Important Phone Numbers

General Information
Information Center
142 Allyn Hall
873-2310

Offices and Facilities
Admissions
Undergraduate Admissions, Office of
127 Student Services
873-2211
Graduate Admissions
106 Oelman Hall
873-2976

International Admissions
122 Student Services
873-2712
School of Medicine, Student Affairs/Admissions
210 Medical Sciences Building
873-2934
School of Professional Psychology, Office of Student Affairs
110 Health Sciences Building
873-3492

Affirmative Action Programs
224 Millett Hall
873-3207
Bolinga Cultural Resources Center
129 Millett Hall
873-2086

Bookstore, University
075 University Center
873-2875

Bursar, Office of the
143 Allyn Hall
873-2021

Educational Resource Center
244 Millett Hall
873-2883

Financial Aid, Office of
129 Student Services
873-2321

Handicapped Student Services
133 Student Services
873-2140/2141/3157

Housing Office
042 University Center
873-4172

Library, University
873-4125, Hours
873-2525, Circulation

Library, Fordham Health Sciences
125D Medical Sciences Building
873-2003

Registrar, Office of the
145 Allyn Hall
873-2451

Student Employment, Office of
152 Allyn Hall
873-2326

University Division
131 Student Services
873-2945

University Testing Services
131 Student Services
873-2841

Veterans Affairs, Office of
151 Allyn Hall
873-2727

Colleges and Schools
College of Business and Administration
110 Rike Hall
873-2437

College of Education and Human Services
228 Millett Hall
873-2821

College of Engineering and Computer Science
130 Engineering and Mathematical Sciences Building
873-2403

College of Liberal Arts
445 Millett Hall
873-2225

College of Science and Mathematics
134 Oelman Hall
873-2611

School of Graduate Studies
106 Oelman Hall
873-2976

School of Medicine
114 Medical Sciences Building
873-3010, Receptionist

School of Professional Psychology
117 Health Sciences Building
873-3490

School of Nursing, Wright State University-
Miami Valley
401 Allyn Hall
873-3131

Wright State University Lake Campus
100 Dwyer Hall
7600 State Route 703
Celina, Ohio 45822
1-800-237-1477
419/586-2365
# Contents

Guide to Using This Catalog

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wright State University</td>
<td>13</td>
</tr>
<tr>
<td>History</td>
<td>14</td>
</tr>
<tr>
<td>Student Body</td>
<td>14</td>
</tr>
<tr>
<td>Mission</td>
<td>15</td>
</tr>
<tr>
<td>Degrees and Areas of Study</td>
<td>17</td>
</tr>
<tr>
<td>College of Business and Administration</td>
<td>17</td>
</tr>
<tr>
<td>College of Education and Human Services</td>
<td>18</td>
</tr>
<tr>
<td>College of Engineering and Computer Science</td>
<td>18</td>
</tr>
<tr>
<td>College of Liberal Arts</td>
<td>18</td>
</tr>
<tr>
<td>College of Science and Mathematics</td>
<td>19</td>
</tr>
<tr>
<td>Wright State University-Miami Valley School of Nursing</td>
<td>19</td>
</tr>
<tr>
<td>Minors</td>
<td>19</td>
</tr>
<tr>
<td>Preprofessional Programs</td>
<td>20</td>
</tr>
<tr>
<td>The School of Graduate Studies</td>
<td>21</td>
</tr>
<tr>
<td>The School of Medicine</td>
<td>22</td>
</tr>
<tr>
<td>The School of Professional Psychology</td>
<td>22</td>
</tr>
<tr>
<td>The Wright State University Lake Campus</td>
<td>22</td>
</tr>
<tr>
<td>Alternative Academic Programs</td>
<td>22</td>
</tr>
<tr>
<td>Cooperative Education</td>
<td>22</td>
</tr>
<tr>
<td>Student Exchange Programs</td>
<td>23</td>
</tr>
<tr>
<td>Study Abroad</td>
<td>23</td>
</tr>
<tr>
<td>Interdisciplinary Study</td>
<td>23</td>
</tr>
<tr>
<td>Honors</td>
<td>23</td>
</tr>
<tr>
<td>Officer Training/ROTC</td>
<td>23</td>
</tr>
<tr>
<td>Resources</td>
<td>24</td>
</tr>
<tr>
<td>University Library</td>
<td>24</td>
</tr>
<tr>
<td>Computer Services</td>
<td>25</td>
</tr>
<tr>
<td>Consortium</td>
<td>25</td>
</tr>
<tr>
<td>Resources for Special Interests</td>
<td>26</td>
</tr>
<tr>
<td>Accreditation and Memberships</td>
<td>27</td>
</tr>
<tr>
<td>Student Life and Student Services</td>
<td>29</td>
</tr>
<tr>
<td>Student Services</td>
<td>30</td>
</tr>
<tr>
<td>Student Services Offices</td>
<td>30</td>
</tr>
<tr>
<td>Facilities</td>
<td>32</td>
</tr>
<tr>
<td>University Center</td>
<td>32</td>
</tr>
<tr>
<td>Campus Housing</td>
<td>33</td>
</tr>
<tr>
<td>Food Service</td>
<td>33</td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>34</td>
</tr>
<tr>
<td>Sports</td>
<td>34</td>
</tr>
<tr>
<td>Music</td>
<td>34</td>
</tr>
<tr>
<td>Organizations and Activities</td>
<td>35</td>
</tr>
<tr>
<td>Admission, Registration, and Fees</td>
<td>37</td>
</tr>
<tr>
<td>Admission</td>
<td>38</td>
</tr>
<tr>
<td>High School Preparation</td>
<td>38</td>
</tr>
<tr>
<td>Degree-Seeking Students</td>
<td>38</td>
</tr>
<tr>
<td>Institutional Transfer</td>
<td>40</td>
</tr>
<tr>
<td>Other Admission and Enrollment Categories</td>
<td>43</td>
</tr>
<tr>
<td>Returning Students</td>
<td>44</td>
</tr>
</tbody>
</table>
Academic Services .............................................................................. 44
University Division ........................................................................... 44
Placement Testing ............................................................................. 44
Academic Advising ........................................................................... 44
Tutoring ............................................................................................ 44
Developmental Education ................................................................ 44
University Testing Services ................................................................. 45
Adult and Transfer Services ................................................................. 45
Registration ....................................................................................... 45
Fees .................................................................................................... 46
Paying Fees ....................................................................................... 46
Fee Schedule .................................................................................... 47
Refunds .............................................................................................. 48
Criteria for Ohio Residency ................................................................. 48
Financial Aid .................................................................................... 48
Scholarships .................................................................................... 48
Grants ................................................................................................ 53
Loans ................................................................................................. 53
Student Employment ........................................................................ 53
Veterans' Benefits ............................................................................ 53

Academic Standards and Requirements ............................................. 55
Requirements for a Bachelor's Degree ................................................ 56
Residence Credit Requirements ............................................................ 56
Second Degrees ................................................................................ 56
Scholastic Regulations ..................................................................... 56
The Grading System ......................................................................... 56
Student Classification ...................................................................... 57
Dean's List ....................................................................................... 57
Repeating Courses .......................................................................... 57
Auditing Courses ............................................................................ 57
Applying for Degrees ..................................................................... 57
Honors .............................................................................................. 58
Good Standing ................................................................................ 58
Mandatory Advising ....................................................................... 58
Dismissal from the University ............................................................ 59
Readmission .................................................................................... 59
Removing High School Deficiencies ............................................... 59
Completing General Education Requirements ................................ 59
Petitioning for Exceptions ................................................................ 59
University Honors Program ............................................................... 60

General Education Requirements ...................................................... 61
General Education at Wright State .................................................... 62
Substitutions .................................................................................... 62
Honors Sections ............................................................................... 62
General Education Requirements .................................................... 63
Area One—Communication and Mathematical Skills .................... 63
Area Two—The Western Experience ................................................. 63
Area Three—The Non-Western World ............................................. 64
Area Four—Understanding the Contemporary World .................. 65
General Education Checklist .............................................................. 67
Contents

Business and Administration ................................................................. 69
Accountancy ....................................................................................... 73
Economics ......................................................................................... 74
Finance, Insurance, and Real Estate ...................................................... 75
Management ...................................................................................... 76
Management Science and Information Systems ................................. 78
Marketing ......................................................................................... 80

Education and Human Services .......................................................... 81
Biological Sciences Education .............................................................. 86
Business Comprehensive Education .................................................... 87
Chemistry Education ......................................................................... 88
Communications Comprehensive Education ........................................ 89
Computer Science Education K–12 .................................................... 90
Early Childhood Education Pre-K–KP Program ................................. 91
Earth Science Education .................................................................... 92
Economics Education ........................................................................ 93
Elementary Education ....................................................................... 94
English Education ........................................................................... 95
General Science Education ............................................................... 96
Geography Education ....................................................................... 96
History Education ........................................................................... 96
Languages Education ....................................................................... 97
Latin Education ............................................................................... 100
Mathematics Education .................................................................... 101
Physical Education K–12 .................................................................. 102
Physics Education ........................................................................... 103
Political Science Education .............................................................. 104
Psychology/Sociology Education ....................................................... 104
Rehabilitation .................................................................................. 104
Science Comprehensive Education .................................................... 105
Social Studies Comprehensive Education ........................................ 106
Special Education .......................................................................... 108
Speech ........................................................................................... 109
Visual Arts K–12 .............................................................................. 109
Vocational Business Education ....................................................... 110

Engineering and Computer Science .................................................. 113
Biomedical and Human Factors Engineering ...................................... 115
Computer Engineering ..................................................................... 118
Computer Science .......................................................................... 120
Electrical Engineering ...................................................................... 123
Mechanical and Materials Engineering ............................................ 127

Liberal Arts ....................................................................................... 131
Art and Art History ........................................................................... 135
Classics .......................................................................................... 136
Communication .............................................................................. 138
Economics ...................................................................................... 140
English Language and Literatures ................................................... 141
Preparing for college, applying for admission to a university, looking into financial aid ... even using a university course catalog ... can be confusing and frustrating experiences. At Wright State University, our goal is to be student centered. To help make your experience with Wright State as pleasant and helpful as possible, we've prepared this brief guide to using this undergraduate catalog. This catalog contains a lot of information, only some of which may be relevant to your needs. The guide on these pages should help you find the information that is of greatest interest to you.

If the particular information you need isn't contained in this catalog, please note that the inside of the front cover lists many of the telephone numbers and office addresses of the most frequently used offices on campus.

### Beginning Degree-Seeking Students

#### All Students

**Read**
- Admission, pp. 38–39 (up to the beginning of Transfer Degree Students section)
- Academic Services, Registration, Fees, pp. 44–48
- Requirements for a Bachelor’s Degree, p. 56

**Scholastic Regulations, pp. 56–59**
**General Education Requirements, pp. 62–67**

#### Areas of Special Interest

**Students interested in financial aid**
**Read**
- Financial Aid, pp. 48–53

**Students unsure of status as Ohio resident**
**Read**

**Continuing students**
**Read**
- Continuing Students, p. 44

**Adults beginning or reentering college**
**Read**
- Adult and Transfer Services, p. 45

**Veterans**
**Read**
- Veterans’ Benefits, p. 53
- Veterans Affairs, p. 32

**Students interested in teacher certification**
**Read**
- Teacher Certification Candidates, p. 44

**Students interested in the Honors Program**
**Read**
- University Honors Program, p. 60
Transfer Students

Students transferring TO Wright State from another Ohio public college or university
Read
Transfer Degree Students, pp. 39–40
Institutional Transfer, pp. 40–42
Adult and Transfer Services, p. 45

Students transferring FROM Wright State to another Ohio public college or university
Read
Institutional Transfer, pp. 40–42

Returning Students

Read
Returning Students, p. 44
Continuing Students, p. 44

Students returning after dismissal
Read
Readmission, p. 59

International Students

Read
International Students, p. 43

Nondegree Students

Read
Nondegree Undergraduate Students, p. 43
Academic Services, Registration, Fees, pp. 44–48
Scholastic Regulations, pp. 56–59

High School Students

Read
High School Preparation, p. 38
Superior High School Students, p. 44
# Academic Calendar 1991/93

## Fall Quarter
**September 16–December 7, 1991**
- September 16, Monday/classes begin
- November 11, Monday/Veterans Day holiday
- November 26, Tuesday/classes end
- November 28–December 1, Thursday–Sunday/Thanksgiving holiday
- December 2–7, Monday–Saturday/final examinations
- December 7, Saturday/Fall commencement

## Winter Quarter
**January 6–March 21, 1992**
- January 6, Monday/classes begin
- January 20, Monday/Martin Luther King Day holiday
- March 14, Saturday/classes end
- March 16–21, Monday–Saturday/final examinations

## Spring Quarter
**March 30–June 13, 1992**
- March 30, Monday/classes begin
- May 25, Monday/Memorial Day holiday
- June 6, Saturday/classes end
- June 8–13, Monday–Saturday/final examinations
- June 13, Saturday/Spring commencement

## Summer Quarter
**June 15–August 20, 1992**
- June 15, Monday/Terms A and C classes begin
- July 3, Friday/Independence Day holiday
- July 16, Thursday/Term A classes end
- July 20, Monday/Term B classes begin
- August 20, Thursday/Terms B and C classes end
Fall Quarter  
September 14–December 5, 1992

September 16, Wednesday/classes begin
November 11, Wednesday/Veterans Day holiday
November 25, Wednesday/classes end
November 26–29, Thursday–Sunday/Thanksgiving holiday
November 30–December 5, Monday–Saturday/final examinations
December 5, Saturday/Fall commencement

Winter Quarter  
January 4–March 20, 1993

January 4, Monday/classes begin
January 18, Monday/Martin Luther King Day holiday
March 13, Saturday/classes end
March 15–20, Monday–Saturday/final examinations

Spring Quarter  
March 29–June 12, 1993

March 29, Monday/classes begin
May 31, Monday/Memorial Day holiday
June 5, Saturday/classes end
June 7–12, Monday–Saturday/final examinations
June 12, Saturday/Spring commencement

Summer Quarter  
June 14–August 19, 1993

June 14, Monday/Terms A and C classes begin
July 5, Monday/Independence Day holiday
July 15, Thursday/Term A classes end
July 19, Monday/Term B classes begin
August 19, Thursday/Terms B and C classes end
As you examine the programs available in this catalog, you will notice that sample four-year plans, set apart in gray boxes like the one shown below, have been provided by the departments. In the Colleges of Education and Human Services, Engineering and Computer Science, Liberal Arts, and Science and Mathematics, these four-year plans will bear the heading of "Sample" and are intended to be used only as a sample of one possible schedule out of many that could meet the degree requirements. These samples assume the availability of courses during the quarters indicated—which may not necessarily be the case. Actual course availability may differ and schedule adjustments may therefore be necessary.

In no case are the samples intended to replace the expertise of an adviser. We encourage you to consult with your adviser about the planning of your academic career at Wright State. Advisers can help you determine what to do when your academic path doesn’t follow the catalog samples for a program you wish to pursue (for example, if you have changed majors or have transferred from another university).

In the College of Business and Administration and the School of Nursing, the curriculum plans bear the heading “Major Requirements” instead of “Sample.” Since these programs are more structured, the four-year plans reflect more closely the departments’ requirements for students in these programs. In the WSU Lake Campus chapter, the heading of “Program” appears above the samples for programs leading to associate’s degrees. While all of these sample plans reflect the proper sequencing of required courses, actual schedules may vary and should be planned with the guidance of an adviser.

Sample
Used for Colleges of:
- Education and Human Services
- Engineering and Computer Science
- Liberal Arts
- Science and Mathematics
Note: These plans are suggestions for these programs; however, actual schedules should be planned with the guidance of an adviser.

Program
Used for:
- WSU Lake Campus
Note: These plans list requirements and proper sequences of requirements; however, actual schedules should be planned with the guidance of an adviser.

Major Requirements
Used for:
- College of Business and Administration
- School of Nursing
Note: These plans list requirements and proper sequences of requirements; however, actual schedules should be planned with the guidance of an adviser.

Urban Affairs
Freshman Year
First Quarter
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
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<td>MTH 105t</td>
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<tr>
<td>HST 101</td>
<td>3</td>
</tr>
<tr>
<td>Science I*</td>
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Second Quarter
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</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>PSY 105</td>
<td>3</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
<tr>
<td>Science II*</td>
<td>4</td>
</tr>
</tbody>
</table>
Throughout this catalog, specific courses are indicated by abbreviations followed by a number. The list below shows the abbreviations for the different areas of study, followed by the name of each area of study and the page on which the course descriptions for the areas begin.

