Practicum</td>
</tr>
<tr>
<td>EES4940</td>
<td>Modeling Sub Fluid Flow</td>
<td>7490</td>
<td>EES Earth &amp; Environmental Sciences 3 Applications of models for simulating sub-surface flow and mass transport in aquifers and oil and gas reservoirs. The emphasis will be on developing the dimensionality, the spatial and temporal discretization, the initial and boundary conditions, and the parameterization needed in formulating a model from field data. &lt;br&gt; &lt;br&gt; Department Managed Prerequisite(s): Graduate level EES 6540 Minimum Grade of D. &lt;br&gt; &lt;br&gt; GR LL Lecture/ Lab Combination</td>
</tr>
<tr>
<td>PSY9050</td>
<td>Quasi-Experimentation</td>
<td>9050</td>
<td>Psychology 4 Issues in design and analysis for field settings are reviewed. These include quasi-experimental design, validity, and statistical analysis. &lt;br&gt; &lt;br&gt; GR SE Seminar</td>
</tr>
<tr>
<td>PSY3230</td>
<td>Cognition &amp; Learning Mth</td>
<td>3230</td>
<td>Psychology 4 Laboratory research in various areas of cognitive psychology. Integrated Writing course. &lt;br&gt; &lt;br&gt; UG LE Lecture</td>
</tr>
<tr>
<td>MGT4780</td>
<td>Internship</td>
<td>4780</td>
<td>Management 3 Internship in Management &lt;br&gt; &lt;br&gt; MGT Management 3 Internship in Management &lt;br&gt; &lt;br&gt; MGT</td>
</tr>
<tr>
<td>PSY6220</td>
<td>Psycholinguistics Cup</td>
<td>6220</td>
<td>Psychology 3 Communication-intensive seminar: integrating knowledge on language: its development during the first years of life, its biological basis, its normal and abnormal characteristics. &lt;br&gt; &lt;br&gt; GR SE Seminar</td>
</tr>
<tr>
<td>EDT140</td>
<td>LMS &amp; Evaluation</td>
<td>8140</td>
<td>Educational Technology 3 Examiners integrating curriculum with educational technologies such as learning management systems and the knowledge and skills necessary to evaluate the quality of online courses. &lt;br&gt; &lt;br&gt; UG LE Lecture</td>
</tr>
<tr>
<td>NUR7613</td>
<td>Psych MH NP Pract III</td>
<td>7613</td>
<td>Nursing 7 The focus is on synthesis of knowledge and implementation of the role of the Psychiatrist-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. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
<tr>
<td>ES1740</td>
<td>Complexity in Env System</td>
<td>7160</td>
<td>Environmental Sciences 4 Complexity in Environmental Systems 4 This interdisciplinary course explores mathematical methods for quantitative analysis and modeling of complex nonlinear environmental systems. The course introduces the concepts and tools for analyzing and modeling: scaling in space and time, feedback, and self-organization in environmental systems including ecology, hydrology, global climate change, and geosystems. Two hours lecture and two hours lab are combined. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
<tr>
<td>SLI1700</td>
<td>Interpreting Process</td>
<td>1700</td>
<td>Sign Language Interpreting 3 Cognitive skills used in the process of interpreting: visualization, prediction, listening, memory, abstracting, closure, dual tasking, and processing time. Introduction to Demand/ Control Schemas. &lt;br&gt; &lt;br&gt; UG LE Lecture</td>
</tr>
<tr>
<td>BME6720</td>
<td>Biomedical Optics</td>
<td>6720</td>
<td>Biomedical Engineering 3 Quantitative biomedical optics, principles and applications of light propagation in biological tissue; 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.&lt;br&gt; &lt;br&gt; Department Managed Prerequisite(s): Undergraduate level PHY 2410 Minimum Grade of D and Undergraduate level ANT 2120 Minimum Grade of D or Undergraduate level ANT 3120 Minimum Grade of D or Graduate level ANT 5120 Minimum Grade of D. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
<tr>
<td>SAA6680</td>
<td>Career Dev Prog/Employ</td>
<td>6680</td>
<td>Student Affairs in Higher Ed 3 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. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
<tr>
<td>BIO6440</td>
<td>Plant Physiology</td>
<td>6440</td>
<td>Biology 4 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. &lt;br&gt; &lt;br&gt; GR LE Lecture</td>
</tr>
</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. <b>Department Managed Prerequisite(s): Undergraduate level MTH 2320 Minimum Grade of D> 5>

Fall 2020  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.

Fall 2020  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.

Fall 2020  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.

Fall 2020  HST7120  7120  Seminar in Ac-Am 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. Topic vary.

Fall 2020  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.

Fall 2020  BME7136L  7136L  Instrumentation Radiation Meas Lab  BME  Biomedical Engineering  0  Required laboratory for BME 7136.

Fall 2020  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, Quine, Kripke, Putnam and Williamson.

Fall 2020  BHE6330  6330  Erg in Occup Silly & Hlth  BHE  Industrial & Human Fac Engr  3  Discusses 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 injury.

Fall 2020  ASM6510  6510  Aerospace Medicine Basic  ASM  Aerospace Medicine  3  An introduction to the basics of aerospace medical issues that prepares students for the aeronautical and commercial aircraft operations in flight environment course. Subject matter includes aerospace medical history, illnesses, atmospheric physics, physical environmental issues such as radiation, thermal issues, noise, and space environments.

Fall 2020  BI05460  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.

Fall 2020  ENGL710  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.

Fall 2020  EDLE720  8720  Bldg-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.

Fall 2020  ATH3800  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.

Fall 2020  CEG420L  420L  Intro Robotics Lab  CEG  Computer Engineering  1  First exposure to plant modeling and controller design to realize elementary control strategies in a laboratory environment.

Fall 2020  ANT7210  7210  Human Microanatomy  ANT  Anatomy  3  Detailed microanatomy of human cells, tissues, and organ systems.

Fall 2020  MB8990  8990  Microbiology Research  MI  Microbiology & Immunology  2  Supervised thesis research.

Fall 2020  PSY6010  6010  Adv Research Methods  PSY  Psychology  4  Advanced methods in selected areas of psychology.

Fall 2020  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.

Fall 2020  ART5120  5120  Studies in Medieval Art  ART  Art  3  General surveys and intensive studies of the period, major movements, and artists of the time. Titles vary.

Fall 2020  EC4600  4600  Economics of Sports  EC  Economics  3  Applications of economic principles to professional and intercollegiate sports.

Fall 2020  EDLD970  9700  Practicum I: Supp  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.

Fall 2020  ME0940  6940  Mech & Mat EGR Interns  ME  Mechanical and Materials Eng  3  Department internship course. Students are supervised via weekly seminars and regular feedback from employer.

Fall 2020  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.

Fall 2020  SOC2210  2210  Explore Social Problems  SOC  Sociology  3  Focuses on specific social problems. Topics vary.

Fall 2020  PSY4420  4420  Organizational Psych Lab  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.