Please note that the courses are alphabetized by the course’s name, not by the abbreviation, both here and later in the course description section.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>Accountancy, p. 218</td>
</tr>
<tr>
<td>AES</td>
<td>Aerospace Science, p. 219</td>
</tr>
<tr>
<td>ANT</td>
<td>Anatomy, p. 219</td>
</tr>
<tr>
<td>ATH</td>
<td>Anthropology, p. 219</td>
</tr>
<tr>
<td>ART</td>
<td>Art and Art History, p. 220</td>
</tr>
<tr>
<td>AED</td>
<td>Art Education, p. 223</td>
</tr>
<tr>
<td>AT</td>
<td>Art Therapy, p. 224</td>
</tr>
<tr>
<td>AVI</td>
<td>Aviation, p. 224</td>
</tr>
<tr>
<td>BCH</td>
<td>Biochemistry, p. 224</td>
</tr>
<tr>
<td>BIO</td>
<td>Biological Sciences, p. 225</td>
</tr>
<tr>
<td>BME</td>
<td>Biomedical Engineering, p. 228</td>
</tr>
<tr>
<td>CHM</td>
<td>Chemistry, p. 229</td>
</tr>
<tr>
<td>CHI</td>
<td>Chinese, p. 231</td>
</tr>
<tr>
<td>CLS</td>
<td>Classics, p. 231</td>
</tr>
<tr>
<td>COM</td>
<td>Communication, p. 232</td>
</tr>
<tr>
<td>CPL</td>
<td>Comparative Literature, p. 234</td>
</tr>
<tr>
<td>CST</td>
<td>Comparative Studies, p. 234</td>
</tr>
<tr>
<td>CSE</td>
<td>Comparative Studies, p. 234</td>
</tr>
<tr>
<td>CEG</td>
<td>Computer Engineering, p. 235</td>
</tr>
<tr>
<td>CS</td>
<td>Computer Science, p. 236</td>
</tr>
<tr>
<td>CPE</td>
<td>Cooperative Education, p. 238</td>
</tr>
<tr>
<td>CNL</td>
<td>Counseling, p. 238</td>
</tr>
<tr>
<td>DAN</td>
<td>Dance, p. 238</td>
</tr>
<tr>
<td>DN</td>
<td>Danish, p. 239</td>
</tr>
<tr>
<td>EC</td>
<td>Economics, p. 240</td>
</tr>
<tr>
<td>ED</td>
<td>Education, p. 242</td>
</tr>
<tr>
<td>EDE</td>
<td>Education—Early Childhood Education, p. 245</td>
</tr>
<tr>
<td>EDS</td>
<td>Education—Special Education, p. 246</td>
</tr>
<tr>
<td>EDT</td>
<td>Educational Technology, p. 247</td>
</tr>
<tr>
<td>EE</td>
<td>Electrical Engineering, p. 248</td>
</tr>
<tr>
<td>EGR</td>
<td>Engineering, p. 250</td>
</tr>
<tr>
<td>ENG</td>
<td>English, p. 250</td>
</tr>
<tr>
<td>EH</td>
<td>Environmental Health Sciences, p. 253</td>
</tr>
<tr>
<td>ENV</td>
<td>Environmental Studies, p. 254</td>
</tr>
<tr>
<td>FIN</td>
<td>Finance, p. 254</td>
</tr>
<tr>
<td>FR</td>
<td>French, p. 256</td>
</tr>
<tr>
<td>GEO</td>
<td>Geography, p. 256</td>
</tr>
<tr>
<td>GL</td>
<td>Geological Sciences, p. 258</td>
</tr>
<tr>
<td>GER</td>
<td>German, p. 261</td>
</tr>
<tr>
<td>GR</td>
<td>Greek, p. 261</td>
</tr>
<tr>
<td>HPR</td>
<td>Health, Physical Education, and Recreation, p. 262</td>
</tr>
<tr>
<td>HST</td>
<td>History, p. 265</td>
</tr>
<tr>
<td>HFE</td>
<td>Human Factors Engineering, p. 266</td>
</tr>
<tr>
<td>ITA</td>
<td>Italian, p. 267</td>
</tr>
<tr>
<td>JPN</td>
<td>Japanese, p. 267</td>
</tr>
<tr>
<td>LAT</td>
<td>Latin, p. 267</td>
</tr>
<tr>
<td>LAW</td>
<td>Law, p. 268</td>
</tr>
<tr>
<td>LA</td>
<td>Liberal Arts, p. 268</td>
</tr>
<tr>
<td>LI</td>
<td>Linguistics, p. 268</td>
</tr>
<tr>
<td>MGT</td>
<td>Management, p. 269</td>
</tr>
<tr>
<td>MIS</td>
<td>Management Information Systems, p. 270</td>
</tr>
<tr>
<td>MS</td>
<td>Management Science, p. 271</td>
</tr>
<tr>
<td>MKT</td>
<td>Marketing, p. 272</td>
</tr>
<tr>
<td>MTH</td>
<td>Mathematics, p. 273</td>
</tr>
<tr>
<td>ME</td>
<td>Mechanical and Materials Engineering, p. 276</td>
</tr>
<tr>
<td>MT</td>
<td>Medical Technology, p. 279</td>
</tr>
<tr>
<td>M&amp;I</td>
<td>Microbiology and Immunology, p. 279</td>
</tr>
<tr>
<td>MIL</td>
<td>Military Science, p. 280</td>
</tr>
<tr>
<td>ML</td>
<td>Modern Language Humanities, p. 280</td>
</tr>
<tr>
<td>TH</td>
<td>Motion Pictures, p. 281</td>
</tr>
<tr>
<td>MUS</td>
<td>Music, p. 281</td>
</tr>
<tr>
<td>NUR</td>
<td>Nursing, p. 285</td>
</tr>
<tr>
<td>OA</td>
<td>Office Administration, p. 285</td>
</tr>
<tr>
<td>PHR</td>
<td>Pharmacology, p. 286</td>
</tr>
<tr>
<td>PHL</td>
<td>Philosophy, p. 286</td>
</tr>
<tr>
<td>PHY</td>
<td>Physics, p. 288</td>
</tr>
<tr>
<td>P&amp;B</td>
<td>Physiology and Biophysics, p. 290</td>
</tr>
<tr>
<td>PLS</td>
<td>Political Science, p. 291</td>
</tr>
<tr>
<td>POR</td>
<td>Portuguese, p. 294</td>
</tr>
<tr>
<td>PSY</td>
<td>Psychology, p. 294</td>
</tr>
<tr>
<td>RST</td>
<td>Regional Studies, p. 297</td>
</tr>
<tr>
<td>RSE</td>
<td>Regional Studies, p. 297</td>
</tr>
<tr>
<td>RHB</td>
<td>Rehabilitation, p. 297</td>
</tr>
<tr>
<td>REL</td>
<td>Religion, p. 298</td>
</tr>
<tr>
<td>RUS</td>
<td>Russian, p. 301</td>
</tr>
<tr>
<td>SW</td>
<td>Social Work, p. 301</td>
</tr>
<tr>
<td>SOC</td>
<td>Sociology, p. 302</td>
</tr>
<tr>
<td>SPN</td>
<td>Spanish, p. 304</td>
</tr>
<tr>
<td>STT</td>
<td>Statistics, p. 305</td>
</tr>
<tr>
<td>SS</td>
<td>Study Skills, p. 306</td>
</tr>
<tr>
<td>TH</td>
<td>Theatre, p. 307</td>
</tr>
<tr>
<td>UD</td>
<td>University Division, p. 309</td>
</tr>
<tr>
<td>UH</td>
<td>University Honors, p. 310</td>
</tr>
<tr>
<td>URS</td>
<td>Urban Affairs, p. 310</td>
</tr>
<tr>
<td>VOE</td>
<td>Vocational Education, p. 310</td>
</tr>
</tbody>
</table>
### Technical Course Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Course Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEG</td>
<td>Engineering Technology</td>
<td>314</td>
</tr>
<tr>
<td>TAC</td>
<td>Technical Accountancy</td>
<td>317</td>
</tr>
<tr>
<td>TAD</td>
<td>Technical Administration</td>
<td>317</td>
</tr>
<tr>
<td>TDP</td>
<td>Technical Data Processing</td>
<td>317</td>
</tr>
<tr>
<td>TEN</td>
<td>Technical English</td>
<td>318</td>
</tr>
<tr>
<td>TFI</td>
<td>Technical Finance</td>
<td>318</td>
</tr>
<tr>
<td>TMG</td>
<td>Technical Management</td>
<td>318</td>
</tr>
<tr>
<td>TMK</td>
<td>Technical Marketing</td>
<td>319</td>
</tr>
<tr>
<td>TMT</td>
<td>Technical Mathematics</td>
<td>319</td>
</tr>
<tr>
<td>TOA</td>
<td>Technical Office Administration</td>
<td>320</td>
</tr>
<tr>
<td>TPS</td>
<td>Technical Psychology</td>
<td>321</td>
</tr>
<tr>
<td>TSS</td>
<td>Technical Study Skills</td>
<td>321</td>
</tr>
</tbody>
</table>
History

Wright State University is a state-assisted university accredited by the North Central Association of Colleges and Schools. Wright State offers to a student population of nearly 17,000 more than a hundred undergraduate majors, twenty-seven master’s degree programs, and programs of study for the M.D., Psy.D., Ed.S., and Ph.D. degrees, as well as certification programs. We’ve reached this state in our growth just twenty-seven years after opening our doors in 1964 as the Dayton Campus of Miami University and The Ohio State University. These schools had been offering classes in borrowed facilities in the Dayton area for many years, giving rise in the 1950s to the idea of a joint branch campus. A community fund-raising effort in 1961 generated three million dollars, which financed the purchase of land for a campus near Dayton and the construction of Allyn Hall, our first building.

In 1965, we became Ohio’s twelfth state-assisted university, known as the Wright State Campus. A major turning point was reached in October 1967, when we became a fully accredited, independent state institution—Wright State University. In those few short years we had grown from a faculty of fifty-five and a student population of 3,200 to a university with 206 faculty members and 5,000 students registered in ninety-six different programs and concentrations, and master’s degree programs in five disciplines. Three new buildings had been constructed, completing Founders Quadrangle in the center of campus.

Since that time, our history has continued to be characterized by phenomenal growth and change. The residence hall opened in 1970, followed by the completion of the University Center and the president’s house in 1971. In 1973, we celebrated the openings of the Creative Arts Center, the University Library, the Physical Education Building, and the Brehm Laboratory. Facilities for the biological sciences were completed in 1975 and 1976, and the Medical Sciences Building was dedicated in 1976. New offices, bringing together student services in one central location, were completed in 1977.

The creation of the Wright State University School of Medicine in 1974 marked our first professional doctorate and indicated our commitment to providing resources for primary health care. The first class of medical doctors graduated in 1980. In 1977, we received authorization to establish a School of Professional Psychology, and planning approval was granted for a Ph.D. program in biomedical sciences. Both programs admitted their first students in 1979. In 1986, the first students were admitted to the Ph.D. program in computer science and engineering.

In 1981, construction was completed on Rike Hall, housing the College of Business and Administration, and the Frederick A. White Center, which is both a teaching facility and a center for health care services. The 1980s also saw the construction of the Health Sciences Building, which houses the School of Professional Psychology and animal laboratories, and the Engineering and Mathematical Sciences Building. A new building is under construction on campus for the College of Engineering and Computer Science.

The Ervin J. Nutter Center, a state-of-the-art sports and entertainment complex, opened in fall 1990. The Nutter Center features an arena that seats over 10,000 people for basketball games and houses facilities for physical education and recreational activities. The center, named for area business leader and board of trustee member Ervin J. Nutter, was also designed to accommodate convocations and major concerts.

Since our beginning in 1964, we have continually expanded and responded to community needs. We have grown from a branch campus to a fully independent, comprehensive university with programs of study leading to baccalaureate, graduate, and professional degrees. Through the Colleges of Business and Administration, Education and Human Services, Liberal Arts, Engineering and Computer Science, and Science and Mathematics; the Schools of Graduate Studies, Medicine, Nursing, and Professional Psychology; and our branch campus, we offer a fully balanced program, committed to excellence and community service.

Student Body

Wright State University’s students don’t fall easily into any one category. To give a general idea about them, the following information has been compiled based on studies and statistics gathered from different areas of the university.

The majority of Wright State’s students are undergraduates—more than 12,000, three-quarters of whom come from southwestern Ohio. The university also has students from other parts of Ohio, from almost every other state, and from forty-nine nations outside the United States.

The majority of Wright State students commute from home or from off campus. However, nearly 15 percent of the undergraduates live in campus housing, including approximately 40 percent of the freshman class. Presently, campus housing includes seven residence halls and four apartment buildings. Planned for the next several years to meet the increasing demand for campus housing are three additional residence halls; an apartment complex for nontraditional students, married students, graduate and professional students, and students with dependents; and a small-group housing complex. The available off-campus housing adjacent to campus is limited.

On the average, Wright State’s students are slightly older than those at most other campuses. One-fifth are under twenty and one-fourth are over thirty; the median age is twenty-six. A 1988 student profile indicates that 48 percent of the students are male and 52 percent are female.

A number of students with disabilities have chosen Wright State University because of the
excellent facilities and support services here. About 3.5 percent of the student population are people with a disability.

Academically, Wright State’s students represent the entire spectrum of the scale. The ACT profile indicates that the average of high school grades for freshmen is 2.7 on a 4.0 scale, with 19 percent of them falling between 3.5 and 4.0.

The opportunities are good for close contact with faculty. The size of classes at Wright State varies from large lecture sessions to small classes and seminars. About 70 percent of the classes have enrollments between five and forty.

About 80 percent of Wright State’s full-time faculty hold terminal degrees in their fields and many also bring valuable professional experience to the classroom. In addition to their teaching responsibilities, many faculty members conduct active research programs. The faculty includes 710 full-time and 303 part-time members.

As a state-assisted university, Wright State has an open enrollment policy for undergraduate students, which means the university accepts and tries to accommodate, at the earliest possible time, Ohio residents who have graduated from an accredited high school or who have passed a high school equivalency test.

Mission

Wright State University is a comprehensive public university dedicated to advancing and disseminating knowledge through the pursuit of excellence in teaching, research, and professional service. Fundamental to the university mission and central to all disciplines are superior teaching and scholarly activity addressing basic questions and the needs of society. Professional service balances the commitment of the university through applied research, technical assistance, cultural activities, clinical services, consultation, and similar non-instructional activities and services.
Wright State is a metropolitan university. It is committed to providing leadership addressing the educational, social, and cultural needs of the Greater Miami Valley and to promoting the economic and technological development of the region through a strong program of basic and applied research and professional service. WSU Lake Campus, its regional branch campus, is committed to providing comprehensive two-year educational and community services to western Ohio.

Wright State desires to create an intellectually exciting community and encourages all students and faculty to strive for excellence. It attempts to foster a learning environment that nurtures innovative teaching and vital intellectual and personal relationships among students and teachers. It is committed to strong educational programs in the liberal arts and sciences as a foundation for all undergraduate degree programs. The university strives to develop fully the intellectual potential and aesthetic sensitivity of each student, including the skills of inquiry, reasoning, and expression. Through its professional programs the university seeks to impart essential skills, competencies, and attitudes students need for successful careers today and tomorrow. While its educational programs convey knowledge from the past and present, the university aspires to educate students for the future. To that end, it undertakes to make all students aware of the importance of the international environment.

Wright State intends to achieve national prominence through excellence in selected program areas. The university emphasizes undergraduate education through a wide range of baccalaureate degree programs in the arts, humanities, social and natural sciences, and several professional fields. Master's, specialist, and doctoral degree programs are offered in selected fields. Wright State is committed to providing the opportunity for lifelong learning and professional development through programs for both degree and nondegree students.

As a state-assisted university, Wright State maintains an open admissions policy. It is also committed to enrolling outstanding traditional and nontraditional students and those bound by place, time, economic, or other personal constraints. The university emphasizes access and services to persons with disabilities. All programs and services are open to qualified persons without regard to race, religion, marital status, gender, age, economic status, ethnic origin, or political belief.

Wright State provides a broad range of support services for the achievement of its educational goals and the development of its students. It seeks to meet the needs of its diverse student population through flexibility in the type, availability, and delivery of these services.

Wright State aspires to be a community bound together for a common purpose on a campus that is functional, aesthetically pleasing, and truly accessible. The university seeks to promote a sense of community among students by involving them in educational, cultural, social, and athletic activities. This sense of community is further fostered by engaging faculty, staff, alumni, and friends in advancing the interests of the university and by observing high standards of social responsibility, including equal access to education, equal opportunity, and affirmative action.

Wright State adheres to the principle of participatory governance. The university defends academic freedom as important for intellectual inquiry and the development of ideas but recognizes that academic freedom imposes on individuals special obligations of accuracy, appropriate restraint, and respect for the rights and opinions of others.
Diversity Statement

Wright State University celebrates diversity. Our daily life is made rich by the diversity of individuals, groups, and cultures. The interplay of the diverse stimulates creativity and achievement in all facets of our existence.

Respect, tolerance, and goodwill are the keystones to enjoying the diversity of our world. We are all linked to each other in a world created for all of us to share and enjoy. Each member of humanity has a potential contribution to make to the whole. It is our duty to encourage and promote that contribution.

Wright State University is committed to achieving an intellectual, cultural, and social environment on campus in which all are free to make their contribution. We will achieve an environment in which every student may think, learn, and grow without prejudice, without intimidation, and without discrimination. We will achieve an environment in which personal dignity and respect for the individual are recognized by all.

Wright State University promotes the acceptance and appreciation of every individual regardless of race, gender, age, ethnicity, ability or disability, sexual orientation, socioeconomic status, religious affiliation, or national origin. We encourage appropriate activities and events that foster learning about the diversity of our world.

Wright State University will be a model for our geographic region, exemplifying that a human community can exist that celebrates diversity, enjoys the richness that diversity brings to our lives, and grows stronger with every new member.

Equal Opportunity/Affirmative Action Policy

Wright State University is committed to achieving full equal opportunity in all aspects of university life. We are proud of the diversity of the university community and strive to make all members of the community feel welcome.

The policy of Wright State University is to not discriminate against any persons on the basis of race, religion, color, sex, sexual orientation, disability, veteran status, national origin, age, or ancestry. In addition, we take affirmative action to recruit and assist members of various racial or ethnic groups, women, Vietnam-era veterans, and persons with disabilities whose ability to achieve academic success might otherwise be unrecognized because of cultural barriers. Our policy is fully consistent with the various federal and Ohio statutes which prohibit discrimination.

Any questions or comments about the university’s policy, and any complaint about perceived discrimination, may be directed to the director of Affirmative Action Programs, 1224 Millett Hall, 513/873-3207.

The university’s Affirmative Action Plan is maintained in the Office of Affirmative Action Programs. Wright State is a public institution, and any member of the public may request a copy of the plan.

In addition, Wright State University is a national leader in accommodating the needs of students with disabilities. Any questions or comments concerning a needed accommodation may be directed to the director of Handicapped Student Services, 133 Student Services, 513/873-2141.

Degrees and Areas of Study

We offer undergraduate programs in the Colleges of Business and Administration, Education and Human Services, Liberal Arts, Engineering and Computer Science, and Science and Mathematics; the School of Nursing; and through the Wright State University Lake Campus. Graduate programs are offered through the School of Graduate Studies; the Schools of Medicine and Professional Psychology; and various postbaccalaureate programs.

Noncredit courses are available through the Office of Conferences and Continuing Education.

Wright State grants these baccalaureate degrees: Bachelor of Arts (B.A.), Bachelor of Fine Arts (B.F.A.), Bachelor of Music (B.Mus.), Bachelor of Science (B.S.), Bachelor of Science in Business (B.S.B.), Bachelor of Science in Computer Engineering (B.S.C.E.), Bachelor of Science in Education (B.S.Ed.), Bachelor of Science in Engineering (B.S.E.), Bachelor of Science in Medical Technology (B.S.M.T.), and Bachelor of Science in Nursing (B.S.N.).

The following associate degrees, available only at the Wright State University Lake Campus, are also granted: Associate of Arts (A.A.), Associate of Science (A.S.), Associate of Applied Business (A.A.B.), and Associate of Applied Science (A.A.S.).

Following are brief descriptions of the colleges and schools, and the fields of study in which Wright State offers course work leading to a baccalaureate degree.

College of Business and Administration

Bachelor of Science in Business degree programs are offered with majors in accountancy, business economics, finance, financial services, management, management information systems, management science, and marketing. Programs may include internships and co-op opportunities.

The fields of study leading to a baccalaureate degree in Business and Administration follow.

Accountancy (B.S.B.)
Business Economics (B.S.B.)
Finance (B.S.B.)
Financial Services (B.S.B.)
Human Resource Management (B.S.B.)
Management (B.S.B.)
Management Information Systems (B.S.B.)
Marketing (B.S.B.)
Operations Management (B.S.B.)
College of Education and Human Services

Basically a professional school, the college is devoted to preparing entry-level teachers, educational administrators, and other school leaders, and to preparing professionals in human services such as counseling, rehabilitation, and art therapy. The college awards the Bachelor of Science in Education and Bachelor of Science degrees.

The fields of study leading to a baccalaureate degree in Education and Human Services follow.*

Biological Sciences Education (B.S.Ed.)
Business Comprehensive Education (B.S.Ed.)
Chemistry Education (B.S.Ed.)
Communications Comprehensive Education (B.S.Ed.)
Computer Science K–12 (B.S.Ed.)
Early Childhood Education Pre-K–K (B.S.Ed.)
Earth Science Education (B.S.Ed.)
Elementary Education (B.S.Ed.)
English Education (B.S.Ed.)
History Education (B.S.Ed.)
Languages Education K–12 (French, German, Spanish, Latin) (B.S.Ed.)
Mathematics Education (B.S.Ed.)
Music Education K–12 (B.S.Ed.)
Physical Education K–12 (B.S.Ed.)
Physics Education (B.S.Ed.)
Rehabilitation Education (B.S.)
Science Comprehensive Education (B.S.Ed.)
Social Studies Comprehensive Education (B.S.Ed.)
Special Education (Developmentally Handicapped; Specific Learning Disabilities; Multihandicapped; Orthopedically Handicapped) (B.S.Ed.)
Visual Arts Education (B.S.Ed.)
Vocational Business Education (B.S.Ed.)

Second Teaching Fields Only
Bookkeeping/Basic Business Education
Economics Education
General Science Education
Geography Education
Political Science Education
Psychology/Sociology Education
Sales Education
Speech Education
Stenography and Typing Education

*New programs in Vocational Education and Marketing Education are under development as the catalog goes to press.

College of Education and Computer Science

The college offers programs leading to the Bachelor of Science and the Bachelor of Arts degrees. Programs of study include biomedical engineering, computer engineering, computer science, electrical engineering, engineering physics, human factors engineering, materials science and engineering, and mechanical engineering. Each of the programs includes cooperative education opportunities.

The fields of study leading to a baccalaureate degree in the college follow.

Biomedical Engineering (B.S.B.E.)
Computer Engineering (B.S.C.E.)
Computer Science (B.S.C.S., B.A.C.S.)
Electrical Engineering (B.S.E.E.)
Engineering Physics (B.S.E.P.)
Human Factors Engineering (B.S.H.F.E.)
Materials Science and Engineering (B.S.M.S.E.)
Mechanical Engineering (B.S.M.E.)

College of Liberal Arts

The college offers programs in the fine arts, social sciences, and the humanities which lead to the Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, and Bachelor of Science degrees. Many different career orientations are available through liberal arts studies. In addition, departments within the college offer specific courses that meet the university’s General Education requirements. These general studies allow you to view a wide variety of subjects at an introductory level before you choose and prepare for your careers.

The fields of study leading to a baccalaureate degree in Liberal Arts follow.

Acting (B.F.A.)
Anthropology (B.A.)
Art (B.A., B.F.A.)
Art History (B.A.)
Classical Humanities (B.A.)
Communication Studies (B.A.)
Dance (B.F.A.)
Directing/Stage Management (B.F.A.)
Economics (B.A.)
English (B.A.)
French (B.A.)
Geography (B.A., B.S.)
German (B.A.)
Greek (B.A.)
History (B.A.)
International Studies (B.A.)
Latin (B.A.)
Mass Communication (B.A.)
Modern Languages (B.A.)
Motion Picture History, Theory, and Criticism (B.A.)
Motion Picture Production (B.F.A.)
Music (B.A.)
Music Composition (B.Mus.)
Music Education (B.Mus.)
Music History and Literature (B.Mus.)
Music Performance (B.Mus.)
Music Theory (B.Mus.)
Organizational Communication (B.A.)
Philosophy (B.A.)
Political Science (B.A.)
Religion (B.A.)
Selected Studies (B.A., B.F.A.)
Social and Industrial Communication (B.A.)*
Social Work (B.A.)
Sociology (B.A.)
Spanish (B.A.)
Theatre Design/Technology (B.F.A.)
Theatre Studies (B.A.)
Urban Affairs (B.A., B.S.)

*Dual major

College of Science and Mathematics

Primarily discipline oriented, the college offers programs leading to the Bachelor of Science, Bachelor of Science in Medical Technology, and Bachelor of Arts degrees as well as interdisciplinary programs. General Education courses in the sciences are offered by various departments.

The college also offers master's degrees as well as an interdisciplinary Ph.D. program in biomedical sciences.

Wright State University-Miami Valley School of Nursing

The program in nursing at Wright State leads to the Bachelor of Science in Nursing degree, which qualifies the graduate for the National Council of State Boards Licensing examination (NCLEX) required for state licensure as a registered nurse. The School also offers a B.S.N. completion program for registered nurses and a Master of Science program.

The field of study leading to a baccalaureate degree in Nursing follows.

Nursing (B.S.N.)

Minors

The university offers minors in the following areas:

African and African-American Studies
Anthropology
Business
Classical Humanities
Communication
English
French
Geography
German

Health Science
History
Mathematics
Music
Political Science
Psychology
Religion
Sociology
Spanish
Statistics
A minor program at Wright State University is a structured and coherent secondary concentration of study. It is intended to allow undergraduates the option of presenting a second field of specialization in addition to a major as part of their studies at the university. Please confer with the appropriate department for details.

Preprofessional Programs

Premedical and Predental Study

There is no specific preferred major for premedicine or predentistry; thus preprofessional students may choose from a variety of appropriate undergraduate majors. However, a core of common courses is required by most health-professions schools.

Prospective medical or dental school applicants should choose a major in a subject area in which they have a strong interest. Most applicants choose a major in biological sciences or chemistry, but many professional schools are actively seeking qualified students in other areas, such as liberal arts. There is strong competition for admission to medical or dental schools, and you should have realistic career alternatives in case you are not admitted to the professional program of your choice.

Planning and performance are the keys to successful admittance to medical or dental school. You should work with an academic adviser to plan your freshman year program and with a member of the Wright State Premedical Advisory Committee before beginning your sophomore year. Members of the Premedical Advisory Committee help you plan your preprofessional programs and offer guidance in applying to medical, dental, or veterinary school.

The Premedical Advisory Committee also assists Wright State students who plan to apply for admissions to medical, dental, and other health-related professional schools. Committee members gather information on programs, admissions tests, application services, and financial aid, and make that information available to students considering health-related careers. In addition, they prepare committee recommendations for students applying to professional schools.

Suggested Undergraduate Curricula

Since course requirements vary slightly among schools, it is important for you to consult one of the admission requirements books for the specific requirements of the particular schools you would like to attend. The following courses offered at Wright State meet the admissions requirements of the great majority of medical and dental schools, including Wright State University and The Ohio State University medical schools.

- BIO 112 Principles of Biology: Ecology
- BIO 114 Principles of Biology: Genetics and Evolution
- BIO 115 Organismic Biology
- CHM 121 Submicroscopic Chemistry
- CHM 122 Macroscopic Chemistry
- CHM 123 Quantitative Chemistry
- CHM 211, 212, 213 Organic Chemistry I, II, III
- CHM 215, 216, 217 Organic Chemistry Laboratory I, II, III
- ENG 101, 102 Composition
- PHY 111, 112, 113 Principles of Physics
- PHY 101, 102, 103 Principles of Physics Laboratory
- PSY 105, 110 Introductory Psychology
One year (three courses) of college-level math, including one course in college algebra and one course in trigonometry, is required.

In preparing for the Medical College Admissions Test (MCAT) or the Dental Admission Test (DAT), if you are not majoring in biology you would do well to take one or more additional courses in the life sciences. If you are majoring in the sciences you should take several courses in the liberal arts over and above the university's General Education requirements. A premedical adviser can help you select courses that are relevant to your career choices and incorporate them into your personal programs of study.

Prelaw Study

Prelaw is not a specific major, so you are free to choose from a wide variety of undergraduate majors. Many different areas of study can prepare you for law studies. When choosing a major, you should select an area in which you have a strong interest and in which you can do well academically. The prelaw adviser at Wright State will help you plan your personal prelaw programs.

To a large extent, admission to law school depends on the basic skills that you master as an undergraduate. The ability to communicate, reason clearly, and think independently are more important than the area of your major. Many disciplines help build these skills. Speaking and writing skills can be sharpened in a history class as well as in a literature class, and reasoning ability can be developed in a chemistry lab as well as in a philosophy seminar.

Competition for admission to law school is keen, and your academic record is one of the key criteria. A major in political science, business, history, or other fields connected with law does not guarantee admission. An excellent academic record in the sciences, math, languages, or other areas not usually associated with law may have equal or even greater appeal to law schools.

Suggested Undergraduate Curricula

The following courses can provide a taste of what the law is about and what those who choose a legal career can expect to deal with. You may take as many or as few of these courses as you like. These courses are neither a prelaw program nor prerequisites for law school, and they do not relate to the intensive approach used in law school studies.

ACC 201, 202, 203 Accounting Concepts and Principles I, II, III
COM 232 Argumentation and Debate
EC 201, 202, 203 Principles of Economics
EC 351 Labor Markets and Unions
EC 454 Economics of Collective Bargaining
ENG 240 Intermediate Composition
FIN 301, 302 Business Finance
FIN 303 Case Problems in Financial Management
FIN 332 Real Estate Law
FIN 462 Retirement and Estate Planning
LAW 300 The Legal Environment of Business
LAW 360 Legal Aspects of Business Organizations
LAW 370 Legal Aspects of Commercial Transactions
LAW 480 Special Topics in Law
PHL 215 Inductive Logic
PHL 223 Symbolic Logic
PHL 124 Social Ethics and Values
PHL 311 Ethics
PHL 371 Business Ethics
PHL 472 Philosophy of Social Science
PLS 340 Law and Society
PLS 399 Mock Trial
PLS 440 Constitutional Law
PLS 441 Civil Liberties
PLS 442 The American Criminal Justice System
PLS 443 Administrative Law Procedure
PLS 471 International Law
REL 419 Ethics in an Industrial Society: The Responsibility of Business in Society
URS 399 Studies in Selected Subjects—Urban Law

The School of Graduate Studies

The graduate school is responsible for twenty-seven master's degree programs, a post-master's degree (Educational Specialist), the Doctor of Philosophy degree in biomedical sciences, and the Doctor of Philosophy degree in computer science and engineering, as well as courses for certification programs in education, and certificate programs in Teaching of English to Speakers of Other Languages (TESOL); business and professional writing; cartography, photogrammetry, and remote sensing; urban studies; professional archival and historical administration; theatre technology; anatomy; and quality assurance. Degrees may be earned in the following fields of graduate study.

Master's Degree Programs

Master of Arts
Applied behavioral science, classroom teacher, counseling and guidance, educational leadership, English, history, selected graduate studies, student personnel services

Master of Art Therapy

Master of Business Administration
Accountancy, finance, financial administration, health care management, logistics management, management, management science, marketing

Master of Education
Classroom teacher, educational leadership, student personnel services

Master of Humanities

Master of Music
Music education

Master of Rehabilitation Counseling
Chemical dependency, severely disabled

Master of Science
Aerospace medicine, biology, chemistry, computer science, counseling and guidance, geological sciences, logistics management, mathematics, nursing, physics, selected graduate studies, social and applied economics, systems engineering
Alternative Academic Programs

In addition to conventional degree programs and classroom experiences, we also offer some innovative alternatives for undergraduate study. Most of our departments offer independent study, and off-campus education is prevalent in professional programs. In the College of Education and Human Services, off-campus participation ranges from observing to student teaching, and in the College of Business and Administration, internships and class projects bring you in contact with local business and industrial firms. Students in nursing, social work, and other areas have direct contact with many outside agencies.

The university accepts the recommendation made by the American Council on Education in "The 1980 Guide to the Evaluation of Educational Experiences in the Armed Services" for transfer credit earned by attending military school.

Students can obtain credit by examination, which makes it possible for them to get college credit for courses available at the university by passing an examination offered by the appropriate department. Students must be registered and have completed at least one course at Wright State in order to receive credit by examination.

Many specific programs provide different ways to approach college education.

Cooperative Education

Cooperative education programs, available through various departments, offer you the opportunity to alternate on-campus study with full-time or part-time educationally or career-related work experience. Cooperative jobs are found by the university and job placements are monitored by the Cooperative Education staff in the Career Services office and/or faculty. Academic credit for work experience may be earned in some departments. In all departments, you are required to register for Cooperative Education, and the work experience and employer name are recorded on the transcript.

Through the co-op program, you can gain valuable learning experiences, test career interests, learn more about career fields, and develop job-related skills, as well as earn income for college expenses.

During co-op work quarters, you may take a limited number of classes. Students who are registered for a full-time co-op work experience are considered full-time students that quarter regardless of the number of classes taken.

If you are interested in the optional co-op program, we advise you to make plans as early in your academic careers as possible. The Cooperative Education staff is available to help you apply to the program and to offer suggestions about planning and scheduling.
Student Exchange Programs

Wright State students may participate in exchange programs with Japan, Brazil, and China. Each summer the university engages in month-long exchange programs with the Okayama University of Science in Okayama, Japan; the Federal and Catholic Universities of Paraná in Curitiba, Brazil; and Beijing Normal University in China. Each exchange provides an excellent opportunity to learn about the host country’s culture through classroom experiences, side trips, and a stay with a host family. A campus employment program allows you to work during the academic year to earn the money to pay for the exchange program. Scholarship credit is available for special projects through the Department of Political Science and the Department of Communication. For further information about the international student exchange programs with Japan, China, and Brazil, contact the International Exchange Program in Student Development.

Study Abroad

Study abroad programs are sponsored from time to time by academic departments. Information may be obtained by contacting individual departments and by watching for promotional materials. The University Library has a number of catalogs available from universities around the world.

Interdisciplinary Study

Interdisciplinary study provides the opportunity to explore different areas or to tailor a major to your interests. Many courses are offered jointly by cooperating departments. You can also combine work in two different departments for a dual major. The selected studies major offered by the College of Liberal Arts allows you to pursue a self-designed course of study, culminating in a senior project, in an area where a major is not currently available.

Honors

The University Honors Program provides both an alternative curriculum and a distinctive atmosphere within which to pursue your education. The honors curriculum provides alternative classes in General Education and in selected major subjects, as well as unique interdisciplinary courses. These courses are built on the philosophy that academically well-prepared and motivated students should exercise some control over their education; such courses emphasize discussion, faculty-student interaction, flexibility, and independent learning.

Honors students and faculty create a distinctive “small college” atmosphere within the diversity and resources of the large university. Classes, social occasions, regional honors meetings, service projects, and faculty mentoring allow participants to create strong bonds and friendships.

For more information on the program and admission requirements, see the University Honors Program section on page 60 in this catalog or contact the University Honors Program office.

Officer Training/ROTC

The Army and Air Force offer the Reserve Officer Training Corps (ROTC) program to all qualified students. The purpose of ROTC is to educate selected men and women for positions of responsibility and afford them the opportunity to be commissioned as second lieutenants in the Army and Air Force. The Army also offers the option for duty in the National Guard or Reserves.

The first two years of both programs have no military obligation. Each offers a competitive scholarship program that pays the student’s tuition, buys all books, and provides $100 a month. Students involved in the Advanced or Professional Officer course would also receive $100 a month during the school year.

Both programs are available to students with only two or three years remaining in their degree program. Two-year and compression programs have been established to facilitate participation in the ROTC program for freshmen and sophomores or for juniors and seniors who will be enrolling in graduate study. Through a special program, advanced placement credit may be given to veterans and JROTC students. Graduate students may also be eligible for both ROTC programs.

The Army program is administered in two parts. The basic course emphasizes practical leadership techniques and management concepts that are equally applicable to both military organizations and private industry. The advanced course is designed to prepare students to be commissioned officers by including practical study in tactics, training, management, leadership techniques, and the exercise of command. Students
in the advanced course (cadets) are paid $100 a month during the regular school year. During the summer quarter between the junior and senior years, they attend a six-week ROTC Advanced Camp which provides them with the opportunity to apply the leadership and technical training received in the classroom. While at camp, cadets are paid half of the salary appropriate to the grade of second lieutenant.

The Air Force ROTC programs are the General Military Course (GMC) and Professional Officer Course (POC). The GMC introduces students to the Air Force and its history through one hour of class and one hour of leadership laboratory each week. The POC consists of management, leadership, American defense policy, and introduction to command. Six courses involving three hours of class and one hour of leadership laboratory each week are required. Summer field training is four or six weeks long and is normally attended between the sophomore and junior years. It emphasizes Air Force careers and leadership development.

Further information is available in the Department of Military Science and the Department of Aerospace Studies.

Resources
University Library

The University Library plays an integral role in the instruction and research activities at Wright State University. The University Library provides information resources and services to serve the diverse needs of the Wright State community. The library collections, among the largest in the Dayton metropolitan area, include over 460,000 bound volumes, 940,000 microforms, 200,000 U.S. and Ohio documents, and 4,151 periodical subscriptions. Built in 1971 and expanded in 1988, the library building is open over 100 hours a week. The facilities include study tables and carrels, a microforms reading room, and photocopiers.

The library is using the latest technology to provide access to instructional and research materials. The library's public catalog has been computerized since 1986, and it provides access to the holdings of many other area libraries. Beginning in 1992, the library will be one of the first in the state to introduce the new OhioLINK system, which
will link the holdings of all academic libraries in Ohio. The Wright State University Library also provides access to a number of computerized databases, and has CD-ROM services available in a wide range of subjects, including education, business, and psychology.

As a partial U.S. government documents depository, the library provides students and the general public with access to over 200,000 documents and to approximately 49,000 geographical and topographical maps from all over the United States.

A number of special services are available through the library. To assist you in the use of extensive collections, reference librarians are available seven days a week. Orientation and instructional programs help you learn effective use of the library as an information and intellectual resource. The general library services include current periodicals, reserves, and database search services. In addition, the university has special libraries for music, health sciences, and educational resources. Through interlibrary loan, you may borrow books and journal articles from other academic libraries throughout the United States. Through the cooperative arrangement, Wright State students are also able to directly use the library resources available at most other Dayton metropolitan universities.

The Department of Archives and Special Collections houses one of the most complete depositories of information on the Wright brothers in the world. The collection contains about 6,000 items, including manuscripts, records, books, family papers, and awards, and over 3,600 prints made by Orville and Wilbur Wright from their own negatives. The archives also contain many other important collections on aviation history, local and regional history, and rare children's books illustrated by Arthur Rackham.

**Computer Services**

Computer services for the campus are provided by University Computing Services (UCS) located in the Library Annex. UCS provides the computing hardware and software to support instructional, research, and administrative computing needs throughout the university.

The available UCS computing equipment consists of IBM 3090-150s, VAX 6420, Encore Multimax 320, and a number of microcomputer laboratories. UCS also supports various computing facilities maintained by academic colleges and departments across the campus. Wright State is a member of the Ohio Supercomputer Network which provides access to a Cray Y-MP/864 in Columbus.

Specific information on the facilities and services provided the students, faculty, and staff is available by contacting the University Computing Services office located on the first floor of the Library Annex.

**Consortium**

As a Wright State student, you also have hundreds of additional classes available to you through the university's membership in the Southwestern Ohio Council for Higher Education, an association that includes many area colleges and universities. If you are a full-time student at Wright State, you may cross-register for credit at member schools at Wright State's tuition rates as long as class space is available, you have your adviser's consent, and the course isn't offered at Wright State. You must also meet course and host college prerequisites.

The consortium also offers cooperative library privileges to students at all member institutions. These library holdings total more than a million volumes.
Resources for Special Interests

Bolinga Cultural Resources Center

The Bolinga Cultural Resources Center, located at 129 Millett Hall, opened in 1971 as a tribute to Dr. Martin Luther King, Jr. The word “Bolinga” means love in the African language of Lingala, and the Bolinga Center promotes cultural diversity on campus and in the community through a variety of programs, activities, and forums. The center also provides academic and personal support to students.