Fall 2020  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.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Type</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE480</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.</td>
</tr>
<tr>
<td>MTH2320</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.</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.</td>
</tr>
<tr>
<td>STT3600</td>
<td>Applied Statistics I</td>
<td>STT</td>
<td>3</td>
<td>Introduction to probability, random variable 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.</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.</td>
</tr>
<tr>
<td>SOC3230</td>
<td>Intensive Alcohol Ed</td>
<td>SOC</td>
<td>3</td>
<td>Observation 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>Patriarchal narratives and Mosaic legislation of the Pentateuch or Torah, the initial five books of the Bible.</td>
</tr>
<tr>
<td>SL49050</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.</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>MIS3100</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.</td>
</tr>
<tr>
<td>LE1030</td>
<td>Law Enforcement</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.</td>
</tr>
<tr>
<td>ED6470</td>
<td>MA Intern Pt I 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>CST2300</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?</td>
</tr>
<tr>
<td>HST4820</td>
<td>Military History</td>
<td>HST</td>
<td>3</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.</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.</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.</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.</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 situations and social causes underlying people's attitudes, beliefs, and behaviors.</td>
</tr>
<tr>
<td>NUR7089</td>
<td>Supervised Nog Res Exp</td>
<td>NUR</td>
<td>1</td>
<td>Guided exploration of research problem(s) under direct supervision of experienced researcher</td>
</tr>
<tr>
<td>WGS3200</td>
<td>Woman Multicultural Pers</td>
<td>WGS</td>
<td>1</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.</td>
</tr>
<tr>
<td>KNH1400</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>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
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<tr>
<td>EGG3970</td>
<td>CE3700</td>
<td>3</td>
<td>Introduction to computer engineering topics.</td>
<td></td>
</tr>
<tr>
<td>CEG9200</td>
<td>EGG3930</td>
<td>3</td>
<td>Examination that tests understanding of the fundamentals necessary to begin concentrated study in a chosen Ph.D. research area.</td>
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<tr>
<td>CS4260</td>
<td>EGG3910</td>
<td>4</td>
<td>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>
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<tr>
<td>IT2010</td>
<td>EGG3930</td>
<td>3</td>
<td>Introduction to computer imaging and photo manipulation using raster-based Photoshop software. Filters and text will be explored. 2 hours lecture/2 hours lab.</td>
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<tr>
<td>HEA4920</td>
<td>EGG3910</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>CNL7700</td>
<td>EGG3910</td>
<td>1</td>
<td>Planned reading and/or project under the guidance of a Department of Human Services faculty member.</td>
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<tr>
<td>EE6360</td>
<td>EGG3910</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>PSY9010</td>
<td>EGG3910</td>
<td>3</td>
<td>Present 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. Department Managed Prerequisite(s): Graduate level PSY 7010 Minimum Grade of D- or PSY 7020 Minimum Grade of D- or PSY 7030 Minimum Grade of D- or PSY 7040 Minimum Grade of D- or PSY 7050 Minimum Grade of D-</td>
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<tr>
<td>EGG3910</td>
<td>EGG3910</td>
<td>3</td>
<td>Understand the origination, evolution, and diversity of microfossil organisms. The utilization of microfossils as biostratigraphic indicators, and their role in interpreting the geologic history of the Earth. Paleontological and paleoenvironmental reconstruction using specific microfossil organisms. Microfossils as indicators of metamorphism.</td>
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<tr>
<td>EGG3910</td>
<td>EGG3910</td>
<td>3</td>
<td>Laboratory supporting EE 5450. Students will experience hands on learning in lab environment.</td>
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<tr>
<td>EGG3910</td>
<td>EGG3910</td>
<td>3</td>
<td>Examine active processes by which organisms gather, interpret, and respond to environmental stimuli.</td>
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<tr>
<td>FTN4000</td>
<td>SOC3100</td>
<td>3</td>
<td>Seminar in a finance topic of current and timely interest. Topics vary.</td>
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<tr>
<td>EGG3910</td>
<td>EGG3910</td>
<td>3</td>
<td>Examine role of cities in past and present societies, the social and cultural implications of urban living, and special problems associated with city life. Department Managed Prerequisite(s): Undergraduate level SOC 2000 Minimum Grade of D and Undergraduate level SOC 3620 Minimum Grade of D- or PSY 3110 Minimum Grade of D- or PSY 3120 Minimum Grade of D-</td>
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<tr>
<td>BUS4000</td>
<td>EGG3910</td>
<td>3</td>
<td>Provide students with contemporary entrepreneurial experience by solving real business challenges &amp; working with local executives. Student objectives are to face an unstructured business situation &amp; develop recommendations to address the opportunity for commercialization; put fundamental business planning skills into practice; use analysis &amp; planning tools (e.g., SWOT, marketing and competitive analysis, forecasts, ROI) to develop recommendations.</td>
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<tr>
<td>UH4000</td>
<td>EGG3910</td>
<td>3</td>
<td>Emphasis on broadly interdisciplinary topics or issues. Integrated Writing course.</td>
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<tr>
<td>MUE2490</td>
<td>EGG3910</td>
<td>3</td>
<td>Exploration of performance repertoire composed expressly for small wind ensemble. Works by such composers as Mozart, Strauss, Dvorak, Berlioz, and Stravinsky. Consent of conductor and student's applied instructor required.</td>
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<tr>
<td>SCM7910</td>
<td>SCM910</td>
<td>3</td>
<td>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.</td>
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<tr>
<td>NUR8201</td>
<td>NUR8201</td>
<td>3</td>
<td>This course examines evidence practices in leadership practices in complex health care settings focusing on creating and evaluating innovative practices including model application for financial and clinical outcomes.</td>
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<tr>
<td>CHM2110L</td>
<td>CHM2110L</td>
<td>2</td>
<td>Laboratory illustrations of CHM 2110 lecture material and techniques of preparative organic chemistry.</td>
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<tr>
<td>DMV1010</td>
<td>DMV1010</td>
<td>5</td>
<td>Laboratory: lecture and lab. Integrated Writing course.</td>
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<tr>
<td>SPN3440</td>
<td>SPN3440</td>
<td>3</td>
<td>Study of Spanish-American culture with emphasis on its uniqueness among the family of nations. Taught in Spanish. Spanish majors who take SPN 3440 may not take ML 3440 for credit. Department Managed Prerequisite(s): Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D- or Undergraduate level SPN 3250 Minimum Grade of D- or Undergraduate level SPN 3250 Minimum Grade of D- or Undergraduate level SPN 3250 Minimum Grade of D-</td>
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<tr>
<td>MTH3140</td>
<td>MTH3140</td>
<td>3</td>
<td>Solving scientific problems using computational software packages MATLAB and Mathematica, including procedural and functional programming.</td>
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<tr>
<td>BIO3700</td>
<td>BIO3700</td>
<td>3</td>
<td>Provides an opportunity to learn and discuss contemporary issues in biology, medicine, and health; recognize, compare, contrast, approach biological situations and problems; acquire and separate factual knowledge from opinion; and demonstrate critical thinking. Integrated Writing course.</td>
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</tr>
<tr>
<td>MUA3420</td>
<td>MUA3420</td>
<td>3</td>
<td>Open only to music majors or minors. All students must have audited for and have received departmental approval before registering for applied music.</td>
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<tr>
<td>ESS7480</td>
<td>ESS7480</td>
<td>2</td>
<td>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. Department Managed Prerequisite(s): Graduate level EES 6540 Minimum Grade of D or PSY 3710 Minimum Grade of D- or PSY 3710 Minimum Grade of D- or PSY 3710 Minimum Grade of D- or PSY 3710 Minimum Grade of D-</td>
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<tr>
<td>BIO4950</td>
<td>BIO4950</td>
<td>1</td>
<td>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.</td>
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<tr>
<td>Course Code</td>
<td>Offering</td>
<td>Description</td>
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<tr>
<td>EE2010L</td>
<td>Fall 2020</td>
<td>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) Department Managed Prerequisite(s): Undergraduate 1 Minimum Grade of C and Undergraduate level 2100 Minimum Grade of B and Undergraduate level MTH 3100 Minimum Grade of C. Undergraduate level PHY 2410 Minimum Grade of D (PHY 2415 can be taken concurrently).</td>
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<tr>
<td>BME6710</td>
<td>Fall 2020</td>
<td>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 biopsy, optical spectroscopy, optical imaging), thermal aspects of light-tissue interaction, therapeutic use of lasers (laser ablation, photodynamic therapy), novel technologies and applications including optical molecular imaging. Includes microscopy facility tour and small lab experiments. (B) Department Managed Prerequisite(s): Undergraduate level PHY 2410 Minimum Grade of D.</td>
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<tr>
<td>ART3470</td>
<td>Fall 2020</td>
<td>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) Department Managed Prerequisite(s): Undergraduate level ART 2000 Minimum Grade of D and Undergraduate level ART 2080 Minimum Grade of D.</td>
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<tr>
<td>AES2230</td>
<td>Fall 2020</td>
<td>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.</td>
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<tr>
<td>BMS4620</td>
<td>Fall 2020</td>
<td>Human Physiology BMS Biomedical Sciences 4 (Also listed as P&amp;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.</td>
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<tr>
<td>ENG4740</td>
<td>Fall 2020</td>
<td>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. (B) Department Managed Prerequisite(s): Undergraduate level ENG 4710 Minimum Grade of D or Undergraduate level ENG 3500 Minimum Grade of D.</td>
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<tr>
<td>HEA9240</td>
<td>Fall 2020</td>
<td>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.</td>
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<tr>
<td>EES4660</td>
<td>Fall 2020</td>
<td>OSHA Compliance EES Earth &amp; Environmental Sciences 1 Practical application of the theories of safety and health law. Intended for persons having management responsibility for occupational safety and health.</td>
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<tr>
<td>KENH720B</td>
<td>Fall 2020</td>
<td>Tennis KENH Kinesiology &amp; Health 1 Fundamental skills and knowledge of Tennis. Competency-based approach. Course may accommodate disabled students when appropriate.</td>
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<tr>
<td>ME4120L</td>
<td>Fall 2020</td>
<td>Finite Element Analysis Lab ME Mechanical and Materials Eng 0 Required laboratory for ME 4120.</td>
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<tr>
<td>BME3530</td>
<td>Fall 2020</td>
<td>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 and continuous Fourier transforms; z-transform and frequency response of digital systems; digital IIR and FIR filter design.</td>
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<tr>
<td>ED7610</td>
<td>Fall 2020</td>