The center's cultural programs include the following:

- **African American Scholars Speakers Series**—the center, in conjunction with academic departments, hosts visiting African American scholars for lectures or other programs.
- **Community Speakers Series**—African American speakers and other speakers from the Dayton community address various topics.
- **Film Series**—the center presents films that focus on African American and Third World issues.

Through the Peer Supportive Services Program (PSSP), the center facilitates the personal and academic adjustment of students. The PSSP consists of several supportive activities designed to facilitate the retention and graduation of African American students. The activities include tutoring, mentoring, workshops, and counseling services. The program also recognizes the importance of a well-rounded education. Students are encouraged to attend a variety of extracurricular activities and cultural events, including campus and community lectures, forums, and artistic events that not only promote academic success but also encourage growth and enrichment.

- **Black Men on the Move/Black Women Striving Forward**

  Both of these are counseling/networking groups that promote academic achievement and self-awareness among undergraduates. Regularly sponsored group meetings allow students the opportunity to network with each other as well as hear presentations by various speakers.

- **Tutoring**

  PSSP sponsors in-house tutorials for a number of courses, including such areas as math, science, and the social sciences. Each quarter, the center disseminates information about its tutorials to students.

Center for Arts for the Disabled and Handicapped

In 1977, the university was given national recognition for programs and activities in arts for people with disabilities. Because of our progressive programs in art therapy, the National Committee, Arts for the Handicapped, Washington D.C., selected Wright State as a national model site and a national resource center. In 1982, a Center for Arts for the Disabled and Handicapped was formed and is located in the Creative Arts Center. Wright State continues to hold national prominence in programs and activities in the arts for all people.

Organizational Services Group

The Organizational Services Group (OSG) is composed of three different centers: Economic Education, Individual and Organizational Development, and Small Business Assistance. Through these centers the OSG provides valuable information and services both to the university community and to the community at large.
Accreditation and Memberships

Wright State is accredited by the North Central Association of Colleges and Schools. Also, programs in the College of Education and Human Services are approved by the Ohio State Board of Education and accredited by the National Council for Accreditation of Teacher Education, our music programs are accredited by the National Association of Schools of Music, business programs by the American Assembly of Collegiate Schools of Business, art therapy by the American Art Therapy Association, geological sciences by the American Institute of Professional Geologists, Professional Psychology's clinical psychology and internship programs by the American Psychological Association Committee on Accreditation, social work by the Council on Social Work Education, environmental health sciences by the National Accrediting Council for Environmental Health Curricula of the National Environmental Health Association, medical technology by the Committee on Allied Health Education and Accreditation and the National Accrediting Agency for Clinical Laboratory Scientists, medicine by the Liaison Committee on Medical Education, the College of Engineering and Computer Science's biomedical engineering, computer engineering, electrical engineering, engineering physics, materials science and engineering, and mechanical engineering programs by the Accreditation Board for Engineering and Technology, the bachelor of science program in computer science by the Computing Sciences Accreditation Board, and the School of Nursing by the National League for Nursing and the Ohio Board of Nursing. In addition, the Bachelor of Science program in chemistry is certified by the American Chemical Society, and the Wright State University Lake Campus is accredited by the North Central Association of Colleges and Schools at the associate degree-granting level.

Wright State holds membership in numerous organizations, including the American Association of Colleges for Teacher Education, American Assembly of Collegiate Schools of Business, the Midwestern Association of Graduate Schools, the Council of Graduate Schools, the Ohio College Association, the Association of Urban Universities, the American Association of State Colleges and Universities, the American Council on Education, the American Association of Colleges, the American Association of Colleges of Nursing, the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing, and the Professional Engineers in Education.

Wright State participates in many kinds of cooperative ventures with local colleges, universities, and institutions. Through the Southwestern Ohio Council for Higher Education, Wright State students may take courses at member institutions and also take advantage of their library facilities. The School of Medicine has cooperative arrangements with Central State and Miami Universities, and the School of Nursing offers its master's program in cooperation with Miami University. Both of these schools work closely with many area hospitals, long-term care facilities, and community health care systems. A graduate-level program in geology is offered in cooperation with Miami University and the University of Cincinnati. The Wright State University Lake Campus in conjunction with Lima Technical College and the Lima Branch Campus of The Ohio State University offers a joint program in law enforcement. Wright State's telecommunications department works with the University Regional Broadcasting Corporation, a joint program of Wright State, Central State, and Miami Universities. In addition, the Sanders Judaic Studies Program, providing scholarship and teaching in the field of Judaic studies, is made possible through the cooperative effort of Wright State, United Theological Seminary, and the University of Dayton.
Student Life and Student Services
In addition to classes and academic programs, there's much more to discover at a university. Wright State has many services, facilities, and activities to give you the opportunity to enjoy all the benefits of university life. Many people are here to serve you, answer your questions, and help you over any rough spots that might occur.

Wright State's student services are a coordinated group of offices including Admissions, Financial Aid, Student Development, Residence Life, Student Employment, Career Services, Handicapped Student Services, Veterans Affairs, Student Health Services, Student Activities, and the Bookstore. Other student-centered areas and activities include the University Center, residence life facilities, intramural sports, and open recreation programs. The Psychological Services Center, located in the Frederick A. White Center, offers personal counseling and seminars.

Student Services Offices
The student services offices are staffed by professionals who are trained to help the student population in particular areas. Most of these services are free and you are invited to visit the offices any time.

Services for Disabled Students
Extending the opportunities of higher education to people with disabilities is a high priority at Wright State. We rank as a leader in adapted physical facilities, and campus buildings have been designed to be free of architectural barriers. Ramps and ground-level entrances lead to each building and all buildings have adapted restrooms and elevator access to every floor. An underground tunnel system links most campus buildings.

Handicapped Student Services promotes the realization of each student's potential by offering services in physical, academic, personal, and/or vocational areas. These services are provided on the basis of individual need, allowing learning-disabled and physically disabled students to pursue college educations.

Physical support services are designed to enable each student to be as independent as possible and include personal attendant care for dressing and hygiene needs; adapted campus parking; assistance in locating adapted off-campus housing; training in activities of daily living to achieve a greater degree of independence; campus mobility orientation for visually impaired students; and adapted athletics, intramural sports, and recreational programs.

The academic support services are designed to assist physically and learning disabled students in meeting all academic requirements. These include the provision of taped textbooks for students who have visual impairment or a learning disability; test proctoring for students who need reading and writing assistance and/or extra time to complete a test; and academic aids that accommodate individuals with disabilities in meeting class requirements.

The vocational program assists you in making realistic occupational choices. Opportunities exist in the planning and development of a career, and there are services designed to provide experience at various employment sites. These methods allow you to make a realistic decision about future careers and ensure that you are able to meet the demands of the occupation.

If you require services available for disabled students, you are strongly encouraged to contact Handicapped Student Services prior to admission to make arrangements for the necessary services well in advance of enrollment.

Student Development
The Department of Student Development provides a variety of programs and services. The Residence Life Office provides administrative support for the campus housing operation as well as developing programs for campus residents. Using
the "Wellness Model," programs are offered in the areas of social, occupational, ethical, physical, emotional, and intellectual development. The Residence Life Office also advises and supports the efforts of several residentially based student organizations. In addition, the residence life staff assist resident students by mediating conflicts, providing personal counseling, and acting as a referral to other university programs and services.

The Student Organization and Leadership Development (SOLD) Office provides support services and advising for over 170 student organizations. A variety of leadership development opportunities are also offered by the SOLD staff throughout the year. This office also works closely with the eleven Greek organizations that currently have chapters at Wright State University.

Campus disciplinary hearings are conducted by the departmental staff, which is coordinated by the Student Relations Office. The department also operates an off-campus housing referral service, assists with the food service operation, and advises the student media.

To assist you with on-campus communication, the department operates a mailbox system in the Allyn Hall Lounge. Most official university correspondence is placed in these mailboxes. Each enrolled student is assigned a mailbox at the start of the fall quarter. Students keep the same mailbox throughout the year unless they fail to register early for winter and spring quarter.

Career Services
Self-assessment, career exploration, and selection of a career path can help you get the most out of your college education. Career Services involves you in experiential opportunities, helping you secure full-time or part-time positions both while in school and after graduation.

The department uses a number of approaches in helping you, including workshops, a two-credit elective class on career decision making, academic courses, cooperative education experiences, and computerized guidance programs. Through these measures, the department helps you explore and evaluate factors important to your career planning, such as your potential abilities, skills, interests, values, needs, and priorities. These planning services, supported by an extensive career resources center, encourage you to explore career possibilities and make thoughtful career choices.

Career Services guides you as you explore careers through cooperative education experiences, internships, part-time jobs, and summer work. As seniors and graduate students approach graduation, they attend workshops in resume writing, interviewing, and job search techniques in preparation for on-campus and on-site interviews with employers from throughout the United States. This service remains available to Wright State University alumni throughout their careers.

It is to your advantage to visit Career Services during your first year at the university to learn more about the services available to you throughout your academic program. If you are interested in cooperative education, you are encouraged to register for cooperative education once you have met the minimum requirements for your academic program. Registration for placement upon graduation should be submitted nine months prior to your graduation date.

Preprofessional Planning
If you wish to pursue a career in law, medicine, or other professional or graduate field, the Office of Preprofessional Advising provides a central source of information. The office maintains a reference library of catalogs for law, medical, and graduate schools and advises students interested in preparing for any of these careers. Each year the office sponsors programs in conjunction with many different law and medical schools and schedules visits by school representatives.

Psychological Services
Personal growth, as well as intellectual development, is an important part of your university experience. The Psychological Services Center staff helps you learn to integrate your academic and personal lives through a variety of experiences. Recognizing the need for life skills development, the center offers individual and group counseling in such areas as increasing self-esteem, assertiveness training, human sexuality, decision making, and adapting to change. Services are also available to assist you in coping with stress as it relates to school, work, family, and personal life situations. Test anxiety, fear of failure, changing values, and uncertainty about future plans are some of the commonly presented concerns.

If you are interested in these programs or have other personal concerns, you may call the Psychological Services Center at 873-3407 for an appointment, or you may visit the center on the second floor of the Frederick A. White Center.
Student Life and Student Services

Monday through Friday from 8:30 am to noon and from 1 to 5 pm. All counseling services are confidential and are available to students without charge.

Veterans Affairs
Veterans who are seeking a degree and who attend school either full time or part time may be entitled to specific benefits. The Veterans Affairs office on campus can help veterans take full advantage of their educational benefits.

Medical Care
Medical care is available to students in Student Health Services in Allyn Hall. Personnel are on duty to see routine health problems 8:30 am to 10 pm Monday through Thursday, and 8:30 am to 5 pm on Friday. Students needing physician care will be referred to the Frederick A. White Center or to a private physician. There is a charge for this referral service; student health insurance may cover some of this expense. Student Health Services also sponsors wellness programs for the university community, such as health screenings; hearing, dental, foot, and hypertension testing; and community services including visits from the Community Blood Center.

Public Safety
The Department of Public Safety is the official law enforcement agency for the university campus and is responsible for ensuring a safe environment for students, faculty, staff, and visitors. Sworn police officers are on duty twenty-four hours a day, seven days a week, and respond to calls for assistance received at the Public Safety Communications Center at 121 Allyn Hall. You can reach the Public Safety Communications Center by dialing 2111, or 911 in an emergency, from a university phone.

Emergency phones are placed at strategic locations throughout the campus in buildings, the parking lots, and remote areas. These phones automatically ring directly in to Public Safety when you pick up the receiver.

An escort service is provided for students concerned about safety when they are walking to automobiles or campus residences after dark. Public Safety also maintains a crime prevention unit that coordinates a Campus Watch program and a property identification program called Operation I.D. In addition, educational programs are offered to students on topics such as campus safety, date or acquaintance rape, drug and alcohol awareness, and crime prevention.

Parking Services
The Office of Parking Services and the Parking Services Advisory Committee establishes and regulates the procedures for parking on campus.

Parking on the main campus is provided in the general parking zones at no charge to students, faculty, and staff. No permit is needed to park in general parking and meter zones.

You do need to purchase a permit to park in A (reserved), B (student staff), F (faculty), H (handicapped), R (resident student), S (staff), and U (university vehicle) zones. Permits are available through the Office of Parking Services, located at 017 Library.

People with a mobility impairment should contact the Office of Handicapped Student Services. People with disabilities must register with Handicapped Student Services before applying for an H permit at the Office of Parking Services.

Resident students must show resident ID cards and vehicle registration when applying for parking permits.

All people driving a motorized vehicle to campus are responsible for complying with the Wright State University Parking Regulations and the laws of the state of Ohio. Complete parking regulations and information concerning permits are available from the Office of Parking Services. RTA passes and schedules are available at the Office of Parking Services.

The Office of Parking Services is also responsible for the campus lost and found. Anyone losing or finding an article should notify the Office of Parking Services. Most articles are held for ninety days and, if not claimed, are donated, sold, or discarded.

Facilities

University Center
A good place to meet and talk with other students, staff, and faculty is the University Center, which includes a cafeteria, private dining rooms, lounges, game rooms, box office, a rathskeller, a faculty dining room, and bookstore. The student-run University Center Board (UCB) schedules concerts, exhibits, guest speakers, artists, comedians, tournaments, and recreation at the center. All requests for reservations are made through the University Center Director’s office. The facility can also be used for public activities on request. The Office of Conferences and Continuing Education, which facilitates the planning of official university activities, is available to provide consultation on planning and coordinating special functions.
The University Center Box Office, managed by the Student Activities Office, handles tickets for both university and community events.

The Student Activities Office, on the lower level of the center, serves as a resource to members of the university community in planning a wide range of community-related functions. The office also provides information about various types of entertainment and sponsors the College Bowl tournament, and, with the University Center Director's office, administers the University Artist Series, Contemporary Lecture Series, and the annual Madrigal Dinner.

The University Bookstore, owned and operated by the university, is located on the lower level of the center. It stocks textbooks and tradebooks used in Wright State classes as well as a variety of other books, supplies, and gift items. The bookstore also buys and sells used books each quarter.

**Campus Housing**

If you wish to experience residential life on campus, you have the opportunity to live in one of five campus communities: Hamilton Hall, Forest Lane, Hawthrorn/Cedar/Hickory, Laurel/Jacob/Boston, or Oak/Maple/Pine.

Hamilton Hall provides air-conditioned dormitory-style residence hall accommodations for approximately 320 students. Most students are housed in double occupancy rooms, the remainder in triples. Single rooms are not available. Floor lounges, a recreation room, a computer room, laundry facilities, vending machines, a large-screen television, and other amenities are provided for use by residents. Hamilton Hall residents are required to purchase a food service plan.

Forest Lane provides apartment-style accommodations for approximately 250 students. The majority of apartments are two-bedroom units that house four students; the remaining units are studio apartments that house two upperclass returning students or athletes. All apartments are air conditioned and partially furnished. Utilities are included. The community is equipped with a laundry facility and a community center including a multipurpose area and a large-screen television room. Forest Lane residents have the option of purchasing a food service plan.

Hawthrorn/Cedar/Hickory and Laurel/Jacob/Boston provide suite-style residence hall accommodations for approximately 790 students. Oak/Maple/Pine are currently under construction and will add 260 additional spaces in 1991 and 130 in 1992. Suites are comprised of either double occupancy or single occupancy rooms adjoined by a bathroom to another double or single occupancy room. Triple occupancy and quad occupancy rooms are available with private bathrooms. Some of the rooms are carpeted and other rooms have tile floors. All of the rooms feature loft style furniture which allows for a variety of floor plans from which you can choose. Each of the residence halls offer floor lounges with televisions, laundry facilities, and vending facilities. Hawthorn/Cedar/Hickory, Laurel/Jacob/Boston, and Oak/Maple/Pine residents must purchase a food service plan.

Only students who have been admitted to Wright State will be considered for campus housing. For more information concerning campus housing contact the Residence Life Office at 513/873-4172.

If you are not interested in or are unable to obtain campus housing, the Department of Student Development offers several services to assist you in obtaining off-campus living arrangements.

**Food Service**

Wright State University, in conjunction with a contracted vendor, provides several food service operations throughout the campus. A cafeteria, The Wright Place; a rathskeller; and a faculty dining room are all located in the University Center. A fast food operation, the Bicycle Shop, is located in the basement of Millett Hall, and a snack shop is available in Allyn Hall lounge. Due to the many locations, you have a wide variety of food and services available to you.

In addition to ala carte items being available at all locations, the food service offers several quarterly food plan options to students, faculty, and staff, allowing them to use various facilities throughout the campus. Some residential students are required to purchase one of the food plan options.

Additional information can be obtained by writing or calling Dining Services, located in 153 University Center, at 513/873-2478.
Extracurricular Activities

Sports

The university offers a broad program of both intercollegiate and intramural sports for men and women. After competing as an NCAA Division II institution for the first eighteen years of the athletic program, the university moved to Division I status in the fall of 1987. You have the opportunity to participate either as a member of the athletic teams or as a spectator. At the same time, athletics serves as a major link between the university and the surrounding community.

The university sponsors eight varsity sports for men and seven for women. Full-time students in good academic standing can try out for any of the varsity teams. Men's sports include baseball, basketball, cross country, golf, soccer, swimming, tennis, and wrestling. Women's sports include basketball, cross country, soccer, softball, swimming, tennis, and volleyball.

The move to Division I brought Wright State athletics up to the level of the university's nationally recognized academic and research programs. The men's basketball program has been the most successful, winning the NCAA Division II national championship in 1983 and qualifying for postseason play eight times. Wright State's other teams were frequently ranked among the Top-20 Division II teams in their respective sports.

Intercollegiate wheelchair athletics provides sports for students who use wheelchairs. Basketball is the major team wheelchair sport with competition available on a regional, national, and international basis. The team competes in the Central Intercollegiate Conference, the only intercollegiate conference for student athletes with disabilities. The university also sponsors competition in track and field and swimming, as well as a number of other intramural and recreational activities that have been adapted for students with disabilities.

Grant-in-aid money is available in varying amounts for each sport. For more information about grant-in-aid money, contact the coach of the respective sport.

Completed in 1973, the Physical Education Building formerly was the center of the athletic department and sporting events. The building served as the site of four NCAA tournaments during the 1985-86 season, as well as the 1985 Division II national wrestling championships.

In the fall of 1990, the athletic department moved to a new home, the Ervin J. Nutter Center. A main arena that seats more than 10,000 spectators for basketball is the focus of the new center. The C. J. McLin, Jr., Gymnasium, which can host athletic events requiring less than 500 seats, provides additional playing floors for athletic practices and facilities for physical education instruction and recreational activities. Besides the intercollegiate athletic offices, the Nutter Center also houses the team locker rooms and training facilities.

Student sports activity is a major focus of the Intramural/Recreation Department, which sponsors teams in touch football, basketball, indoor soccer, wrestling, volleyball, and softball, and individual activities in racquetball, golf, tennis, and handball. There are also open recreation periods when any student may use the Nutter Center facilities.

Adapted athletics introduces students who are unable to take part in regular intramurals to a variety of recreational activities through an instructional approach. Rules and equipment are modified and activities such as archery, aquatics, billiards, bowling, and squash, as well as individualized therapy programs, are taught.

Music

The Department of Music instrumental and choral ensembles provide you with an opportunity to develop your musical talent, broaden your education, and make new friends. Ensembles are composed of students with various majors from many departments; you need not be a music major to participate. Participation may be on a credit or noncredit basis; some ensembles, however, require an audition. Most groups present one concert a quarter on campus as well as occasional off-campus performances.

There are several choral ensembles, a vocal jazz ensemble, and a gospel choir. The University Chamber Singers perform a variety of music from the Renaissance to the twentieth century.
University Chorus performs major choral works from all periods. They have performed with the Dayton Philharmonic Orchestra and with the Wright State University/Community Orchestra. The Gospel Choir performs music from various periods of the black church tradition, mainly emphasizing the contemporary sound. Various phases of American jazz from the Big Band Era to the present are sung by the Vocal Jazz Ensemble, a highly select group who perform on campus and within the greater Dayton Community.

The department’s orchestral ensembles include the Wright State University/Community Orchestra and the University Chamber Orchestra. The University/Community Orchestra annually presents “Concerto Night,” featuring student soloists selected by audition. The University Chamber Orchestra is composed of select string, wind, and percussion performers from the university and the community.

The University Symphony Band and the University Concert Band perform a wide variety of standard literature for wind ensemble and concert band. Instruments are available for both groups, and no audition is required for Concert Band. The University Jazz Ensemble plays early swing and jazz through contemporary progressive jazz. Other instrumental groups include the University/Community Trombone Ensemble; Brass Choir; Varsity Band, which plays for all home basketball games and other special events on campus; and other ensembles that are formed depending on interest, enrollment, and faculty availability.

Students and residents of the Dayton area have a variety of opportunities for musical growth and exploration in the noncredit Community Music Division of the Department of Music. A ten-week program of noncredit classes and private lessons is given each quarter.

Private lessons are available in most orchestral instruments, as well as classical guitar, folk guitar, organ, and voice. These lessons are taught by university faculty, faculty associates, Community Music Division faculty, and selected university students majoring in music. You must provide your own instruments. Private lessons are scheduled by the teacher in consultation with the student, at a time that is mutually acceptable.

Organizations and Activities

Many opportunities for extracurricular involvement exist through participation in student organizations, clubs, and activities. Departmental clubs allow you to delve into a particular area of study or career field, and several academic departments sponsor honoraries. Several chapters of Greek letter fraternities and sororities offer service, social activities, and friendship. Sports, religious, and special-interest clubs provide many avenues for you to explore your interests with a group.

Government

The Student Government is an elected representative student assembly that officially acts on behalf of the student body. Student Government members represent the students through Academic Council and on major committees of the council. Student Government consists of an elected student assembly of eleven students, the Board of Trustees student appointee, and an appointed cabinet of six students. The student body president chairs both the assembly and the cabinet.

The Academic Council is the major decision-making body of the university, consisting of representatives from the faculty, administration, and Student Government. It deals with academic regulations, curriculum changes, and other university-wide policies.

If you don’t know where to take a grievance, problem, or suggestion, you can go to the Office of the Ombudsman, 192 Allyn Hall. The ombudsman provides accurate information about the university, investigates and tries to resolve student problems, and makes students’ concerns known to the faculty and administration.

Inter-Club Council

Inter-Club Council (ICC) is made up of representatives from the various student organizations on campus. Any student organization registered with the Student Organization and Leadership Development Office can be a member of
ICC. ICC’s purposes are to develop cooperative campus activities and to provide communication among and services to the different student groups.

Media

If you wish to put your creative talent to work, there are several student media outlets on campus. The student newspaper, *The Guardian*, trains writers, editors, salespeople, photographers, managers, and desktop publishers to produce a paper once a week during the academic year. The literary magazine, *Nexus*, is published once each quarter and includes poetry, fiction, and original artwork from students as well as some of the best talents in the country. You can also work at WWSU, the campus radio station, as a disc jockey, news- and sportscaster, or record reviewer. WSU Cable 4-A, a student-run cable station, provides classroom training and experience in video production as well as programming for cablecasting throughout the Dayton area.

Cultural Activities

Many cultural opportunities on campus allow you to both see and participate in the performing arts. The Department of Music presents many concerts and recitals by student and faculty soloists and choral and instrumental groups. University Theatre presents six major productions, several one-act plays, and at least one children’s theatre production during the academic year. The theatre department has also offered a motion picture series. The University Center Board sponsors many current popular films, mini-concerts, recreational and special events. The University Art Galleries regularly schedule exhibitions and events, both in the Main Gallery and the Experimental Gallery. The University Artist Series brings nationally known performing artists to the campus several times a year, and the Contemporary Lecture Series attracts popular guest speakers who focus on a particular theme chosen for each season.
Admission, Registration, and Fees
Admission, Registration, and Fees

Three offices at the university that you'll probably have a lot of contact with are the Offices of Undergraduate Admissions, the Registrar, and Financial Aid.

The staff of the undergraduate admissions office assists prospective and returning students by providing information about the university, its academic programs, and undergraduate admissions. Staff members also help you complete the application for admission. The office arranges individual and group tours of the campus and can make appointments for you to talk with faculty or advisers in the academic areas in which you're interested.

Included among the duties of the Office of the Registrar are registering students in classes and assessing fees, processing class withdrawals, obtaining fee refunds, accepting applications for graduation, processing grade reports, and issuing academic transcripts to students who request them.

The Office of Financial Aid helps students who have difficulty in meeting the costs of a college education. Although we feel students and students' families are primarily responsible for financing a college education, we realize there are many reasons their financial resources may be limited.

Admission

Ohio students who have graduated from an accredited high school or who have passed a high school equivalency test (GED) are eligible to enter Wright State University. Out-of-state students, however, besides meeting regular admission requirements, must present evidence of above-average ability to do college work.

High School Preparation

While Wright State University adheres to an open admission policy as provided in the Ohio Revised Code, the university has adopted a new college preparatory curriculum policy. The university requires you to have a high school record that is consistent with the recommendations of the Report of the Advisory Commission on Articulation between Secondary Education and Ohio Colleges. If you do not meet these requirements, you will enter the university under a directed advising program and will be required to remove any deficiencies before graduating from Wright State.

The following table summarizes the requirements and indicates how you may remove deficiencies. In this table, "high school" is defined as grades 9–12, and a "unit" is one academic year of course work.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Removal of Deficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English—four units</strong></td>
<td>Pass ENG 101*</td>
</tr>
<tr>
<td><strong>Mathematics—three units (including Algebra I and II)</strong></td>
<td>Pass MTH 127*</td>
</tr>
<tr>
<td><strong>Social Sciences—three units (including two units in history)</strong></td>
<td>Complete the General Education requirement in Western Civilization. A one-term course removes up to one unit of deficiency.</td>
</tr>
<tr>
<td><strong>Science—three units</strong></td>
<td>Complete the General Education requirement in natural sciences. A one-term lecture/lab course removes up to one unit of deficiency.</td>
</tr>
<tr>
<td><strong>Foreign Language—two units (in the same foreign or classical language through level II)</strong></td>
<td>Pass courses through the 103 level or demonstrate proficiency by examination.</td>
</tr>
<tr>
<td><strong>Arts—one unit</strong></td>
<td>Complete the General Education requirement in Fine and Performing Arts.</td>
</tr>
</tbody>
</table>

*Initial enrollment in English and mathematics courses will be determined by placement testing. See the section on Placement Testing below. **Algebra I and Foreign Language I may be taken in eighth grade.

Admission to the university does not automatically guarantee admission to a major program of study. Major programs of study have specific entrance requirements that must be met.

Degree-Seeking Students

Freshmen

If you're beginning college work at Wright State with the intention of earning a degree, the procedures for applying are simple. First, you should get an application form from the Office of Undergraduate Admissions, complete it, and return it with the nonrefundable $25 application fee. Then you should have your high school counselor send a transcript of your grades and the College Preparatory Curriculum Completion form to Wright State.

National test scores (the American College Testing score [ACT] or the Scholastic Aptitude Test score [SAT]) are required for admission. The following section explains Wright State University's internal placement testing procedures.
Placement Testing

During the registration period, the University Division conducts placement testing in mathematics, reading, and writing for undergraduate students who are new to the university. New students must complete appropriate testing before scheduling an academic advising appointment to prepare for course registration. Directions for academic advising and registration will be given at the placement testing session.

Mathematics

All students preparing to enroll for their first mathematics course in higher education are required to take a mathematics placement examination. Appropriate course enrollment is then determined based on these scores. Math test scores are valid for one year from the time the test is taken.

Transfer students who have earned college credit in mathematics at a grade of C or above within the past year do not need to take the exam. In addition, students transferring from Clark State, Edison State, or Sinclair Community College who have completed all required developmental mathematics courses within the past twelve months need not take the math placement exam.

Reading and Writing

All students preparing for their first English composition course in higher education are also required to take reading and writing placement examinations.

Transfer students who have earned college credit in English composition at a grade of C or above need not take the writing exam. In addition, transfer students from Clark State, Edison State, and Sinclair Community College who have satisfactorily completed all required developmental reading and writing courses need not take the exams.

Writing—Students enter Wright State with very different abilities in English. To give every student the best possible instruction in writing, several courses have been developed, ranging from Honors sections of Freshman English 101 to ENG 072, 082, and 092, noncredit courses for students needing more extensive instruction in writing than the two-quarter ENG 101/102 sequence can provide. The placement procedure (an essay) exists to give students the course and instruction most appropriate for their writing abilities upon entering the university.

Reading—In order to meet the reading demands of the General Education curriculum, it is imperative that students be given an opportunity to remove deficiencies in their skills. Four courses have been developed, SS 071, 081, and 091 "Improving College Reading" and SS 094 "Critical Reading," to give every student the best possible instruction in reading. The placement procedure exists to give students the course and instruction most appropriate for their reading abilities upon entering the university.

For more information, you may contact the University Division, 131 Student Services.

Transfer Degree Students

Students who have registered for 12 or more quarter hours at another college are considered transfer students. To apply for admission, prospective students need to complete the application and return it to the Office of Undergraduate Admissions with the nonrefundable $25 application fee. They must have an official transcript from each college in which they've been registered sent to the Office of Undergraduate Admissions. Graduates from high school in 1987 or after who have less than 45 quarter hours of transfer credit must also submit a high school transcript or GED scores and the College Preparatory Curriculum Completion form.
All transfer students with at least a C average are eligible for admission to the university; admission to some colleges and schools requires a higher grade point average. Students who do not have a grade point average of 2.0 at the last college attended must petition for admission. This petition process involves completing both the application form and the petition form (available from the Office of Undergraduate Admissions) plus submitting the nonrefundable $25 application fee and the required transcripts as indicated in the preceding paragraph. Students who have been suspended from another institution will normally not be considered for admission to Wright State for one calendar year. In the case of unusual circumstances, students may appeal to the University Admissions Committee to have the one-year waiting period reduced.

Transfer Credit Regulations

1. Students' credits must have been earned at an institution that is regionally accredited, or an institution of equivalent quality (as determined by Wright State).
2. Students must have earned a grade of C or higher (according to the definition of grades currently used at Wright State). Grades of “pass” and “credit” are considered for transfer credit.
3. The credits must have been acceptable for satisfying the graduation requirements at the source institution.
4. Any credit earned through correspondence study or as a part of an off-campus study program are subject to the same regulations as other transfer credit.
5. If the credits were earned more than ten years before students' admission to Wright State, their advisers will determine if the credits are still applicable to their degree.
6. If students have completed three-fourths or more of the Wright State quarterly credit hour requirement for a course or sequence, they may receive credit for that course or sequence. For example, two 3.0 credit hour courses in English composition may be considered the equivalent of ENG 101 and 102 (8 credit hours).
7. Wright State academic advisers will determine how students' transfer credits are to be used toward the requirements for their major. If there are exceptions to the transfer credit rules, the dean of the major college or school involved will make the decision.
8. If students have earned 24 quarter credit hours or less of transfer credit, they will be assigned to the University Division (the freshman advising office) for advising. If students have earned more than 24 hours, the Office of Undergraduate Admissions will notify them of their admission to the University Division, Adult and Transfer Services, or the appropriate college or school.

9. General Education requirements for most transfer students will be determined by a course-by-course evaluation. For specific exceptions that apply in the School of Nursing, see page 76 of this catalog.
10. The university will accept a minimum of 90 credit hours for an associate degree from a regionally accredited (see Transfer Credit Regulation number 1) junior or community college. Also, credit is usually given for all academic college credit hours above 90 for which a grade of C or better has been earned.
11. Students who have already received a baccalaureate degree from an accredited institution (see Transfer Credit Regulation number 1) and wish to pursue a second baccalaureate degree will automatically receive 138 quarter credit hours. They will be ranked as seniors. An adviser will determine how many credits students will have to complete to receive their second degree.
12. All religion courses taught by a religion department in any state college or university will be considered for transfer credit. These courses are subject to other applicable Transfer Credit Regulations. Religion courses taught by all other colleges must be approved by the religion department before transfer credit is granted.

Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a new statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the state policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

Transfer Module

The new Ohio Board of Regents' Transfer and Articulation Policy establishes the Transfer Module, which is a specific subset of the entire set of a college or university's General Education requirements. The Transfer Module contains 54 to 60 quarter hours or 36 to 40 semester hours of specified course credits in English, composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science, and interdisciplinary course work.

A Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at the receiving institution, once the student is accepted. Students may be required, however, to meet additional General Education requirements that are not included in the Transfer Module.
Conditions for Transfer Admission

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of D or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.

2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade of C or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module, and only courses in which a C or better has been earned will transfer.

3. The policy encourages receiving institutions to admit on a nonpreferential consideration basis students who complete the Transfer Module with a grade of C or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of C or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their adviser and the college or university to which they plan to transfer.
Appeals Process
A multilevel, broad-based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and of the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.
If a transfer student’s appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

Wright State University’s Transfer Module
Wright State’s Transfer Module consists of 54 credit hours of introductory courses in English composition, mathematics, arts/humanities, social and behavioral sciences, and natural and physical sciences. The Transfer Module includes all but 3 credits of the 57 credits needed to complete the General Education Requirements for a bachelor’s degree.

<table>
<thead>
<tr>
<th>Required of All Students</th>
<th>To Complete the Transfer Module</th>
<th>To Complete General Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>ENG 101-4</td>
<td>Choose one:</td>
</tr>
<tr>
<td></td>
<td>ENG 102-4</td>
<td>CST 220-3</td>
</tr>
<tr>
<td>8 credits</td>
<td></td>
<td>CST 230-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CST 240-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CST 250-3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>MTH 105-3*</td>
<td></td>
</tr>
<tr>
<td>3 credits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts/ Humanities</td>
<td>HST 101-3</td>
<td>Choose one:</td>
</tr>
<tr>
<td>15 credits</td>
<td>HST 102-3</td>
<td>ENG 204-3</td>
</tr>
<tr>
<td></td>
<td>HST 103-3</td>
<td>PHL 204-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL 204-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Choose one:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ART 214-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MUS 214-3*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TH 214-3</td>
</tr>
<tr>
<td>Social and Behavioral</td>
<td>SOC 200-3</td>
<td>Choose one:</td>
</tr>
<tr>
<td>Science</td>
<td>PLS 200-3</td>
<td>RST 260-3</td>
</tr>
<tr>
<td>16 credits</td>
<td>EC 200-3*</td>
<td>RST 270-3</td>
</tr>
<tr>
<td></td>
<td>PSY 105-4*</td>
<td>RST 280-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RST 290-3</td>
</tr>
<tr>
<td>Natural and Physical</td>
<td>Choose one</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>sequence:</td>
<td></td>
</tr>
<tr>
<td>12 credits</td>
<td>BIO 105-4, 106-4, 107-4**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHM 105-4, 106-4, 107-4**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GL105-3/115-1, 106-3/116-1, 107-4**</td>
<td></td>
</tr>
<tr>
<td>*Approved course substitution available; see the section on General Education Requirements on pages 62-67.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Approved sequence substitution available; see the section on General Education Requirements on page 62-67.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
International Students

Wright State welcomes applications from qualified international applicants. Nearly 300 students on F-1 and J-1 student visas currently attend the university. Application materials are available at the Office of Undergraduate Admissions. Applications for admission must be completed four months before the quarter in which applicants wish to begin studies at Wright State if they live outside the United States; applications must be completed three months before the quarter in which applicants wish to begin studies at Wright State if they live within the United States.

International applicants are expected to meet the following criteria for admission:

1. Undergraduate applicants must have an educational background that is equivalent to a high school diploma from the state of Ohio. Graduate applicants must have earned a baccalaureate degree or its equivalent from a college, university, or other institution of higher learning. Only an official transcript, translated into English, will be accepted as evidence of academic preparation. If applicants’ credentials cannot be evaluated by the Office of Undergraduate Admissions, they will be required to submit their credentials to an evaluation service and pay the cost of the evaluation.

2. All international applicants must demonstrate proficiency in English. For applicants whose native language is not English, the Test of English as a Foreign Language (TOEFL) is required; a minimum score of 500 is required for admission. Non-native English-speaking students will also be tested in English upon arrival at Wright State and required to enroll in appropriate English courses if the testing so indicates.

3. Since there is no financial assistance available for undergraduate international students, the university must be assured that all international applicants have adequate financial resources to attend Wright State. If students are being sponsored, the financial statement form must be accompanied by an affidavit of support and a bank statement provided by their sponsor, indicating the amount of money available to them for the purpose of studying at Wright State University. If students are financing their education from personal funds, they must also submit a bank statement together with the financial statement. Bank statements must be certified copies on bank stationery. International students, once admitted, may be required to deposit with the university a full year’s tuition before they will be sent a student visa form.

4. The Forms I-20 or IAP-66, which enable students to apply for F-1 or J-1 visas, will be issued by the international student adviser when students have met the above requirements and have been admitted to the university.

5. To be considered for admission, international students already in the United States who wish to transfer from another university must be "in status" according to the U.S. Immigration and Naturalization Service. Transfer students must also present evidence of above-average ability to do college work.

All first-year international students should take the reading, writing, and mathematics placement examinations before enrolling for their first quarter of classes. Contact the office of the University Division for further placement testing information.

Other Admission and Enrollment Categories

Nondegree Undergraduate Students

Students who want to take courses at Wright State but who don’t intend to work toward a degree at this time can register as nondegree students. Students may take as many courses as they like, as long as they meet the requirements for each course. To be eligible to register as nondegree students, they must have graduated from an accredited high school or passed a high school equivalency test (GED). In order to take junior- or senior-level courses offered by the College of Business and Administration, students must have been admitted to the college.

To apply, students need only fill out a simple application-registration form and pay a $10 one-time registration fee. Later, if they decide to enter a degree program, they can file their credentials and pay an additional $15 application fee. Nondegree work normally can be applied toward a degree program.

Nondegree students may receive academic advising from the University Division and may participate in any of the services of the division, including tutoring and developmental education courses.

For information about nondegree status for graduate students, see the Graduate Catalog.
Teacher Certification Candidates

College graduates who would like to become certified as teachers must apply for admission, file all the necessary credentials, and pay the application fee. We recommend that students meet with a teacher certification adviser when they apply, to have their records evaluated and to plan their program.