<td>C &amp; I for Learning ED Education 3 Students will understand and critique curriculum by analyzing Curriculum and Instruction Theory. (B) Department Managed Prerequisite(s): Undergraduate level ART 2090 Minimum Grade of D and Undergraduate level ART 2080 Minimum Grade of D.</td>
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<tr>
<td>PTX9520</td>
<td>Fall 2020</td>
<td>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 &amp; Toxicology with input from the advisor.</td>
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<tr>
<td>PSIS310</td>
<td>Fall 2020</td>
<td>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.</td>
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<tr>
<td>MKT4300</td>
<td>Fall 2020</td>
<td>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.</td>
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<tr>
<td>STT4860</td>
<td>Fall 2020</td>
<td>Ind Read Stat and Prob STT Statistics 1 Independent study in statistics and probability.</td>
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<tr>
<td>EE7470</td>
<td>Fall 2020</td>
<td>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) 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 6350 Minimum Grade of B) and (B) Department Managed Prerequisite(s): Undergraduate level EE 4010 Minimum Grade of D.</td>
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<tr>
<td>OL4030</td>
<td>Fall 2020</td>
<td>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.</td>
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<tr>
<td>KHNH1100A</td>
<td>Fall 2020</td>
<td>Bowling KHNH Kinesiology &amp; 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.</td>
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<tr>
<td>CEG8980</td>
<td>Fall 2020</td>
<td>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 offering 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.</td>
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<tr>
<td>PSY7060</td>
<td>Fall 2020</td>
<td>Perception PSY Psychology 4 Study of the active processes by which organisms gather, interpret, and respond to environmental stimuli.</td>
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<tr>
<td>ECE4010</td>
<td>Fall 2020</td>
<td>ECE-Gen 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.</td>
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<tr>
<td>PTX9520</td>
<td>Fall 2020</td>
<td>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 &amp; Toxicology with input from the advisor.</td>
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<tr>
<td>STT4860</td>
<td>Fall 2020</td>
<td>Ind Read Stat and Prob STT Statistics 1 Independent study in statistics and probability.</td>
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<tr>
<td>EE7470</td>
<td>Fall 2020</td>
<td>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) 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 6350 Minimum Grade of B) and (B) Department Managed Prerequisite(s): Undergraduate level EE 4010 Minimum Grade of D.</td>
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<tr>
<td>OL4030</td>
<td>Fall 2020</td>
<td>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.</td>
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</table>
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  FSN4110  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 Leadership 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  LEP0350  0350  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  CHS5010  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. (hb) Department Managed Prereq(s): Undergraduate level CHI 2020 Minimum Grade of D or AP Chinese Language & Culture 4/5.
GR  LE  Lecture
Fall 2020  KHH14801  14801  Rappelling  KHN  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 1: 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  ED7060  7060  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  CSD3210  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 3050. UG  LB  Lab
Fall 2020  TEG2920  2920  Indus Elec 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. (hb) Department Managed Prereq(s): Undergraduate level TEG 2910 Minimum Grade of D or.
UG  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. (hb) Department Managed Prereq(s): Undergraduate level EE 4100 Minimum Grade of D or Undergraduate level PHY 3150 Minimum Grade of D or.
UG  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. (hb) Department Managed Prereq(s): Undergraduate level SPN 3210 Minimum Grade of D or Undergraduate level SPN 3250 Minimum Grade of D and (Undergraduate level SPN 3110 Minimum Grade of D or Undergraduate level SPN 3120 Minimum Grade of D or Undergraduate level SPN 3260 Minimum Grade of D or Undergraduate level SPN 3310 Minimum Grade of D or Undergraduate level SPN 3340 Minimum Grade of D or Undergraduate level SPN 3360 Minimum Grade of D or Undergraduate level SPN 3980 Minimum Grade of D or Undergraduate level SPN 3990 Minimum Grade of D or.
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  PHY4080  4080  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 gradients, ionic basis of the action potential, synaptic transmission, and ion channels. GR  LE  Lecture
Fall 2020  PHL3800  3800  Identity Resposta 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. Preparers 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
Fall 2020  REL5720  5720  Pentateuch  REL  Religion  3  Examines patriarchal narratives and Mosaic legislation in the Pentateuch or Torah as the bedrock of the Bible.  GR  LE  Lecture
Fall 2020  PSY9990  9990  Dissertation Research  PSY  Psychology  1  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.  GR  IS  Independent Study
Fall 2020  DAN4800  4800  Advanced Tap Dance II  DAN  Dance  1  Group class exploring upper-level Tap Dance techniques.  UG  ST  Studio
Fall 2020  CS7800  7800  Information Retrieval  CS  Computer Science  3  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. `<b>Department Managed Prerequisite(s): Undergraduate level CS 3300 Minimum Grade of D or Graduate level CS 5100 Minimum Grade of D.`  GR  LE  Lecture
Fall 2020  EED5000  5000  Fams, Comm's, & Schools  EED  Elementary Education P-5  3  Educators collaborating with families and diverse backgrounds in the care and education of children; building curriculum that addresses the needs of English Language Learners.  UG  LE  Lecture
Fall 2020  MKT7300  7300  Entrepreneurship  MKT  Marketing  3  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.  GR  LE  Lecture
Fall 2020  PSH160  160  Forensic Assessment  PSI  Professional Psychology  3  A focus on the interface between psychological assessment and the legal system.  GR  LE  Lecture
Fall 2020  HST1100  1100  West Civ. to 1500  HST  History  3  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.  UG  LE  Lecture
Fall 2020  TH3360  3360  Pattern Draft & Draping  TH  Theatre  3  Basic principles of pattern drafting, flat patternmaking, and draping of the female bodice.  UG  ST  Studio
Fall 2020  MST300  300  Ent Data and Res Mgmt  MIS  Management Information Systems  3  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.  GR  LE  Lecture
Fall 2020  CEG7050  7050  Trust Integ Ckt Design  CEG  Computer Engineering  3  This course will cover topics in "Trust for Integrated Circuit Design." 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. `<b>Department Managed Prerequisite(s): Graduate level EE 6620 Minimum Grade of D and Graduate level EE 4620 Minimum Grade of D or Undergraduate level EE 4620 Minimum Grade of D or Undergraduate level EE 4620 Minimum Grade of D or Undergraduate level CEG 3320 Minimum Grade of D.`  GR  LB  Lab
Fall 2020  KNH1555  1555  GRACIE Self Def/Intense  KNH  Kinesiology & Health  1  Intermediate level of skills and knowledge in GRACIE Self Defense: Intermediate. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  ENG3400  3400  Studies in African Lit  ENG  English  3  Representative works of established and emerging African writers.  UG  LE  Lecture
Fall 2020  PSY4510  4510  Cross-Cul 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. Integrated Writing course.  UG  SE  Seminar
Fall 2020  FIN4810  4810  Internship in Finance  FIN  Finance  1  Faculty-supervised internship in finance. Students work in a firm or public agency, participate in seminars, and submit reports. Topics vary.  UG  IN  Internship
Fall 2020  MUE6700  6700  Univ Symphony Orchestra  MUE  Music: Ensembles  1  Performs orchestral music of all styles and periods.  GR  LL  Lecture/Lab Combination
Fall 2020  PLS4480  4480  Gender Violence Am Pol  PLS  Political Science  3  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.  UG  LE  Lecture
Fall 2020  RHD3680  3680  Impact of HIV  RHB  Rehabilitation  3  Introduction to HIV and the populations impacted. Overview of the history, stereotypes and prejudices, prevention and treatment, and specific impact on subpopulation of HIV.  UG  LE  Lecture
Fall 2020  DMV9999  9999  For Administrative Use Only  DMV  DMV Consortium  0
Fall 2020  PSLS670  6700  Politics of Intelligence  PLS  Political Science  3  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.  GR  LE  Lecture
Fall 2020  PSY2820  2820  Topics in Human Factors  PSY  Psychology  3  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  DAN4210  4210  Jazz/Theatre Dance IV  DAN  Dance  2  Diversified styles and techniques of advanced jazz/musical theatre dancing. Emphasis on the continued development of advanced techniques, synchronization, coordination, musicality, and variation of style.  UG  ST  Studio
Fall 2020  EE86760  6760  Air Quality Management  EES  Earth & Environmental Sciences  3  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.  GR  LE  Lecture
Fall 2020  ENG4640  4640  TopicsTech/Prof Writing  ENG  English  3  Courses, seminars, or workshops in specialized topics relating to business, technical, and professional writing. `<b>Department Managed Prerequisite(s): Undergraduate level ENG 3610 Minimum Grade of D.`  UG  LE  Lecture
Fall 2020  MUS1560  1560  Keyboard Musicianship II  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  EE6440L  6440L  Electronic Integ Lab  EE  Electrical Engineering  1  Laboratory supporting EE 6440. Students will experience hands on learning in lab environment.  GR  LB  Lab
Fall 2020  PHY7510  7510  Solid State - E&M  PHY  Physics  3  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.  GR  SE  Seminar
Fall 2020  GR1010  1010  Beginning Greek I  GR  Greek  3  Essentials of the Greek language.  UG  LE  Lecture
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Department</th>
<th>Prerequisites</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME4530</td>
<td>Energy Conversion</td>
<td>4.5</td>
<td>Mechanical and Materials Engineering</td>
<td>Fundamentals of energy and energy conversion, the conversion of energy from mechanical, thermal, chemical, and nuclear sources. To demonstrate these energy forms in gases, liquids, and solids, direct energy conversion, fossil fuels, biofuels, and nuclear power will be presented. Undergraduate level ME 3310 Minimum Grade of D-&lt;br&gt;Department Managed Prerequisite:</td>
<td>Lecture</td>
</tr>
<tr>
<td>ASM7000</td>
<td>Accident Investigation</td>
<td>7.0</td>
<td>Aerospace Medicine</td>
<td>This course provides an overview of aerospace accident investigation procedures, relevant regulations, and interdisciplinary management from an aero-medical perspective. Selected advanced topics include the analysis of relevant aerospace accident reports, post-crash survivability, and future directions.</td>
<td>Lecture</td>
</tr>
<tr>
<td>ED6530</td>
<td>AYA Int Pr II: Std T ISS</td>
<td>6.5</td>
<td>Education</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>Internship</td>
</tr>
<tr>
<td>EDL7665</td>
<td>Mentoring and Coaching</td>
<td>7.66</td>
<td>Educational Leadership</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>Lecture</td>
</tr>
<tr>
<td>PLS4881</td>
<td>Diplomacy &amp; Negotiation</td>
<td>4.88</td>
<td>Political Science</td>
<td>Topics include power and leverage; negotiation strategies; mediation and third-party involvement; and ratification and implementation of agreements. Provides an analagous understanding of how negotiation works, and some level of proficiency and comfort in the practice of negotiation. Integrated Writing course.</td>
<td>Seminar</td>
</tr>
<tr>
<td>CHM6600</td>
<td>Exp Nanomaterials</td>
<td>6.60</td>
<td>Chemistry</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 fabrication of nanomaterials such as metal nanoparticles and graphene nanohybrids, 2) characterization of physical and chemical properties by using techniques such as Raman spectroscopy, atomic force microscopy, X-ray spectroscopy, electrochemical analysis; and 3) computational modeling of nanoscale physical phenomena.</td>