Undergraduate students and students who receive degrees from other colleges within the university may also obtain teaching certificates upon completion of all the requirements of the College of Education and Human Services.

Superior High School Students

High school students who have completed their sophomore year may take courses at Wright State while still enrolled in high school. For specific information about the program, contact the Office of Undergraduate Admissions.

Returning Students

Students who have not attended Wright State for four or more quarters must apply for readmission through the Office of Undergraduate Admissions. There is no additional application fee and official transcripts are required only from the schools students have attended since they left Wright State.

Students who have been dismissed may apply for readmission by petition after remaining out of school for four quarters; see the section on Re­admission on page 59.

Students who have not attended Wright State for five years (twenty quarters) may wish to take advantage of the Fresh Start Rule. This rule may allow students to have their earlier grade point average recalculated. Contact the Office of Undergraduate Admissions for more information.

Continuing Students

Once enrolled for an academic quarter, students are eligible to reenroll for the following four quarters and to be regarded as continuing students if they meet minimum academic standards. Students not receiving a registration form prior to the beginning of the registration period for an upcoming quarter should contact the Registrar's Office.

Academic Services

University Division

The University Division provides placement testing, academic advising, tutoring assistance, adult and transfer student services, and developmental academic support services for new freshmen, both degree and nondegree. In addition, the division’s University Testing Services administers university-authorized standardized testing for a variety of purposes to both undergraduates and graduates.

Placement Testing

During each registration period, the University Division conducts placement testing in mathematics, reading, and writing for students new to the university. Results of these tests help in identifying present skill levels and aid in selecting appropriate courses for initial enrollment.

Academic Advising

Academic advisers assist students assigned to the University Division with scheduling, academic matters, and orientation to the university. Advisers help degree-seeking students meet their university General Education requirements and the admission requirements of their selected major. Advisers also teach a freshman seminar that helps students adjust quickly to the college experience.

Tutoring

The University Division and the Developmental Education program conduct the university’s freshman-level tutoring program. Free or partially university-subsidized tutoring is provided for undergraduate students in all freshman-level courses.

Developmental Education

The Developmental Education Program provides instruction in study strategies, reading improvement, critical reading, fundamental English skills, and basic mathematics for students who need to improve their skills in these areas before taking college-level courses. Students taking fundamental English and/or reading improvement courses are scheduled to spend at least one hour per week in the writing and reading centers. A Developmental Education adviser in the University Division helps students with specific academic needs.

The Student Support Services Program for Academically Underprepared Students makes it possible for students who are not prepared for college work, either because of inappropriate choices in high school or because of gaps in educational experience, to take additional developmental courses during the fall and winter quarters. These courses include a survey of biology, chemistry, or geology; psychology concepts; critical reading; and career exploration. Students who enroll through the Student Support Services Program receive free tutoring throughout their enrollment to the university.

In addition, the services of a counselor and a staff of peer facilitators are available to Student Support Services students to enhance their psychological adjustment to college life.

For four weeks each summer the Developmental Education Program conducts Wright Start for high school students in the Miami Valley who are considering higher education. Wright State students may participate in the program as a means of reviewing or previewing course work. Wright Start is free to all who participate.
University Testing Services

The University Division's University Testing Services administers university placement exams, coordinates dissemination of information about undergraduate departmental proficiency exams and/or credit by evaluation, and administers a variety of national standardized exams approved by the university for undergraduates and graduates.

Adult and Transfer Services

The Office of Adult and Transfer Services provides a starting place for those adults who are beginning or reentering college and for students transferring into Wright State University. Services offered introduce adult and transfer students to the university system and provide information, support, and referral resources.

Adult and Transfer Services staff assist students age 25 or older who are returning to the university academic setting to complete a degree, begin a degree, or plan a career change. The services include academic and career exploration, referral to university and community services, and support in managing change.

Transfer students with 75 or more credit hours who have not met entrance requirements for their academic major will be assigned to the Office of Adult and Transfer Services for academic advising. Transfer services include information on admission and transfer procedures, requirements for General Education and academic programs, and entrance requirements for academic majors.

Registration

Wright State is on the quarter system. The academic year is divided into three quarters (fall, winter, and spring) and a summer session (two five-week terms or one ten-week term). Classes are assigned values in quarter credit hours. The credit hour is based on fifty minutes of instruction each week for one quarter, although there are exceptions. Laboratory courses usually require considerably more time for each quarter hour of credit. The general rule for time expenditure is that students should plan to spend at least two hours in outside preparation for each hour they spend in class. Students should carefully plan their academic program with an adviser, especially if they are also working while going to school. However, students are responsible for registering in appropriate classes, scheduling, and fulfilling all university and program requirements for graduation.

The minimum full-time undergraduate load is 12 credit hours per quarter with the average between 14 and 17 credit hours. The normal full-time load during each five-week summer term is between 6 and 9 credit hours.
For students who are employed full time, we recommend that they register for no more than six quarter hours, or two courses, during the regular academic year and for just one course at a time during the summer.

Registration dates are announced in the quarterly schedule of classes. Currently registered students receive their registration forms in their campus mailboxes, located in the lounge of Allyn Hall. Students who are not currently registered, but who have been registered any time during the past year, receive their registration forms in the mail.

There are three different registration periods. For students taking advantage of the early registration period, there is a specific deadline for paying fees. That deadline date is published in the quarterly class schedule. If students don't pay by the deadline, their registration will be canceled to make room for students who register later. During open registration students must pay fees at the time they register. Late registration allows students to register during the first week of classes; there is an additional fee for late registration. Students cannot register after the first week unless they have the permission of the instructor, department chair, and the school or college dean. No one may register after the second week of the quarter.

To make a change in their registration, students must first submit a Change of Program form to the Office of the Registrar and pay the appropriate fee. There is no fee for adding courses or for withdrawing from all classes at any time. No fee is charged if students make changes before the second week of class or its summer session equivalent. See the quarterly class schedule for the exact day.

Students may drop a course or withdraw from the university without grades through the third week of the quarter, or its equivalent. These courses won't be recorded on transcripts. From the fourth through eighth weeks, or their equivalents, freshmen may drop a course or withdraw, but the course and a designation of "W" will appear on their record. All students other than freshmen may drop a course or withdraw from the fourth through the fifth weeks or their equivalents, but the course and a designation of "W" will appear on their record. Please see the quarterly class schedule for the exact drop and withdrawal dates. After the withdrawal date, students need to petition to drop; otherwise, the course will appear on their record with a grade.

**Fees**

**Paying Fees**

The method for paying fees depends on which registration period is used. See the previous section on registration for a description of the different registration periods.

Students will find fee payment deadlines for each registration period in the university calendar published in the quarterly schedule of classes. Students who register early and do not pay the fees by the required due date will have their registration canceled in order to make classroom space available to other students. Students who register during the open registration period must pay all fees and charges at the same time they register.

Students are encouraged to pay fees by check or money order, made payable to Wright State University and sent to the attention of the bursar. The check or money order should be written for the exact amount due. Incorrect checks will be returned, and registration will proceed on schedule if a new check or money order for the correct amount is received by the published deadline date for the payment of fees. Postdated checks will be returned to the sender.

Students may also use either MasterCard or VISA credit cards to charge most fees paid to the university. In order to use a credit card, students must either be the cardholder or have the cardholder's authorization. All charge transactions are subject to approval by the financial institution that issued the credit card.

Students have the option of using the Student Installment Payment Plan (SIPP) to spread quarterly fees for tuition, insurance, and university housing (if applicable) over a three-month period. The plan is offered as an alternative to the single payment for fees that is normally due at the beginning of fall, winter, spring, and summer quarters. For a nonrefundable fee, preregistered students pay one-third of their fees by the published fee payment deadline. The balance is divided into two installments which are payable at established dates about thirty days apart. Students who participate in open registration must pay the fee and the initial installment on the day they register. The second and third payments are due on the same dates established for those who have preregistered. Further information about SIPP is available at the Bursar's Office.

Payment of fees can be mailed to the attention of the bursar or presented in person at the cashier windows in Allyn Hall and the depository window adjacent to 143 Allyn Hall. Mailed payments should be sent to ensure their receipt by the fee payment deadline. Mailed payments received after the deadline will be returned and the original registration will be canceled.

Students whose fees are entirely paid by grants or scholarships must still notify the Office of the Bursar by the established fee payment deadline of their intention to attend Wright State.

Any payment made with a check not honored by the bank will result in a student's registration being canceled unless satisfactory payment arrangements are made within seven days after appropriate notification is mailed to the student. A returned check charge is assessed for each check not honored by the bank. All charges, including the returned check charge, must be paid by the date indicated in the notification.

Financial accounts may be audited at any time during students' enrollment or academic career. If an error is identified, a bill or refund will be issued. The university will issue a refund within thirty days or apply the credit to the account. If students do not make acceptable arrangements to pay any amount due within thirty days after notification, their current registration may be canceled.
# Fee Schedule

### Quarterly Fees for Undergraduate Students

<table>
<thead>
<tr>
<th>Hours/Rates</th>
<th>Main Campus</th>
<th>WSU Lake Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 through 10.5 hours/per hour</td>
<td>$84</td>
<td>$75</td>
</tr>
<tr>
<td>Instructional and general fees</td>
<td>$712</td>
<td>$704</td>
</tr>
<tr>
<td>Nonresident tuition/added to above†</td>
<td>$883</td>
<td>$788</td>
</tr>
<tr>
<td>Total: Ohio resident</td>
<td>$883</td>
<td>$788</td>
</tr>
<tr>
<td>Total: Nonresident†</td>
<td>$1,766</td>
<td>$1,671</td>
</tr>
</tbody>
</table>

*The hourly rate applies to all credit hours in excess of 18.
†Nonresidents of the state of Ohio must pay a nonresident fee in addition to other fees and charges. If you are unsure of your status as a resident of Ohio, see Appendix I on page 340, which lists criteria for Ohio residency, or consult with the Office of the Registrar, 513/873-2451.

### Additional Fees and Charges

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late registration fee</td>
<td>$25</td>
</tr>
<tr>
<td>Nondegree application fee</td>
<td>$10</td>
</tr>
<tr>
<td>Application fee to change from nondegree to degree student</td>
<td>$15</td>
</tr>
<tr>
<td>Audit fee per credit hour (laboratory and special courses not open to audit)</td>
<td>same as for credit courses</td>
</tr>
<tr>
<td>Drop fee per transaction</td>
<td>$10</td>
</tr>
<tr>
<td>Transcript fee/first request</td>
<td>$3</td>
</tr>
<tr>
<td>Each additional at same time</td>
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</tr>
<tr>
<td>Immediate preparation of transcripts</td>
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</tr>
<tr>
<td>Undergraduate and graduate degree and certification application fee</td>
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</tr>
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<td>Returned check penalty per check</td>
<td>$25</td>
</tr>
<tr>
<td>Applied music fee one half-hour lesson per week</td>
<td>$55</td>
</tr>
<tr>
<td>Applied music fee one hour lesson per week</td>
<td>110</td>
</tr>
<tr>
<td>Proficiency test per credit hour</td>
<td>$10</td>
</tr>
<tr>
<td>Graduation fee</td>
<td>$35</td>
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<tr>
<td>International student fee</td>
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<tr>
<td>Student installment plan application fee</td>
<td>$15</td>
</tr>
<tr>
<td>Student installment plan late charge per payment</td>
<td>$15</td>
</tr>
</tbody>
</table>
Refunds

A current schedule of refunds can be found in the quarterly schedule of classes. Refunds relating to withdrawal are initiated through the Office of the Registrar. Refunds will be calculated as of the date of official withdrawal, unless proof is submitted substantiating circumstances that were beyond the control of the student (e.g., hospital confinement) and that prevented the filing of the official withdrawal at an earlier date. In such a case, the refund will be determined as of the date of said circumstances. Nonattendance of classes or substantiating circumstances that were beyond the control of the student (e.g., hospital confinement) and that prevented the filing of the official withdrawal at an earlier date. In such a case, the refund will be determined as of the date of said circumstances. Nonattendance of classes or substantiating circumstances that were beyond the control of the student (e.g., hospital confinement) and that prevented the filing of the official withdrawal at an earlier date. In such a case, the refund will be determined as of the date of said circumstances.

Students who officially withdraw from the university before the eighth calendar day of the quarter or its summer session equivalent will receive a 100 percent refund of instructional and general fees paid.

Students who withdraw during the eighth through sixteenth calendar day of the quarter or its summer session equivalent will receive a credit based on 70 percent of the fees assessed. Students who withdraw during the seventh through sixteenth calendar day will receive a credit based on 30 percent of the total instructional and general fees assessed, regardless of how much they have paid at the time of withdrawal. For students on the installment payment program, the charge of 30 percent of the instructional and general fees will be subtracted from their payments to determine the amount of any refund.

No refunds will be granted after the sixteenth calendar day of the quarter. Students who withdraw while owing the university money will be considered to be indebted to the university for that amount. Therefore, all refunds will be applied to any indebtedness before being issued to the student. All refunds will be issued thirty days after the date of withdrawal from the university.

Students who drop courses during a partial-refund period will receive the refund according to the published refund schedule that will be in compliance with the policy for complete withdrawal.

All refunds of fees other than instructional and general fees must be approved by the responsible office or department before submission to the Office of the Bursar (e.g., room and board refunds must be approved by the director of housing).

Appeals regarding charges and refunds of instructional fees, late registration fees, and drop fees must be submitted in writing to the Office of the Registrar. Appeal procedures are available in that office.

Criteria for Ohio Residency

Students who are nonresidents of Ohio must pay a nonresident fee in addition to other fees and charges.

The Ohio Board of Regents' Residency Rule 3333-1-10 determines who can be considered an Ohio resident and cites specific exceptions to the rules. The intent of this rule is to exclude from treatment as residents those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.

If you are in doubt as to your status as an Ohio resident as it applies here, see Appendix I of this catalog on page 340, which lists Rule 3333-1-10 in its entirety, or contact the Office of the Registrar, 513/873-2451.

Financial Aid

The Office of Financial Aid makes every effort to assist students who would be unable to attend school without receiving some form of financial aid. No student interested in attending Wright State University should fail to apply because of financial limitations. If necessary, students should meet with a financial aid staff member to arrange an appropriate financial aid package.

Financial aid, with the exception of four-year scholarships, is granted on a three-quarter basis (summer financial aid requires completion of a separate section of the WSU financial aid application). All students must apply for financial aid on a yearly basis.

Application deadlines for the following programs vary, so it is essential that individuals contact the Office of Financial Aid for specific dates and additional details.

Scholarships

Scholarships are a form of gift aid that do not require repayment. They may be based entirely on academic excellence or on financial need. Students who have paid a nonresident fee in addition to other fees and charges.

Applications for scholarships supported by local industries, foundations, and agencies should be obtained directly from those organizations. For information about ROTC scholarships contact the specific branch of the Armed Forces in which you are interested. The Ohio Board of Regents' Residency Rule 3333-1-10 determines who can be considered an Ohio resident and cites specific exceptions to the rules. The intent of this rule is to exclude from treatment as residents those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.

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Wright State has developed a scholarship program that recognizes students' academic accomplishments, involvement in extracurricular activities, and creative talent. Transfer scholarships and incoming student scholarships are renewable as long as the recipient maintains a 3.0 cumulative GPA and earns 45 hours of credit per academic year. Some level of participation in the Honors Program may be required by all transfer and incoming scholarship recipients.

Wright State scholarship applications are available in the Admissions catalog or may be obtained from the Office of Financial Aid or high school counselors. To be considered for the limited scholarships based on financial need and academic performance, students must complete the Wright State application for financial aid and the College Scholarship Financial Aid Form (FAF) by March 31. The majority of scholarships offered by Wright State are based on academic performance, not financial need.

For priority consideration, scholarship applications for undergraduate incoming and transfer students must be received in the Office of Financial Aid by February 1. Continuing undergraduate students must return their scholarship applications to the Office of Financial Aid by April 1.

For specific information about scholarships available from Wright State University, contact the Coordinator of Scholarships in the Office of Financial Aid.

The following scholarships fall into the category of awards Wright State calls "Academic Performance" Scholarships. They are available to incoming students who meet specific criteria and return a simple application by the February 1 priority deadline date.

**Academic Performance Scholarships**

A student who participates in the National Merit Scholarship Program and becomes a National Merit or National Achievement Finalist and lists Wright State as his or her first choice college is eligible to receive scholarship assistance equal to in-state tuition, on campus room and board and books. National Merit and Achievement Semi-Finalists with a 3.4 high school cumulative GPA may receive $2,500 in scholarship assistance. National Merit and Achievement Commended students may receive $2,000 in scholarship assistance.

Students who are Valedictorians or Salutatorians of a four-year high school and attend Wright State directly after graduation may receive a $2,000 scholarship upon verification of this information by their high school guidance counselor.

Paul Laurence Dunbar Scholarships for $2,000 are for African American students who have a 20 ACT composite score or 870 SAT composite score, complete a college preparatory curriculum; and at the end of the seventh semester rank in the top 20 percent of their high school graduating class or have a 3.0 cumulative GPA.

The Charles H. Hewitt Memorial Scholarships for $1,000 are offered to students who have a 27 ACT composite score or an 1100 SAT composite score; and at the end of their seventh semester rank in the top 10 percent of their high school graduating class or have a 3.4 cumulative GPA.
Ohio Academic Scholarships are awarded by the Ohio Board of Regents to outstanding Ohio high school students. These awards are in the amount of $1,000 for four years. Wright State matches the first year's award of $1,000 for any Ohio Academic Scholar who attends Wright State University directly from high school. This match may be renewed if the recipient earns 45 hours of credit per academic year and maintains a 3.0 cumulative GPA.

The Rike Community College Transfer Scholarships are available to students with a 3.5 cumulative GPA and an associate degree from a state-supported two-year institution. The scholarships are for $1,000 a year and are renewable for one year if the recipient earns 45 hours of credit each academic year and maintains a 3.0 cumulative GPA.

Students who are enrolled at the Lake Campus and have earned a minimum of 90 hours at Lake Campus with a 3.4 cumulative GPA may be eligible to receive an $800 scholarship for study toward their bachelor's degree at the main campus. This scholarship is renewable if the recipient earns 45 hours of credit each academic year and maintains a 3.0 cumulative GPA.

Students who have earned an associate degree from the Wright State University Lake Campus with a 3.4 cumulative grade point average and who will continue their studies at Wright State's main campus for the next fall quarter may be eligible to receive a two-year, $1,200 scholarship.

A second category of scholarships for incoming and transferring students is called "Competitive" Scholarships. Students applying for these awards compete with other applicants meeting the February 1 priority deadline date for scholarships in this category. Their applications are reviewed and selections made by a Scholarship Review Committee.

Competitive Scholarships

The Wright State University Board of Trustees has established the Trustees Scholarship in the amount of $2,500 per year for four years of study. One Trustee Scholarship is awarded to one of those outstanding applicants direct from high school who apply for Honors Scholarships. Successful applicants rank in the top 5 percent of their graduating class, have a minimum cumulative GPA of 3.25, are involved in extracurricular activities, and have ACT/SAT scores in the 90th percentile.