<td>Lecture</td>
</tr>
<tr>
<td>PS9990</td>
<td>Internship</td>
<td>9.99</td>
<td>Professional Psychology</td>
<td>Capstone clinical experience for the Psy.D. degree, completed under supervision by a licensed psychologist.</td>
<td>Internship</td>
</tr>
<tr>
<td>BMS7110</td>
<td>Biomedical Signals</td>
<td>7.110</td>
<td>Biomedical Sciences</td>
<td>This course provides 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>Lecture</td>
</tr>
<tr>
<td>TH4240</td>
<td>Adv Design Studio I</td>
<td>4.24</td>
<td>Theatre</td>
<td>Intensive study of theatrical costume, scenery, lighting, and sound design with a focus on script interpretation. Provides practical design work with an emphasis on produced designs, professional development, and specialization in the student's area of design.</td>
<td>Studio</td>
</tr>
<tr>
<td>PSY9910</td>
<td>Internship</td>
<td>9.910</td>
<td>Psychology</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>Internship</td>
</tr>
<tr>
<td>DAN4070</td>
<td>Advanced Tap Dance I</td>
<td>4.070</td>
<td>Dance</td>
<td>Group class exploring upper level tap dance techniques.</td>
<td>Lecture</td>
</tr>
<tr>
<td>ATH7000</td>
<td>Arch Field Methods</td>
<td>3.700</td>
<td>Anthropology</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 archaeological data.</td>
<td>Lecture</td>
</tr>
<tr>
<td>PHL6110</td>
<td>Ethics Seminar</td>
<td>6.110</td>
<td>Philosophy</td>
<td>An in-depth investigation of ethical problems, theories, and methods. Variable title course.</td>
<td>Seminar</td>
</tr>
<tr>
<td>BBO6550</td>
<td>Plant Systems Biology</td>
<td>6.550</td>
<td>Biology</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>Lecture</td>
</tr>
<tr>
<td>EE7520</td>
<td>Low Power VLSI Sys Des</td>
<td>7.520</td>
<td>Electrical Engineering</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. &lt;br&gt;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)&lt;br&gt;Required laboratory for ISE 4540 and ISE 4540L.</td>
<td>Lecture</td>
</tr>
<tr>
<td>EC2100</td>
<td>Econ State and Society</td>
<td>2.100</td>
<td>Economics</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 PHL 2100, part of a two-course Wright State Core cluster on government and society.</td>
<td>Lecture</td>
</tr>
<tr>
<td>PSY2020</td>
<td>Careers in Psychology</td>
<td>2.020</td>
<td>Psychology</td>
<td>Topics relating to careers and occupations in psychology.</td>
<td>Lecture</td>
</tr>
</tbody>
</table>
| IT1400 | Layout and Typography                                               | 1.400   | Information Technology  | 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. | Lecture/Lab
| RHB4010 | Dev Disabilities                                                     | 4.010   | Rehabilitation        | Study of the etiology, eligibility, and rehabilitation of individuals with development disabilities. Behavioral observations, evidenced based research study and site visits to rehabilitation facilities are components of course. | Lecture |
| DOS9080 | Struct Equation Modeling                                             | 9.080   | Doctor Org Studies     | This course will develop comprehension and skills for Strategic Equation Modeling techniques. The course includes purpose, logic, applications, benefits and limitations of Structural Equation Modeling techniques. | Seminar |
| LA6100 | Theory                                                               | 6.100   | Liberal Arts          | An examination of the relationship and relevance of academia, the humanities, and the liberal arts to today's society and the modern learner. | Lecture |
| ISE3512 | Biotechnology II Lab                                                | 3.512   | Industrial & Systems Engineering | Required laboratory for ISE 3512. | Lab |
| ED4950 | Youth Voices                                                         | 4.950   | Education            | This course provides 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. | Seminar |
| ASM7777 | Space Medicine                                                      | 7.777   | Aerospace Medicine    | 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. | Lecture |
| ASL2010 | Intermediate ASL I                                                  | 2.010   | American Sign Language | This course focuses on American Sign Language that continues to develop grammatical and vocabulary competencies, fluency in conversational ranges, and increases knowledge of the Deaf community and its cultural aspects. Outside activity required. | Lecture |
| ARA1010 | Beginning Arabic I                                                   | 1.010   | Arabic                | Communicative introduction to Arabic. Study of the vocabulary and structure of the Arabic language; practice in speaking, listening, reading, and writing. | Lecture |
| REL4500 | Seminar Amer Religion                                                | 4.500   | Religion             | Selected topics related to the history and practice of religion in America. Integrated Writing course. | Seminar |
Fall 2020  PPH8210  8210 Public Health ILE I  PPH  Population & Public Health  3  This course provides the opportunity to apply, integrate, and synthesize knowledge and experience gained throughout the MPH Program to a question or problem of public health relevance. Under supervision of a faculty advisor, students conduct an integrative writing project usually developed in the form of an applied research paper, policy analysis, community assessment, program evaluation, comprehensive case analysis, or “best practices” review. A full report is written and presented.
GR  IS  Independent Study
Fall 2020  WGS6990  6990 Independent Study  WGS  Women, Gender, and Sexuality  1  Supervised individual research on selected topics arranged between students and faculty member(s). Department Managed Prerequisite(s): Graduate level WMS 7000 Minimum Grade of D or Graduate level WGS 7000 Minimum Grade of D or Graduate level ENG 7140 Minimum Grade of D+.
GR  IS  Independent Study
Fall 2020  CLS1000  1000 Latin Greek Roots Eng  CLS  Classics  3  Builds English vocabulary through a study of Latin and Greek roots. Emphasis on words used commonly in higher education rather than on specialized terminology.
UG  LE  Lecture
Fall 2020  KNH1210A  1210A 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  RUS2010  2010 Intermediate Russian I  RUS  Russian  3  Grammar review, reading, and discussion of selected texts with practice in speaking and writing. Taught in Russian(s). Department Managed Prerequisite(s): Undergraduate level RUS 1020 Minimum Grade of C+.
UG  LE  Lecture
Fall 2020  ML5990  5990 Studies in Selected Subj  ML  Modern Languages  1  Topics of study in modern languages
GR  LE  Lecture
Fall 2020  EC2000  2000 Economic Life  EC  Economics  3  Basic economic concepts such as resource allocation, costs, supply, demand, and public goods. Topics include American capitalism, market failures, unemployment, inflation, and taxation. Basic economic principles applied to modern society and the challenges presented by a globalized economy. Credit will not be given for EC 2000 Economic Life for students who have already successfully completed EC 2040 and EC 2050. Integrated Writing course.
UG  LE  Lecture
Fall 2020  APS3020  3020 APS Leadership  APS  Applied Studies  3  A course to provide opportunities for students to gain knowledge, practice, and study in sustainable influence, direction, motivation, governance and "setting the pace" as they apply to business and organizational settings.
UG  LE  Lecture
Fall 2020  KNE3450  3450 Checkpoint 2  KNH  Kinesiology & Health  1  Monitors and supports the professional progress of health and physical education licensure students. Enhances the HIPR teacher candidate's preparation for Praxis II exam, student teaching and career development.
UG  LE  Lecture
Fall 2020  RBH3050  3050 Addictions & Application  RBH  Rehabilitation  3  Provides an overview of the historical, political, social-cultural, and psycho-physiological impact of addictions. Special attention given to emerging abuse and dependency issues and interventions used to address them.
UG  LE  Lecture
Fall 2020  GER5830  5830 Applied Elem Ger Instr  GER  German  1  Graduate student assist GER 1010 or GER 1020 instructors in conducting classes. Taught in German.
GR  IS  Independent Study
Fall 2020  REL5410  5410 Chinese Religions  REL  Religion  3  Introductory survey of religious thought and practice in Chinese History and culture. Primary focus will be on Confucianism, Daoism, and Buddhism. Themes examined include: religious and political in Chinese History, human nature and self-cultivation, and conceptions of the sage in Chinese religions.
GR  LE  Lecture
Fall 2020  PSY941  941 Annu! Beh Cp w/FldSdyAbr  PSY  Psychology  5  Communication-intensive seminar integrating knowledge on animal behavior. Topics will include evolution, natural and sexual selection, and mating systems. It also includes an educational trip abroad (e.g., Poland) in order to perform the critical experiential part of course work in engaging and interesting environment while at the same time being exposed to international scientific community and cooperation.
UG  LL  Lecture/Lab Combination
Fall 2020  HST7890  7890 IndependentStudyHlst  HST  History  1  Explores various facets of history under direct supervision of a faculty member. Requires approval of the supervising faculty member and the Director of Graduate Studies prior to registration. May not be taken on a topic currently offered in the graduate course catalog. May not be repeated for credit.
GR  IS  Independent Study
Fall 2020  MIL2020  2020 Found of Tactical Ldrshp  MIL  Military Science  3  Examines the challenges of leading tactical teams in complex contemporary operating environments. Highlights terrain analysis, patrolling, and operation orders. Cadets develop greater self-awareness as they assess their own leadership styles and practice communication and team-building skills. Contracted students are required to participate in two-hour lab, physical fitness program and weekend training exercises.
UG  LE  Lecture
Fall 2020  TH5510  3510 Stage Management  TH  Theatre  3  Skills and processes required of the working stage manager. Explores practical solutions to problems of stage management.
UG  LL  Lecture/Lab Combination
Fall 2020  EE1000  1000 Intro to EE  EE  Electrical Engineering  1  This course is designed to acquaint incoming Electrical Engineering and Engineering Physics students with the programs, expectations, goals and career paths. Outcome expectations are that the student will be more prepared in choosing an appropriate course of study and field of concentration.
UG  LE  Lecture
Fall 2020  MP3110  3110 The Moving Image  MP  Motion Picture  3  Introduction to film appreciation and analysis. Surveys basic theoretical and philosophical approaches to the study of film. Explores what it means to be literate in the language of film through study of key terms and concepts used in analyzing film. Topics include what it means to be a film spectator, how films create meaning, the political aspects of filmmaking, and various approaches to film criticism.
UG  LE  Lecture
Fall 2020  EDS6200  6200 Prin & Prac ECIS & PKSN  EDS  Education - Special Education  3  Overview of historical foundations, laws, theories, philosophies, and models in early childhood special education and early intervention.
GR  LE  Lecture
Fall 2020  PTX8061  8061 Six Sigma,Black Belt  PTX  Pharmacology/Toxicology  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 practices that emphasize understanding, measuring, and improving processes. The Black Belt course focuses on the advanced analytical tools for process improvement. Topics covered in the Green Belt course will only be explored at a deeper level.
GR  LE  Lecture
Fall 2020  CEG7900  7900 Selected Topics in CEG  CEG  Computer Engineering  1  Selected topics in computer engineering
GR  LE  Lecture
Fall 2020  TH1070  1070 Music Theory Actors II  TH  Theatre  2  Develops student understanding of rhythm, melody, sight-singing, and musical theatre piano in a group class.
UG  LL  Lecture/Lab Combination
Fall 2020  PHY7280  7280 General Relativity  PHY  Physics  3  Principles of the general theory of relativity with applications to gravitation and cosmology. Review of special relativity and tensor analysis. The equivalence principle, curvature, and Einstein's field equations. Introduction to differential geometry.
GR  SE  Seminar
Fall 2020  CHM1020L  1020L Elem Organic Chem w/App Lab  CHM  Chemistry  0  Required laboratory for CHM 1020.
UG  LB  Lab
Fall 2020  ED6230  6230 Recnet -Reading Recovery Core I  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.