Honors Scholarships are awarded to incoming students who intend to graduate as University Honors Scholars. Six scholarships in the amount of $2,500 per year for four years are awarded. In addition, as many as four Miami Valley Honors Scholarships are available to students who reside in Montgomery or Greene counties. Successful applicants exhibit outstanding writing and verbal ability as well as commitment to independent and intensive study; a minimum high school GPA of 3.25; ACT/SAT scores in the 90th percentile; and rank in the top 10 percent of their graduating class.

Additional Scholarships for Incoming Students

Two Science Fair Scholarships are offered to high school seniors who compete for the scholarships at the State Science Day Fair held at Wright State University. The scholarship pays instructional and general fees and is renewable if the recipient earns 45 hours of credit each academic year and maintains a 3.0 cumulative GPA.

The Robert G. Chollar Memorial Scholarship is awarded to a student who resides in Montgomery County and intends to major in a scientific discipline. Applicants must demonstrate financial need by filing a Financial Aid Form with the College Scholarship Service by the March 31 deadline. A minimum high school GPA of 3.25 and ACT/SAT scores in the 90th percentile are required.

Twenty Special Recognition Scholarships are awarded to students who demonstrate outstanding leadership qualities during their high school career. Area high school counselors are asked to nominate students for the $800 scholarships.

Creative Talent Scholarships are awarded to incoming students who intend to major in theatre arts or music at Wright State. Applicants must demonstrate creative ability through an audition. Awards range from $300 to $1,500 per year and may be renewed. Separate applications are required for these scholarships. Students should contact the Department of Theatre Arts or the Department of Music to obtain further information. Art majors should be in touch with the Department of Art History about the availability of scholarships.

The Adult Incentive Scholarships of varying amounts are available to nontraditional part-time adult students. Applications are available from Wright State's Honors program.

Horizons Scholarships are available to high school juniors and seniors who have, since 1987, successfully completed the summer Horizons Program in business, engineering/computer science,
Scholarships cover tuition for one or four years. For more information about the Horizons summer programs, contact the director of Pre-College Planning.

**Scholarships for Continuing Undergraduate Students**

Continuing students who have demonstrated strong academic achievement at Wright State may apply for scholarships supported by the Wright State University Foundation and the Campus Scholarship Campaign, and for departmental scholarships. Applicants compete for these scholarships with other scholarship applicants who are enrolled in their own college, department, or professional school and are selected by a committee comprised of faculty members in their college, department, or professional school. Scholarships range from $500 to $1,500 and are awarded for one year.

Out-Of-State Scholarships in the amount of nonresident fees for one year are awarded to help continuing students from other states meet the cost of nonresident fees.

The President's Scholarship of $2,500 is awarded to an outstanding senior who is selected by the President from nominations by the Colleges of Business and Administration, Education and Human Services, Engineering and Computer Science, Liberal Arts, Science and Mathematics, and the School of Nursing. The recipient pursues an independent research project for credit under the direction of the president of Wright State University.

The President's Club Scholarship of $2,500 is awarded to an outstanding junior or senior participating in the Honors Program. The recipient is selected by the President from nominations made by the Colleges of Business and Administration, Education and Human Services, Engineering and Computer Science, Liberal Arts, Science and Mathematics, and the School of Nursing.

The Fred A. White and Robert S. Oelman Scholarships were established by the Wright State University Foundation to recognize the achievements and dedication to Wright State University of these two distinguished founders. One Fred A. White Scholarship and one Robert S. Oelman Scholarship is awarded each year and covers instructional and general fees.

The Frank L. Salsburg Memorial Honors Scholarship in the amount of $1,800 is open to junior and senior honors students who have at least a 3.4 cumulative gpa and who are working toward graduation with departmental honors or as a University Honors Scholar.

Distinguished Senior Awards of $1,500 are awarded each year to two outstanding senior honors students who are completing requirements for graduation with departmental honors or as University Honors Scholars. The awards are aimed at recognizing outstanding accomplishments in research.

The Montgomery County Medical Society Auxiliary (MCMSA) awards scholarships to full-time students who are enrolled in a degree program in medicine or nursing. Applicants must be residents of Montgomery County or contiguous counties and must have at least a 3.0 cumulative gpa.

The Accountancy Alumni Scholarship is a scholarship of at least $1,500 awarded to full-time accountancy majors.

The Peggy Rike Scholarship of $2,000 is available to all business majors with an interest in retailing.

Four Creative Writing Scholarships of $800 are available to English majors who demonstrate writing talent and are participating in creative writing courses.

The C.S.C. Adult Student Scholarship is available to part-time nontraditional students.
Bolinga Cultural Resource Minority Scholarship applications are available to minority students. Scholarship amounts range from $600 to $1,200.

Kittyhawk Scholarships are available to full-time juniors or seniors who are engineering, computer science, physical science, and math majors. Scholarship amounts vary from $500 to $2,000.

The Black Student Organization Scholarship is awarded to full-time students with a minimum gpa of 3.0. The amount varies.

The Harry Jeffrey Scholarship is awarded to honor Harry Jeffrey who served the University Foundation Board of Directors for many years. The award ranges from $1,500 to $3,000.

The Justin R. Beason Memorial Scholarship is available to assist the son or daughter of a Wright State alumnus living in Greene County with the costs of books.

The Nicholas Kousa Memorial Scholarship is awarded to a medical technology major with financial need. The amount varies.

The Robbins Myers Scholarship for $1,000 is awarded to a junior or senior majoring in engineering or computer science.

The Dayton-Wright Chapter Armed Forces Communication and Electronics Association Scholarship is awarded to a sophomore, junior, or senior student majoring in engineering or computer science. The amount varies.

The William F. Wahlert Memorial Fund Scholarship is awarded to a human factor or mechanical systems engineering major. The amount varies.

The Harry W. Moore Memorial Scholarship is awarded to an outstanding student with financial need who is majoring in engineering or computer science. The amount varies.

The Association for Unmanned Vehicles Systems Scholarship is awarded to a biomedical or electrical engineering major. The amount varies.

The Alumni Association Scholarships are awarded to full- and part-time students who have a family member who is a Wright State University alumnus. The scholarship amounts range from $500 to $1,000.

The Mazer Scholarship is awarded to a student who demonstrates financial need. The amounts vary.

The Woods Scholarship is awarded to a student living in the Hawthorn/Cedar/Elm/Oak residence centers. The amount of the scholarship covers tuition and books.

The Volkseporting Scholarship is awarded to a student with financial need. The amount ranges from $500 to $1,000.

The Dayton Advertising Club Scholarship is awarded to a junior or senior marketing major. The amount varies.

The Barbara K. Stickney Scholarship is awarded to a junior or senior management major. The amount is $500.

The Sharon Sutton Memorial Scholarship is awarded to nontraditional female, full- or part-time student with financial need. The amount is $500.

The Business Alumni Scholarship is awarded to a junior, senior, or graduate student who is a business major. The amount varies.

The Howard L. Magner Accountancy Scholarship is awarded to full-time accountancy majors. The amount varies.

The James W. Blain Scholarship is awarded to accountancy majors involved in extracurricular activities. The amount varies.

The William Bartholomew Memorial Scholarship is awarded to black undergraduate students majoring in art, dance, music, or theatre. The amount varies.

The Heinze P. Murka Scholarship is awarded to full-time students majoring in biomedical and human factors engineering. First preference is given to physically challenged students. The amount varies.

The Modern Industrial Plastics Mechanical Engineering Scholarship is awarded to an outstanding freshman majoring in mechanical engineering. First preference is given to current Modern Industrial Plastics employees or members of their immediate family. The amount varies.

The Cargill Scholarships are awarded to a sophomore, a junior, and a senior chemistry major. Also awarded is one scholarship to an accounting major who is a sophomore, or junior with financial need. Four awards of $500 each are made.

Edgar G. Eberling Humanitarian Scholarship is a need-based scholarship awarded to any major. The amount varies.

The William Brent Turner Scholarship is awarded to nursing majors who have graduated from Cedarville, Jamestown, or South Charleston High Schools. Second preference is given to graduates of high schools in Greene, Montgomery, or Clark counties. The amount varies.
These scholarships are available to students who meet specific criteria. Eligible students may either be considered automatically or be asked to apply.

Grants
Grants are forms of gift aid that are not repaid. They are available to undergraduate students and are based on financial need. The Ohio Instructional Grant is available to students who are residents of the state of Ohio and attend college full time. Students must apply directly to the Ohio Board of Regents by completing a separate Ohio Instructional Grant application.

Students carrying at least 6 credit hours are eligible to apply for the Pell Grant and the Supplemental Educational Opportunity Grant. To be considered for the Pell Grant, students must complete either a separate Pell Grant application or a Financial Aid Form (FAF). The Supplemental Grant requires the completion of the Financial Aid Form and the Wright State application for financial aid.

Loans
Loans, which are repaid starting six months or nine months after graduation or termination of half-time (six hours) studies, are available to both undergraduate and graduate students. Students apply for the low interest (5 percent) Perkins Loan (formerly the National Direct Student Loan) by completing the Financial Aid Form (FAF) and the Wright State application for financial aid. Students apply for the Stafford Student Loan (8 percent interest) by completing the Financial Aid Form (FAF) and the Wright State application for financial aid. Students who are officially admitted to the School of Nursing are eligible to apply for the Nursing Loan. The Nursing Loan has a 5 percent interest rate and repayment begins nine months after graduation or termination of half-time (six hours) nursing studies. The Financial Aid Form and the Wright State application for financial aid are required for students to be considered for this loan.

The university has established a short-term loan fund to help students with emergencies. This program allows students to borrow up to $250 per quarter for books and personal expenses. To qualify, students must have at least a 2.0 cumulative grade point average, have attended Wright State before the loan request, and have a cosigner (for the first request). Long-term educational loans are available also from private foundations and philanthropic organizations. Eligibility criteria vary, but all of the loan programs require at least half-time enrollment status. Application forms for several of these loan programs are available through the Office of Financial Aid.

Student Employment
Student employment is available to students who wish to work to help finance their education or just to get extra spending money. Students can obtain information about job opportunities through the Office of Student Employment. For on-campus jobs, students may be employed through the federally funded College Work-Study Program or the regular employment program. The Financial Aid Form and the Wright State application for financial aid must be completed for students to be considered for College Work-Study. There are no financial eligibility requirements for students who wish to work under the regular employment program. Students may also be employed off-campus. There are no financial eligibility requirements to obtain an off-campus job.

Students with cumulative grade point averages of 3.0 or better are permitted to work up to thirty hours per week. Students with cumulative grade point averages of less than 3.0 are permitted to work up to twenty hours per week while classes are in session. All students can work up to forty hours per week during breaks and summers. Students must be registered for a minimum of 6 credit hours to be eligible for on-campus employment. Students interested in obtaining job referrals for off-campus jobs must be registered for at least one class. There is no limit as to the number of hours students may work per week off-campus.

Veterans’ Benefits
G.I. Bill benefits can be used by veterans and active-duty personnel who served during the post-Korean and Vietnam periods. Veterans who served on active duty for more than 180 continuous days, any part of which occurred after January 31, 1955, but before January 1, 1977, and who were released under conditions other than dishonorable, are eligible. Veterans who were released from active duty after June 1, 1966, have eligibility for ten years after their last discharge or release, or until December 31, 1989, whichever is earlier.

Applications are available from the Veterans Affairs office at Wright State University or from any Veterans Administration office. Educational opportunities are available for children, wives, and widows of veterans whose deaths or permanent total disabilities were service-connected and for wives and children of servicemen declared missing in action or prisoners of war. Students should refer to the Ohio War Orphans Scholarship Program mentioned earlier under the Scholarships for Incoming Freshmen section.

Tutorial assistance is available to students who are receiving benefits under Chapters 31 (vocational rehabilitation) and 34 (regular G.I. Bill benefits). Assistance is given to vocational rehabilitation students according to need while Chapter 34 benefits are limited to a maximum of $84 per month.
Academic Standards and Requirements
Requirements for a Bachelor’s Degree

The university has several requirements that must be met by every candidate for a bachelor’s degree, including the following: You must complete a minimum of 183 hours of credit in approved courses; earn at least a minimum cumulative grade point average of 2.0; complete the General Education requirements; and fulfill the university’s residence credit regulations.

If you are continuously enrolled or eligible to enroll continuously (you’re eligible to enroll continuously if you’re enrolled during any part of the calendar year), you may elect to meet either the graduation requirements that were in effect when you entered the university or the graduation requirements that become effective while you’re studying at Wright State. If you’re not enrolled continuously, you must meet university requirements in effect when you’re readmitted to the university. In addition, you must meet the program requirements in effect when you are admitted to a college, school, or department major program. Programs or colleges may review and revise your requirements after seven years if you have not completed the program in this time. If you are not enrolled continuously, you may be required to meet program requirements in effect when you are readmitted to a program.

You are responsible for registering in appropriate classes, scheduling, and fulfilling all university and program requirements for graduation. You’re encouraged to contact advisers in the University Division, Adult and Transfer Services, or colleges and schools for information and guidance in formulating your program of study.

Residence Credit Requirements

The residence requirements that must be met to receive a baccalaureate degree from Wright State include:

- A minimum of 45 hours of course work must be earned at Wright State
- At least 15 of the last 45 hours of credit must be taken at Wright State
- A minimum of 30 hours of courses numbered 300 or above must be earned at the university.

College and school requirements may exceed these minimums; see college requirements for specific details.

Second Degrees

If you hold a baccalaureate degree from an accredited institution, including Wright State, and you wishing to earn a second baccalaureate degree at Wright State, you must satisfy the requirements of the department and college from which you intend to earn the second degree. You must earn at least 45 credit hours beyond the minimum hours required for the first degree. At least the last 45 hours of course work are to be taken at Wright State, 23 of which must be in courses numbered 300 or above.

Scholastic Regulations

The Academic Council at Wright State has formulated the following regulations and procedures concerning scholarship and advising at the university.

The Grading System

Academic achievement is indicated by the following letter grades and points used in calculating grade point averages.

- A: Highest quality—4 points per credit hour
- B: Second quality—3 points per credit hour
- C: Third quality—2 points per credit hour
- D: Lowest quality—1 point per credit hour
- F: Failed—0 points per credit hour
- X: Failure to complete a course for which you are registered, without officially withdrawing—0 points per credit hour

Your Wright State grade point average is obtained by dividing the number of points you’ve earned at Wright State by the total number of hours you’ve attempted, excluding the following symbols, which appear on your record but are not used in computing your grade point averages.
L Audit—given only if arranged when you register
N No report—the instructor did not report a grade
P Passing—given only for separately approved courses
S Satisfactory performance—final grade assigned upon completion of the project
U Unsatisfactory performance
I Incomplete—given only when part of required work is missing and arrangements have been made with instructor to complete the work. An incomplete grade contract must be submitted by the instructor at the time the grade sheet is submitted to the Office of the Registrar. If the work is not completed by the end of the following quarter, or earlier if required by the instructor, the I grade automatically is considered equivalent to an F and the grade point recalculated, unless the instructor submits another I grade. Work for an incomplete received spring quarter does not have to be completed until the end of the following fall quarter if the instructor does not indicate an earlier date on the grade contract.
T Attended—this grade is used only for honors courses. These hours are not counted toward graduation.
W Withdrew—given for courses from which you withdrew or that you dropped during the fourth through eighth week of classes or equivalent or for which you petitioned for withdrawal.

Grade reports are sent at the end of each quarter to the addresses on file in the registrar’s office. If you notice any discrepancy on your report, you should contact the Office of the Registrar within thirty days.

Student Classification
Undergraduate students are classified by the total number of credit hours they’ve earned at Wright State plus any transfer credits that have been accepted by the University.
Freshman 0-44.9 hours
Sophomore 45-89.9 hours
Junior 90-134.9 hours
Senior 135 hours or more

Dean’s List
Students who attain high grade point averages during a quarter are placed on the Dean’s List. To be named to the list, you must have at least a 3.4 grade point average for the quarter; have completed for the quarter at least 12 hours of credit for courses in which you’ve received grades of A, B, or C; and cannot have received a grade of F, X, D, I, U, T, or N. The categories for the Dean’s List are: 3.4–3.59, honors; 3.6–3.79, high honors; and 3.8–4.0, highest honors.

Repeating Courses
You may repeat any course in which you earned a grade of D, F, or X if the course was taken as part of the first 45 hours earned (including transfer hours). The course may be repeated until you’ve achieved a grade of at least C. Only the last attempt for each course will be counted in the cumulative grade point average as long as it is completed no later than the quarter in which the first 60 credit hours are earned (exception: or until the course is offered again, if ever, during the regular academic year). However, each grade received for a repeat will become a part of the permanent record.

After the first 45 hours (including transfer hours), you may repeat any course in which you earned a grade of D, F, or X until you’ve achieved at least a grade of C. Each grade will become part of the permanent record and will be counted in the cumulative grade point average.

You may repeat courses in which you’ve earned a grade of A, B, or C in order to increase your knowledge or to meet program requirements, but the hours and points for the repeat will not be calculated in your hours earned or in the determination of your cumulative grade point average. Neither will the hours or points be used to meet graduation requirements.

Whenever you repeat a course under these terms, you must specify this on the course registration form when you register.

Students in those program units where the repeat policy is more rigorous than that of the university shall follow the policy of that department, college, school, or division.

In the calculation of cumulative grade point averages for honors, each of your recorded grades will be counted.

You may not repeat a course after graduation in order to alter your final grade point average at the date of graduation. You may repeat a course later, but the second grade will not affect your undergraduate grade point average.

Auditing Courses
If class space permits, you may audit a course with written approval from the instructor before you enroll. The amount of participation required of auditing students is left to the discretion of the instructor, but it cannot exceed that required of a regular student. You may not use audited courses to establish full-time status, and you may not change your registration from audit to credit or from credit to audit after the first week of class.

Applying for Degrees
Before you graduate, you must submit an application for a degree. Applications must be filed by the end of the early registration period for the quarter in which graduation will take place. See the current class schedule for specific details. If you do not complete the graduation requirements in time, you must file another application for a later graduation.

Students who complete their degree requirements during winter or spring quarters may participate in the June commencement. Those who complete their degree requirements during summer or fall quarters may participate in the December commencement.
Honors

Undergraduate students who compile outstanding academic records are recognized at commencement. Honors are based on the following: *summa cum laude* recognizes a cumulative grade point average of at least 3.8; *magna cum laude*, a cumulative grade point average of at least 3.6; and *cum laude* indicates a cumulative grade point average of at least 3.4.

Academic honors are based on meeting the minimum honors grade point average requirement for work attempted at Wright State University and for all college work attempted as of the end of the term in which you graduate—that is, by the day on which term grades are due. In the calculation of cumulative grade point averages for honors, only the first grade earned for a course will be counted. To be eligible for academic honors at graduation, you must have earned at least 45 credit hours at Wright State University. (This policy will go into effect as of December graduation, 1991.)

Good Standing

Students who have earned a cumulative grade point average of 2.0 or higher, or have not been on mandatory advising for more than two consecutive quarters, are considered to be in good standing.