Fall 2020  ED6120  6120 Early Lit Assess/Inst II  ED  Education  3  Teachers deepen their understanding of Clay’s literacy processing theory and connect interdiction instruction while tutoring students who struggle with literacy. Key concepts include teaching for phrased reading, fluent processing and flexible problem solving.

Fall 2020  CEG4322L  4322L VLSI Design Lab  CEG  Computer Engineering  1  Work station based experience designingasic 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>

Fall 2020  PSI9974  9974 Practicum - Advanced  PSI  Professional Psychology  1  Field experience supervised by a licensed psychologist.

Fall 2020  ISE4820  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.

Fall 2020  PSI4930  9430 Psychodynamic Psychother PSI  Professional Psychology  3  Present contemporary psychodynamic theory and practice.


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.

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.

Fall 2020  PSY4200  4200 Cognitive Psych Cap PSY  Psychology  3  Communication-intensive seminar integrating knowledge on cognitive psychology. Topics will vary. Integrated Writing course.

Fall 2020  AFSE3000  3000 History of Africa AFS  Afr /Afr Amer Studies  3  General introduction to African history. Covers the culture and history of the region from early time periods to the modern era.

Fall 2020  REL5540  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.

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.

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.<b> Department Managed Prerequisite: Graduate level PPH 7810 Minimum Grade of D</b>

Fall 2020  EE8000  8000 Select Topics in EE EE  Electrical Engineering  1  Recent developments in Electrical Engineering and related fields. Topics vary.

Fall 2020  ME4860  4860 Metal Forming ME  Mechanical and Materials Engr  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 2700 Minimum Grade of D and Undergraduate level ME 3120 Minimum Grade of C</b>

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.

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>

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.

Fall 2020  PHY4400  4400 Intro Nanosc/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.

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 ST 3680 Minimum Grade of D or Graduate level EE 4620 Minimum Grade of D and Undergraduate level MTH 2310 Minimum Grade of D</b>

Fall 2020  CEG6970  6970 Independent Study in CEG CEG  Computer Engineering  1  Independent study in computer engineering.

Fall 2020  COM6640  6640 Media Literacy COM  Communication  3  Analysis of contemporary programming and production practices including the development of critical standards for evaluation.

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>
This course will introduce students to the major perspectives and cross-disciplinary theories in the area of human addiction in the K-12 setting. A comprehensive review of the diverse cultures of Spain.

Overview of addiction and substance related issues for children and adolescents in the K-12 setting. Emphasis on the families impacted by addiction and substance use disorders.

Overview of wireless communication: 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.

Combination
Fall 2020  PSC7900  7900  Found of Novk Sec  PSC  Prof Psychology Cyber Security  3  Covers current real-world issues and practices of information security. Students learn how to successfully configure, execute, construct, and troubleshoot network security to ensure that threats are minimized or negated.  GR  LE  Lecture
Fall 2020  CTE4900  4900  Independent Study CTE  CTE  Career and Technical Education  1  Independent study for CTE candidates. Topics vary.  UG  IS  Independent Study
Fall 2020  MUA3220  3220  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  MUS7040  7040  Found & Prin of Mus Ed  MUS  Music  3  Historical, philosophical, and psychological foundations of music education. Principles applied to theoretical and practical problems of music education.  GR  LE  Lecture
Fall 2020  GER1010  1010  Beginning German I  GER  German  3  Communicative introduction to German structures and vocabulary and to Germanic culture. Practice in speaking, listening, reading and writing.  UG  LE  Lecture
Fall 2020  PSY2010  2010  History of Modern Psych  PSY  Psychology  3  The history of psychology as an academic discipline. History of the mind, historical events that have shaped the field, recognition of psychology as a science, and life histories of selected psychologists.  GE  LE  Lecture
Fall 2020  CEG7350  7350  Computer Architecture  CEG  Computer Engineering  3  Review of sequential computer architectures and study of parallel computer architectures. Topics include instruction-level parallelism, multiprocessor systems, memory hierarchy, pipeline processing, and interconnection networks.  GR  LE  Lecture
Fall 2020  TH5300  3500  Directing  TH  Theatre  3  Problems of script selection and interpretation, casting, rehearsing, and performance. Techniques of composition and movement; the proscenium stage and open stage. Preparation of the prompt book.  UG  LL  Lecture/Lab Combination
Fall 2020  MUE2460  2460  University Saxophone Quartet  MUE  Music: Ensembles  1  Performs saxophone quartet repertoire ranging from classic to jazz to contemporary. Audition required.  UG  LL  Lecture/Lab Combination
Fall 2020  EES4960  4960  Senior Thesis Research  EES  Earth & Environmental Sciences  0.5  In consultation with a faculty research advisor, students design a research problem that involves data collection and analysis. Students write a senior thesis in the style of a professional scientific journal. May be taken for a letter grade or pass/unsatisfactory. Integrated Writing course.  UG  IS  Independent Study
Fall 2020  CST7990  7990  Full-time CPT in CS  CS  Computer Science  0  Practical work experience in graduate level Computer Science.  GR  IN  Internship
Fall 2020  FR3610  3610  French Phonetics  FR  French  3  Pronunciation, diction, rhythm, and intonation. Transcription exercises and oral production. Taught in French.  GR  LE  Lecture
Fall 2020  KNH1200B  1200B  Fencing: Beginning  KNH  Kinesiology & Health  1  Fundamental skills and knowledge of Fencing: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate.  UG  LB  Lab
Fall 2020  PHL4420  4420  Lit and Philosophy  PHL  Philosophy  3  Study of literary texts with strong philosophical themes, such as philosophy and tragedy or philosophy and science fiction. Integrated Writing course.  UG  LE  Lecture
Fall 2020  CL4220  4220  Laboratory Management  CL  Clinical Laboratory Science  1.5  Principles of education, laboratory management, computer application and completion and presentation of a scientific project. Integrated Writing course.  GR  LE  Lecture
Fall 2020  EDS4820  4820  Internship Phase II  EDS  Education - Special Education  1  Internship in a middle school childhood for supervised field experience in inclusive setting while focusing on professional/ethical practice in collaborative/consultative role, research-validated practice, lifelong professional development. Cohort meetings required.  UG  IN  Internship
Fall 2020  CHI3980  3980  Studies in Sexs Suby  CHI  Chinese  3  Individual research project approved and supervised by a full-time faculty member. Taught in Chinese.  GR  LE  Lecture
Fall 2020  PSC7920  7920  Sec Risk Mgmt  PSC  Prof Psychology Cyber Security  3  Introduces management aspects of Cyber Security from an IT governance perspective by understanding the DoD, Federal, and IC information technology management goals. Topics include DIACAP, FISMA, CNSS, FIPS, and NIST Standards.  GR  LE  Lecture
Fall 2020  ED6800  6800  Class Manage & Organ  ED  Education  3  The study and application of classroom management and organizational models for use in diverse settings as related to adolescent development, discussion of recent research, practice, and innovation in the field of classroom management.  GR  LE  Lecture
Fall 2020  ISG7280  7280  Com & Con GIS as St Adv  ISG  Intervention Specialist  3  Skills and information needed in the role of the Gifted Intervention Specialist as collaborator with general education teacher, administrators and parents and the advocate for students with gifts and talents.  GR  LE  Lecture
Fall 2020  PLS7990  7990  Continuing Registration  PLS  Political Science  0  Continuing registration.  GR  IS  Independent Study
Fall 2020  SOC2000  2000  Intro to Sociology  SOC  Sociology  3  Introduction to the processes through which individuals become members of groups, organizations, institutions, and societies, and how human social interactions lead to changes in social life and structures. Integrated Writing course. Multicultural Competence course.  UG  LE  Lecture
Fall 2020  ANT7990  7990  Anatomy Seminar  ANT  Anatomy  1  Two seminars (Anatomy Seminar I and II) run concurrent with the Department of Neuroscience, Cell Biology and Physiology Seminar Series.  GR  SE  Seminar
Fall 2020  PLS4590  4590  Contemporary Brazil  PLS  Political Science  3  Introduction to Brazilian politics, society and economy. Topics include Brazil's political and economic liberalization, its international relations, gender and race relations, and the environment. Integrated Writing course.  GR  LE  Lecture
Fall 2020  KNH1530  1530  SCUBA: Newport Aquarium  KNH  Kinesiology & Health  2  Fundamental skills and knowledge of SCUBA: Newport Aquarium. 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  EC4010  4010  Managed Econ & Strat  EC  Economics  3  Applies economic analysis to management decision making. Stresses practical methods and problems.  UG  LE  Lecture
Fall 2020  EE4910  4910  Elec Egr Senior Dex I  EE  Electrical Engineering  3  A project-oriented design course integrating design methodology with the principles of major electrical engineering disciplines. Students from working groups, define design projects and select faculty advisors according to their interests, needs and knowledge bases. Integrated Writing course.  UG  LE  Lecture
Fall 2020  TH4410  4410  Movement IV  TH  Theatre  2  Training in three weapons styles in preparation for the Skills Proficiency Test at the end of the semester. Adjudication of students from the west coast meets at the end of the semester. Approved by: University Administration. UG  LL  Lecture/Lab Combination

Fall 2020  ATR3020  3020  Strength & Conditioning  ATR  Athletic Training  3  Introduction to testing and techniques to improve strength, flexibility, power, agility, speed, endurance, body composition and cardiovascular fitness levels. UG  LL  Lecture/Lab Combination

Fall 2020  STT4210  4210  Sampling Design  STT  Statistics  3  Classical sampling design including sample random sampling, stratified sampling, multi-stage sampling, cluster sampling, and systematic sampling, using auxiliary information and ratios estimators; unequal probability sampling, detectability and line transect methods, composite and ranked-set sampling. UG  LE  Lecture

Fall 2020  SOC3520  3520  Social Psychology  SOC  Sociology  3  Scientific approach to exploring human expression through the application of contemporary and historical perspectives. UG  LE  Lecture

Fall 2020  COM3660  3660  Advanced News Writing  COM  Communication  3  Advanced study of writing skills, practices, and procedures used in reporting news for mass media. Reporting in the field required. Integrated Writing course. UG  LE  Lecture

Fall 2020  PHIL310  3101  Ancient Philosophy  PHIL  Philosophy  3  History of philosophy from the Pre-Socratic to Neo-Platonism, with particular emphasis on the philosophical systems of Plato and Aristotle. Topics vary. Integrated Writing course. UG  LE  Lecture

Fall 2020  TH3390  3390  Musical Theatre Workshop  TH  Theatre  3  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. SG  ST  Studio

Fall 2020  ART6140  6140  Adv Studies Baroque Art  ART  Art  3  Intensive studies of the period, major movements, and artists of the time. Titles vary. GR  LE  Lecture

Fall 2020  TH2260  2260  Graphics II: Drafting  TH  Theatre  3  Introduction to and practice with the basic tools, materials and techniques used in drafting scenic designs for the theatre. UG  LL  Lecture/Lab Combination

Fall 2020  BIO1910  1190  Bio Honors Rucitation  BIO  Biology  1  Internship discussion section to review basic concepts developed in the laboratory. Co-registration in lecture and honors laboratory is required. UG  RE  Rucitation

Fall 2020  ISE1990  1990  Independent Study I: ISE  ISE  Industrial & Systems Engr  1  Undergraduate independent studies in Industrial and System Engineering. Topics vary. UG  IS  Independent Study

Fall 2020  PLS5990  5990  Studies in Select Topics  PLS  Political Science  3  Problems, approaches and topics in the field of political science. GR  LE  Lecture

Fall 2020  EES670  6701  Seismic Processing  EES  Earth & Environmental Sciences  4  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. We deal with both land and marine data. The student has hands-on experience with industry-standard software packages. GR  LE  Lecture

Fall 2020  PSY8140  8140  Psychoacoustics  PSY  Psychology  3  Advanced examination of auditory psychophysics and perceptual processes involving consideration of peripheral and central auditory physiology whenever possible. GR  LE  Lecture

Fall 2020  BMS7520  7520  Molecular Biochem. II  BMS  Biomedical Sciences  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  ABS7900  7900  Practicum in ABS  ABS  Applied Behavioral Science  1  On-site participation of students in selected behavioral science projects. Jointly supervised by faculty and on-site personnel. PR  Pr  Practicum

Fall 2020  BIO4000  4000  Senior Capstone  BIO  Biology  1  Students research and evaluate scientific literature and techniques to create and give oral presentations. Integrated Writing course. UG  IS  Independent Study

Fall 2020  ATH2000  2000  Intro to Anthropology  ATH  Anthropology  1  An introduction to the major including advising, curriculum, and career options. The course is optional, but highly recommended for Anthropology majors and minors. UG  LE  Lecture

Fall 2020  EDL8730  8730  Bldg Budget, Mgmt, SS  EDL  Educational Leadership  3  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/co-curricular activities. GR  LL  Lecture/Lab Combination

Fall 2020  STT1620  6620  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, maximum likelihood estimation (MLE) 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. GR  LE  Lecture

Fall 2020  ME4150  4150  Mechanical Design II  ME  Mechanical and Materials Engr  3  Analysis and design of mechanical elements including screws, wedges, springs, bearings, clutches, brakes, flywheels, pulleys and shafts. Group design project. PR  Department Managed Prerequisite(s): Undergraduate level ME 4140 Minimum Grade of D/h>.


Fall 2020  CEG4322  4322  VLSI Design  CEG  Computer Engineering  3  Introduction to VLSI system and subsystem design. Topics include CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processing design rules, chip planning and layout, basic system subcomponents (adders, subtractors, ALUs, and others), system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI. UG  LE  Lecture

Fall 2020  PL5450  4500  Political Anthropology  PLS  Political Science  3  Anthropological study of political life cross-culturally. Evolutionary and historical approaches to political institutions, and classic anthropological analyses of political institutions. Recent developments in the study of politics as a contemporary problem. Integrated Writing course. UG  LE  Lecture

Fall 2020  CHM5210R  5210R  Adv Inorg Syn & Charact Res.  CHM  Chemistry  0  Required recitation for CHM 5210. GR  RE  Rucitation

Fall 2020  KNE1960  1960  Yoga  KNE  Kinesiology & Health  1  Fundamental skills and knowledge of Yoga. Competency-based approach. Course may accommodate disabled students when appropriate. UG  LB  Lab
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 2² factorial experiments. <b>Department Managed Prerequisite(s): Graduate level STT 6660 Minimum Grade of D</b>  GR  LE  Lecture

**EE7510L** 7510L  Dig Wideband Rec Des Lab

**EE** Electrical Engineering 1  New laboratory components using Mathlab/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. <b>Department Managed Prerequisite(s): Graduate level EE 6500 Minimum Grade of D and Graduate level EE 6620 Minimum Grade of D</b>  GR  LB  Lab

**NUR6102** 6102  Teach & Eval. Strat.

**NUR** Nursing 4  Examination and application of the art, principles, theories, models, and strategies of teaching and evaluation in nursing education. Role of nurse education in classroom and clinical is explored.  GR  LE  Lecture

**EES4530** 4530  Diagnose 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.  UG  LL  Lecture/Lab Combination

**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, anthropology, ecology and conservation implications.  GR  LE  Lecture

**EDS6770** 6770  Sld Tecng: IS M/M

**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 mild/moderate needs.  GR  IN  Internship

**PHL5050** 5050  19th Century Philosophy

**PHL** Philosophy 3  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/optimism about humanity's ability to shape its world and a commitment to action over thought.  GR  LE  Lecture

**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 oscillators and synthesizers, phase lock loops and phase noise. <b>Department Managed Prerequisite(s): Graduate level EE 7580 Minimum Grade of D and Graduate level EE 7580L Minimum Grade of D</b>  GR  LE  Lecture

**EGR4990L** 4990L  Special Topics in EGR Lab

**EGR** Engineering 0  Required laboratory for EGR 4980.  GR  LB  Lab

**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

**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

**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

**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

**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. <b>Department Managed Prerequisite(s): Undergraduate level IT 1300 Minimum Grade of D and Undergraduate level IT 2010 Minimum Grade of D</b>  UG  LL  Lecture/Lab Combination

**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

**ACC2020** 2020  Accounting Principles II

**ACC** Accountancy 3  Introduction to accounting for business enterprises. Includes analysis of the effect of transactions on financial position, preparation of financial statements, reports for managers, and financial statement analysis.  UG  LE  Lecture

**PSY4110** 4110  Positive Psy Cap

**PSY** Psychology 3  Communication-intensive seminar integrating knowledge within Positive Psychology. Integrated Writing course.  UG  SE  Seminar

**TH4160** 4160  Singing for Actor VIII

**TH** Theatre 1  Private singing lessons for acting, theatre studies and dance majors only.  UG  ST  Studio

**ATHD303** 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

**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. <b>Department Managed Prerequisite(s): Undergraduate level GER 3110 Minimum Grade of D and Undergraduate level GER 3210 Minimum Grade of D</b>  UG  LE  Lecture

**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

**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

**PHY4660** 4660  Multiple Rep Phys Sci

**PHY** Physics 3  Acquires 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

**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 biothermal control systems.  GR  LE  Lecture
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)<b>/GR</b></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 = Graduate level ENG 6710 Minimum Grade of D)<b>/GR</b>  GR  LE  Lecture

Fall 2020  EDT1100  1100  Special Topics in E Lib  EDT  Educational Technology  1  Topics vary.  UG  LE  Lecture

Fall 2020  NURS102  8102  Final Pract-Direct Care  NUR  Nursing  1  Individuals precepted practicum that requires advanced nursing practice with individuals and groups. Includes seminar that facilitates synthesis and application of all prior learning for evidence-based practice.  GR  SE  Seminar

Fall 2020  OL4950  4950  Ldshp 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 selected 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  KNH11020  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  ASM4741  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/fail/unsatisfactory.  UG  LE  Lecture

Fall 2020  ME412IL  4121L  Industrial Controls Lab  ME  Mechanical and Materials Eng  1  Hands-on experience in Industrial Controls, Automated Controls systems, plant modeling and control system performance.<b> Department Managed Prerequisite(s): (Graduate level ENG 4210 Minimum Grade of D or Graduate level ENG 6210 Minimum Grade of D or (Graduate level ENG 4210 Minimum Grade of D or Graduate level ENG 6210 Minimum Grade of D)<b>/GR</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 5E-12 second language acquisition.  GR  LE  Lecture

Fall 2020  EDT9230  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  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.  GR  LE  Lecture

Fall 2020  EDL9660  9660  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  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  PSY9270  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 3260 Minimum Grade of C)<b>/GR</b>  GR  LE  Lecture

Fall 2020  BIO4070  4070  Wetlands Biology  BIO  Biology  5  Ecological investigation of wetlands of United States, with emphasis on Midwest. Covers soils, vegetation, hydrology, conservation, and restoration. Primarily field oriented and some lecture.  UG  LL  Lecture/Lab Combination

Fall 2020  PL54890  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  BBM4880  4880  Ind Read Biochem Mol Biol  BMM  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  ECE3590  3590  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
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**Course Descriptions:**

- **Fall 2020 CEG7360 Embedded Systems**: 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.<br>
- **Fall 2020 PSY1010 Machining Lab**: Required laboratory for PSY 6870.<br>
- **Fall 2020 ATH6500 Spec. Topics Archaeology**: Concepts related to health care administration including: regulations, policies and procedures, legal considerations, facility design and function, budgeting, drug testing and health care services, personnel management, and career preparation.<br>
- **Fall 2020 ENG4430 Studies in Gender/Sex**: 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 appreciation. Integrated Writing course.<br>
- **Fall 2020 BHE6420 Innov & Enterp Sem**: 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>
- **Fall 2020 ISM6300 Independent Research**: 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.<br>
- **Fall 2020 EES6550 Aqueous Env Geochemistry**: 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. An independent term project is required. Three hours lecture.<br>
- **Fall 2020 BME3540L Biomedical Computation Lab**: Required laboratory for BME 3540.<br>
- **Fall 2020 PHY6730 Mathematical Physics**: 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.<br>
- **Fall 2020 SPN3700 Internship in Spanish**: Supervised use of Spanish in workplace settings. Must complete an application available from the Department of Modern Languages. Minimum time commitment 15.5 hours a semester, including a minimum of 120 hours of on-site work. Senior standing and advisor permission required.<br>
- **Fall 2020 DEV0100 Found Academic Writing&Reading**: Intensive instruction in reading, writing, and critical thinking. Emphasizes reflection, revision, collaboration, and self-assessment to prepare students for collegiate success. Graded pass/unsatisfactory.<br>
- **Fall 2020 SPN6710 Spanish As a World Lang**: 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.<br>
- **Fall 2020 PSY4040 Independent Reading**: Specific topics selected by students and instructor.<br>
- **Fall 2020 EES3120 Earth Materials**: The minerals and rocks that make up the solid earth, their significance and uses. Based upon the "rock cycle" the materials 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.<br>
- **Fall 2020 CEG4990 Undergraduate Thesis**: Completion of a computer engineering research project. Writing and defending a thesis that describes the research and summarizes the results. Department Managed Prerequisite(s): Undergraduate level CEG 4970 Minimum Grade of D.<br>
- **Fall 2020 KNH1660A Swimming: Beginning**: Fundamental skills and knowledge of Swimming: Beginning. Competency-based approach. Course may accommodate disabled students when appropriate.<br>
- **Fall 2020 ED6050 Cult & Comm Comp for Edu**: 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.<br>
- **Fall 2020 PHY6830 Statistical Mechanics**: Introduction to microscopic and macroscopic physical systems developed from concepts of statistical physics. Application to classical and quantum systems will be presented as well as theories of phase transitions, critical phenomena and fluctuations.<br>
- **Fall 2020 PSY1010 Intro to Psychology**: 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.<br>
- **Fall 2020 FIN3120 Investing in Securities**: Introduction to the theory and practice of investing in stocks, bonds, and other securities. Required laboratory for ME 6750.<br>
- **Fall 2020 FAS2150 Princ Food Process Eng**: 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.<br>
- **Fall 2020 MIS4810 Internship in Bi**: 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.
Fall 2020 ISE4150 4150 Adv Prob and Stats Engineers ISE Industrial & Systems 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. UG LE Lecture

Fall 2020 PHY5510 6510 Electricity & Magnetism 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 URS6320 6320 Managing Volunteer Org URS Urban Affairs 3 Prepares students to design, plan and evaluate volunteer programs. Topics address management principles including program design, recruitment, retention, training, and placement and assessment. GR LE Lecture

Fall 2020 KNE2000 2000 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 CEG4870L 4870L Intelligent Control Lab CEG Computer Engineering 1 Implements intelligent control strategies on systems and subsystems in industrial and engineering applications. (b) Department Managed Prerequisite(s): Undergraduate level EE 4138 Minimum Grade of D and Undergraduate level EE 4136 Minimum Grade of D= or (b) Department Managed Prerequisite(s): Undergraduate level EE 4136 Minimum Grade of D and Undergraduate level EE 4138 Minimum Grade of D= GR LB Lab

Fall 2020 EDL7820 7820 School Law EDL Educational Leadership 3 Examines the legal framework that all school personnel must function in. Emphasis on both legal precedents and statutory provisions. GR LE Lecture

Fall 2020 CHM7890 7890 Continuing Registration CHM Chemistry 1 3 3

Fall 2020 PSY6310 6310 Objective Pers. Assesn PSI Professional Psychology 3 Introduction to the principles and practices of objective personality assessment and report writing. GR IS Independent Study

Fall 2020 ANT7010 7010 Selected Topics in ANT ANT Anatomy 1 A selected area of anatomy is discussed in greater detail than in basic anatomy courses. Some topics may include laboratory. GR IS Independent Study

Fall 2020 PTX7120 7120 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 SOC4420 4420 Ethnographic Methods SOC Sociology 3 Explores the meaning, scope and dilemmas of ethnography using both a hands-on ethnographic project and a wide array of readings. Integrated Writing course. UG LE Lecture

Fall 2020 CTE4810 4810 Teaching At-Risk Student CTE Career and Technical Education 3 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. UG LE Lecture

Fall 2020 PN7200 7200 Neuronal immune Sy Homeostasis PN Physiology & 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 leukemia to acute and chronic inflammation. This course focuses on immune-neuro 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. GR LE Lecture

Fall 2020 EES4240 4240 Oceanography EES Earth & Environmental Sciences 3 Introduction to the interrelated geology, physics, chemistry, and biology of the ocean. UG LE Lecture

Fall 2020 PHIL5120 5120 History of Ethics PHIL Philosophy 3 Study of the development of ethical philosophy through a detailed investigation of such figures as Plato, Aristotle, Hobbes, Butler, Hose, Kant, Mill, and Nietzsche. GR LE Lecture

Fall 2020 REL3410 3410 Chinese Religions REL Religion 3 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. UG LE Lecture

Fall 2020 ME7730 7730 Adv Physical Properties ME Mechanical and Materials Engr 3 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. (b) Department Managed Prerequisite(s): Undergraduate level ME 4700 Minimum Grade of D or Graduate level ME 6700 Minimum Grade of D= or (b) Department Managed Prerequisite(s): Undergraduate level ME 4700 Minimum Grade of D or Graduate level ME 6700 Minimum Grade of D= or (b) Department Managed Prerequisite(s): Undergraduate level ME 4700 Minimum Grade of D or Graduate level ME 6700 Minimum Grade of D= GR LE Lecture

Fall 2020 RBH4700 4700 Special Topics RBH Rehabilitation 1 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. UG LE Lecture

Fall 2020 DEV0410 0410 Introductory Algebra DEV Developmental Education 4 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. UG IS Independent Study

Fall 2020 CEG7030 7030 VLSI Des Synth Optim CEG Computer Engineering 3 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. (b) Department Managed Prerequisite(s): Undergraduate level EE 4620 Minimum Grade of D and Undergraduate level EE 4620 Minimum Grade of D or (b) Department Managed Prerequisite(s): Undergraduate level EE 4620 Minimum Grade of D or (b) Department Managed Prerequisite(s): Undergraduate level EE 4620 Minimum Grade of D or Graduate level EE 6620 Minimum Grade of D and Graduate level EE 6620L Minimum Grade of D= or (b) Department Managed Prerequisite(s): Undergraduate level EE 4620 Minimum Grade of D and Undergraduate level EE 4620 Minimum Grade of D= or (b) Department Managed Prerequisite(s): Undergraduate level EE 4620 Minimum Grade of D and Undergraduate level EE 4620 Minimum Grade of D= GR LE Lecture

Fall 2020 CEG9900 9900 Spec Topics in Comp Egr CEG Computer Engineering 1 Special Topics in Computer Engineering. UG LE Lecture

Fall 2020 IDL7110 7110 Learning in a Digital World IDL Instructional Design & Learning 3 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. GR LE Lecture

Fall 2020 PSY3010L 3010L Research Methods Psy I Lab PSY Psychology 0 Required laboratory for PSY 3010. Integrated Writing course. UG LB Lab

Fall 2020 MTH6070 6070 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. (b) Department Managed Prerequisite(s): Undergraduate level MTH 2250 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D= or (b) Department Managed Prerequisite(s): Undergraduate level MTH 2250 Minimum Grade of D and Undergraduate level MTH 2350 Minimum Grade of D= GR LE Lecture
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<td>COM3450</td>
<td>Public Relations</td>
<td>COM Communication</td>
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<td>Simulation focusing on the processes of a public-relations campaign: fact finding, action planning, implementation of communication channels, and program evaluation.</td>
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<td>Fall 2020</td>
<td>EGR7980</td>
<td>Special Topics in EGR</td>
<td>EGR Engineering</td>
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<td>Special topics in engineering. Prerequisite: instructor approval.</td>
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<td>EC4780</td>
<td>Hon: Ind Study Economics</td>
<td>EC Economics</td>
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<td>Research in economics for fulfillment of the Honors Program project requirement.</td>
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<td>BMB4450</td>
<td>Medical Biochemistry</td>
<td>BMB Biochem &amp; Molecular Biology</td>
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<td>Emphasizes biochemistry and the biochemical principles of diseases.</td>
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<td>Topics in Modern Biology</td>
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<td>Advanced topics of current interest. Topics vary.</td>
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<td>FR3110</td>
<td>French Conversation</td>
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<td>Practice in oral use of French emphasizing the culture of the French-speaking world. Taught in French.</td>
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<td>EE7560L</td>
<td>Advanced Robotics Lab</td>
<td>EE Electrical Engineering</td>
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<td>Required laboratory for EE 7560. Department Managed Prerequisite(s): Undergraduate level FR 2020 Minimum Grade of D or AP French Language 4+&lt;b&gt;</td>
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<td>BIO6490</td>
<td>Genetic Screen using RNA</td>
<td>BIO Biology</td>
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<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>
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<td>Prime Care Women/Child</td>
<td>NUR Nursing</td>
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<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>
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<td>TTW6490</td>
<td>TTW Int: Job Training Coord</td>
<td>TTW Transition to Work</td>
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<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>
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<td>Applied Music</td>
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<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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<td>Critical Thinking</td>
<td>PHL Philosophy</td>
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<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>
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<td>Lecture</td>
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