Mandatory Advising

Scholastic action is determined on the basis of cumulative grade point average. The registrar takes scholastic action by placing on mandatory advising those students whose cumulative grade point average drops below 2.0. Students will not be placed on mandatory advising until they have attempted 6 or more credit hours. Whenever students subsequently attain a cumulative grade point average of at least 2.0, they are removed from mandatory advising.

If you are on mandatory advising, you must have your adviser's approval of your course selection before you register for classes. Adviser approval is also required for all drop-add transactions as well. Your course loads may be limited if the adviser feels such a restriction is necessary. Your adviser may also require counseling, remedial work, course repeats, enrollment restrictions, and other steps.

Scholastic actions are determined on the basis of quarter hours computed in the Office of the Registrar. Since credit hours for transfer, proficiency, and grades of S, P, and I aren't used in computing quarter and cumulative averages, they are not considered in determining scholastic action.
Dismissal from the University

If you remain on mandatory advising for two quarters, you may be dismissed from the university for unsatisfactory academic performance. Dismissal action is taken by the chief academic officer of the college, school, or division to which you are assigned in consultation with the head of the respective program unit or the academic adviser. In taking dismissal action, the academic officer will generally consider your progress toward meeting degree requirements as well as your overall academic performance.

Notice of dismissal from the university will be sent directly to you by the chief academic officer of the college, school, or division to which you’re assigned.

Readmission

If you have been dismissed, you will not be permitted to enroll for any courses at the university for a full calendar year (four consecutive quarters, including summer quarter). Readmission is not automatic. After a period of dismissal, you must submit a petition for readmission.

Readmission petition forms may be obtained from, and must be submitted through, the Office of Admissions. To be readmitted, you must be accepted by a college, school, or division. Readmission petitions are reviewed by the chief academic officer or the petitions committee of the appropriate school, college, or division. Readmitted students are continued on mandatory advising.

Students who are readmitted following academic dismissal may be subject to special requirements to remove academic deficiencies as determined appropriate by the college, school, or division.

Removing High School Deficiencies

You should have removed all high school deficiencies by the end of the quarter in which you have earned 45 credits at Wright State University. (The section on “High School Preparation” on page 39 explains high school deficiencies further.) If you have not met this requirement, you should not register for additional classes unless you are enrolled in courses to remove these deficiencies. The same regulation applies to all transfer students with fewer than 90 hours of transfer credit.

Completing General Education Requirements

You should have completed ENG 101 and 102 and General Education mathematics requirements by the end of the quarter in which you have earned 60 credit hours. If you have not met this requirement, you shouldn’t register for additional classes unless you are enrolled in courses that satisfy these requirements. The same regulation applies to all transfer students.

Petitioning for Exceptions

Exceptions to scholastic regulations may be petitioned to the University Undergraduate Student Petitions Council. Petition forms are available in most academic department offices. These forms are filed in the registrar’s office.
University Honors Program

The University Honors Program is designed to meet the special needs of academically well-prepared students. First year students can qualify by meeting two of the following criteria:

- a high school grade point average of 3.25 or better;
- a ranking in the top ten percent of their graduating class; or
- a score at or above the ninetieth percentile on the ACT.

Continuing Wright State students and transfer students with a grade point average of 3.0 or better are eligible to participate.

The Honors curriculum offers three types of undergraduate courses: a wide variety of the general education courses are presented in special Honors sections; popular introductory courses in certain majors are offered as Honors courses; and special interdisciplinary courses are offered for sophomores, juniors, and seniors. Honors students also undertake special programs of study in their majors, usually in their junior or senior year. These programs involve independent study with a faculty mentor and culminate in a research report, design project, or senior thesis. Each department, college, or school has its own admissions and performance criteria, which are available for review in the Honors office.

You may graduate with one of three Honors designations by completing the following sets of requirements:

A. To graduate with the distinction “University Honors Scholar,” you must

1. Complete eight Honors courses with grades of B or better, including (a) at least one course from the UH 201, 202, 203 sequence; (b) at least three courses that are classified as General Education courses (these may include UH 201, 202, 203); and (c) at least two interdisciplinary seminars (UH 400). (To complete this eight-course requirement, you may choose from any other courses designated as University Honors courses, except for UH 400 seminars.)

2. Successfully complete a departmental, school, or college Honors program.

B. To graduate with the distinction “General Studies Honors Scholar,” you must complete eight Honors courses (as described above for “University Honors Scholars”) with grades of B or better and attain a cumulative grade point average of 3.4 or better.

C. To graduate “With Honors” in your major fields, you must complete a departmental, school, or college Honors program.

You normally complete the Honors Program by taking three Honors courses your first year, three as a sophomore, one as a junior, and one as a senior. However, you are free to take as many or as few courses as your interest and program requirements permit. All Honors courses are designated as Honors on transcripts, and students who complete the program receive special designations on their transcripts and diplomas.

The Honors Program also offers social, cultural, and leadership development opportunities through participation in the Student Honors Association; Service First; the Mid-East Honors Association, the National Collegiate Honors Council, and the University Honors Committee. The Honors Program awards scholarships to both incoming and continuing honors students. Small grants are available to assist students working on honors projects. Consult the Honors Program office for additional information and applications.
General Education at Wright State

A bachelor's degree awarded by a university implies more than career preparation or specialized technical competency. A university education should be broadly based in order to promote intellectual growth, cultivate informed understanding, encourage breadth and flexibility of perspective, and foster a critical examination of social, cultural, and scientific realities. Thus, the General Education program at Wright State University seeks to:

• sharpen critical thinking, problem solving, and communication skills as a basis for life-long learning.
• cultivate an awareness of the moral and ethical insight needed for participation in the human community.
• increase knowledge and understanding of the past, of the world in which we live, and of how both past and present have an impact on the future.

These purposes are embodied in a program covering a broad spectrum of skills and knowledge, and organized to provide a coherent educational experience.

As a part of the requirements for a baccalaureate degree at Wright State University, students must complete a minimum of 57 hours of course work in the General Education program. The specific requirements are listed below and must be completed prior to graduation. In general, courses numbered 100 should be taken during the freshman year, and courses numbered 200 should be taken during the sophomore year; however, some programs at the university allow students to take the General Education courses throughout the four years of enrollment. Students should complete English 101 and 102 and the General Education mathematics requirement by the time they have earned 60 credits at Wright State University (see the section on Completing General Education Requirements on page 59).

Substitutions

Substitutions can be made for some General Education courses. Some major programs—as well as the preprofessional programs for premedical and predental students (see the section on Preprofessional Programs in chapter 1)—may have program requirements that will affect a student's choice of General Education courses. Approved substitutions listed below are open to any student in the university as an option to the General Education course with which they are listed.

Honors Sections

Honors sections of General Education courses are available for both entering freshmen and continuing Wright State students who meet Honors Program criteria. Honors sections are limited to an enrollment of twenty, encourage student participation, offer more sophisticated and complex assignments, and provide greater opportunities for analysis, synthesis, and creative expression. Honors students may also choose to substitute UH 201, 202, and 203 for some General Education courses (see below). For more information see the section on the University Honors Program on page 60.
General Education Requirements

Area One—Communication and Mathematical Skills

11 hours

Area One requirements help students develop a command of written communication, disciplined thought processes, and ability to manipulate abstract and mathematical concepts.

ENG 101-4 Freshman Composition
Concentrates on the writing process and its applications, stressing clarity, conciseness, and correctness.

ENG 102-4 Freshman Composition
Continues focus on the writing process, stressing principles of argumentation and academic research techniques. Prerequisite: Grade of C or better in ENG 101.

MTH 105-3 Mathematics and the Modern World
An introduction to selected great books in the history of Western philosophy, chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined both within their respective historical frameworks and as an exercise in critical thinking. Substitution: MTH 132, 133 or STT 164, 265

Great Books of the Western World
(Choose one**)

ENG 204-3 Great Books: Literature
An introduction to selected masterpieces of poetry, drama, and fiction from the Western literary tradition from the Greeks to the twentieth century, viewed in their historical context and for their enduring interest.

PHL 204-3 Great Books: Philosophy
An introduction to selected great books in the history of Western philosophy, chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined both within their respective historical frameworks and as an exercise in critical thinking.

REL 204-3 Great Books: The Bible and Western Culture
A study of selected Biblical writings viewed in their original cultural contexts and chosen to reflect the varieties of Biblical literature, the Bible’s relationship to various societies, and its role in the development of Western culture.

Fine and Performing Arts
(Choose one**)

ART 214-3 Visual Art in Western Culture
A general introduction to the visual arts focusing on selected major works of art throughout history and discuss comparisons across time, basic art media, and the formal characteristics of art.

MUS 214-3 Music in Western Culture
An introduction to the music of Western culture from the Middle Ages to the present. Emphasis on listening skills; elements of music; major styles, genres, and composers; and cultural context. Substitution: MUS 121 and 122

TH 214-3 The Theatre in Western Culture
An introduction to the many arts of the theatre, including the roles of the actor, playwright, director, designer, critic, and audience; selected scripts from representative historical periods are examined as an aid in understanding the theatrical event.
Area Three—The Non-Western World

6 hours

Area Three requirements help students develop an understanding of cultures other than their own and of the realities of global interdependence through a comparative and regional study of non-Western cultures.

Comparative Studies

(Choose one)

CST 220-3 Comparative Non-Western Environments
An examination of distinctive environments of Asia and Africa through analysis of the geographic patterns of land use, population, settlements, economic activities, languages, religions, and political systems.

CST 230-3 Comparative Non-Western Worldviews
An examination of the worldviews of selected non-Western peoples and their varied expression in literature and religion, emphasizing examples from Asia, Africa, Latin America, and the Middle East.

CST 230 Comparative Non-Western Literature
An introduction to selected non-Western literature from Asia, Africa, Latin America, and the Middle East, emphasizing common cultural, social, and political themes.

CST 230 Comparative Non-Western Religions
An introduction to non-Western religious worldviews, their expression, and their communication, using examples from Africa, Asia, Latin America, and the Middle East and exploring differences between major types of cultures and religions.

CST 240-3 Comparative Non-Western Cultures
An introduction to the cultural diversity and uniqueness of selected areas of Asia, Africa, Latin America, and the Middle East as reflected in their cultural systems or in particular cultural manifestations such as the arts.

CST 240 Non-Western Cultural Systems
An introduction to non-Western cultural systems with examples drawn from several regions of the world, emphasizing how non-Western societies have addressed universal human problems and adapted to changing world conditions.

CST 240 Art and Music of the Non-Western World
An introduction to the visual and musical arts of non-Western cultures. Comparative examination of Asian, African, Middle Eastern, and Latin American art and music with emphasis on two selected cultures.

CST 250-3 Comparative Non-Western Social Systems
An examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues.

CSE 250-3 Comparative Non-Western Economic Systems
A comparison of the economic systems in Asia, Africa, Latin America, and the Middle East with the Western system with which students are familiar; emphasis on developing and socialistic economies and on contemporary problems including technological change and resource development.

CST 250 Comparative Non-Western Political Systems
A comparative study of the political processes, institutions, ideologies, and contemporary issues in non-Western societies emphasizing the relationships between culture and politics.

Regional Studies

(Choose one)

RST 260-3 Regional Studies: Asia
An introduction to the environments, human organizations, and populations of selected regions or countries in Asia, providing an overview of the region with focus on a particular part of the region such as Japan, China, or South Asia.

RST 260 Asia: Japan
A brief introduction to Asian environments, population distribution, and human organizations and a detailed examination of economic, geographic, political, religious, and social aspects of Japan.

RSE 260 Asia: China
A brief introduction to Asian environments and cultures and a detailed examination of the development of China and of the conflict between traditional values and cultural patterns and current development efforts.
RST 260 Asia: South Asia
A brief introduction to the culture and society of Asia and a detailed examination of the themes and structures that unify South Asian culture.

RST 270-3 Regional Studies: Africa
An introduction to African environments, diversity of cultural heritages, changes due to modernization, colonialism, slavery, and independence with a brief survey of the relations of Africa to other non-Western regions and the contributions of Africa to world civilization.

RST 280-3 Regional Studies: Latin America
A survey of non-Western societies, including Indians, mestizos, blacks, and the peasantry, from pre-Columbian and African origins to the present, in terms of ideology, organization, social structure, culture, and economic activities.

RST 290-3 Regional Studies: The Middle East
An introduction to the history, peoples, cultures, and geography of the Middle East from Mauritania to Pakistan from the seventh century to the present.

Area Four—
Understanding the Contemporary World
25 hours
Area Four requirements help students develop an understanding of the physical world, of the relationship of science and technology to society, of individual development, of institutions and their impact on individuals, and of the methodologies used in studying these matters.

Natural Sciences
(Choose one sequence)

Biology Sequence*
BIO 105-4 Cells, Genes, and Genetics
A study of cells and genetics to provide the focus for examining the unique interactions of matter, energy, and information which produce life and provide for its continuity and change. 3 hours lecture, 2 hours lab.

BIO 106-4 Evolution and Ecology
An examination of the interactions between organisms and their environments that determine the abundance, forms, and adaptations of species in space and time. 3 hours lecture, 2 hours lab. Prerequisite: BIO 105.

BIO 107-4 Human Biology
An examination of the organization and function of the human body throughout the cycle of life. 3 hours lecture, 2 hours lab. Prerequisite: BIO 106. Sequence Substitution: Biology 112, 114, and 115. Honors students may substitute UH 203 for BIO 107.

Chemistry Sequence*
CHM 105-4 Chemistry of Our World: Living Things
An examination of the principles of covalent bonding and of the structures and reactions of molecules of importance to living things, with attention to the technological, regulatory, and social complexities of problems related to them. 3 hours lecture, 2 hours lab.

CHM 106-4 Chemistry of Our World: Materials
An examination of the bonding of metals and nonmetals to explain the nature of familiar materials of industrial importance with some attention to the risk-benefit implications of these materials and technologies for consumers. 3 hours lecture, 2 hours lab. Prerequisite: 3 units of high school science or CHM 105 or CHM 101.

CHM 107-4 Chemistry of Our World: Energy and the Environment
An examination of the gaseous and liquid states and thermochemistry as a basis for understanding air and water quality, and fossil and nuclear fuels with some attention to the chemistry of the solar system. 3 hours lecture, 2 hours lab. Prerequisite: CHM 106 or CHM 101. Sequence Substitution: CHM 121, 122, and 123 or CHM 101 and 102 and BCH 250 and PHR 340. Honors students may substitute UH 203 for CHM 107.

Geological Sciences Sequence*
GL 105-3 The Planet Earth
An introduction to the composition and structure of the earth through a study of the physical and chemical processes (weathering, sedimentation, and the plate tectonic cycle) that have operated to produce the earth, its minerals, rocks, landforms, and economic mineral fuel deposits. Concurrent registration in GL 115 required.

GL 115 The Planet Earth Laboratory
Study of rocks and minerals, field trips, map interpretation, and practical work on ground water, glaciation, and structural geology. Laboratory component for GL 105.
GL 106-3 The Evolving Earth
An exploration of time in geology through a study
of the history of the earth and of life as revealed
by the physical and biological evidence recorded
in the rocks. Concurrent registration in GL 116
required. Recommended preparation: GL 105.

GL 116-1 The Evolving Earth Laboratory
Exercises on time measurement, correlation of
stratified rocks, evolution and biological diversity
in the fossil record, and paleontology. Field trip.
Laboratory component for GL 106.

GL 107-4 The Earth and Human Affairs
An examination of the interactions of humans
with the earth in terms of geological hazards
(floods, landslides, earthquakes, and volcanoes)
and of natural resources (soil, water, ores,
industrial minerals, and fossil fuels). Lab
exercises on slope stability, earthquakes, soil
conservation, ground water, toxic waste, and the
economic aspects of mineral extraction and fossil
fuels. 3 hours lecture, 2 hours lab. Recommended
preparation: GL 106.

Sequence Substitution: GL 111, 112, and 113 or
GL 251/252, 253/254, and 255/256. Honors
students may substitute UH 203 for GL 107.

Physics Sequence*

PHY 105-3 Sounds and Colors
A study of wave motion with an orientation
toward phenomena experienced by our senses,
such as musical sounds, noise, and the colors
occurring in nature. Concurrent registration in
PHY 115 required.

PHY 115-1 Sounds and Colors Laboratory
Experiments to illustrate the physical aspects
of what we see and hear. Lab component of
PHY 105 for students using the course to meet
the General Education science requirement.

PHY 106-3 Revolutions in Physics
A study of the microscopic structure of matter,
the search for the atom from molecules to
fundamental particles, and quantum mechanics,
relativity, and nuclear energy. Concurrent
registration in PHY 116 required.

PHY 116-1 Revolutions in Physics Laboratory
Experiments to illustrate the phenomena and
concepts of modern physics. Lab component of
PHY 106 for students using the course to meet
the General Education science requirement.

PHY 107-3 Stars, Galaxies, and the Cosmos
An introduction to astronomy with emphasis on
the universe of stars and galaxies and covering
stellar evolution, astrophysics, and cosmology.
Concurrent registration in PHY 117 required.

PHY 117-1 Stars, Galaxies, and the Cosmos
Laboratory
Astronomical observations and measurements,
laboratory experiments, and a visit to a
planetarium. Lab component of PHY 107 for
students using the course to meet the General
Education science requirement.

Sequence Substitution: PHY 111/101, 112/102,
and 113/103 or PHY 250/255, 251/255, and
252/257. Honors students may substitute UH 203
for PHY 105 or 106 or 107.

Behavioral Science
(Required)

PSY 105-4 Psychology: The Science of
Behavior*
Considerations of the causes of behavior.
Includes physiological processes; learning,
memory, and processing of information;
perceptual, cognitive, and social changes from
birth to old age; and individual differences in
thoughts, feelings, and actions.

Substitution: PSY 111 and 112

Social Institutions and Processes
(All required**)

SOC 200-3 Social Life
An 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.

PLS 200-3 Political Life
An examination of political power relationships
in contemporary society, emphasizing the origins
and forms of power and the key social structures
exercising power with contemporary public issues
providing case studies of the consequences of
political relationships.

EC 200-3 Economic Life*
An introduction to basic economic concepts such as
resource allocation, costs, supply, demand, and
public goods; topics covered include American
capitalism, market failures, unemployment,
inflation, and taxation.

Substitution: EC 201, 202, and 203.

*Substitutions are allowed for these courses; see the program
requirements listed by the departments of your major
program.

**Honors students may meet the Great Books or the Fine and
Performing Arts requirement with UH 201. Honors students
may substitute UH 202 for any one of the three required
Social Institutions and Processes courses.
General Education Checklist

Area One—Communication and Mathematical Skills
11 hours
- ENG 101-4, 102-4 Freshman Composition
- MTH 105-3 Mathematics and the Modern World*

Area Two—The Western Experience
15 hours
The Western World
(All required)
- HST 101-3 The Western World: The Ancient and Medieval Eras
- HST 102-3 The Western World in Transition: The 14th–18th Centuries
- HST 103-3 The Modern Western World: The 19th–20th Centuries

Great Books of the Western World
(Choose one**)
- ENG 204-3 Great Books: Literature
- PHL 204-3 Great Books: Philosophy
- REL 204-3 Great Books: The Bible and Western Culture

Fine and Performing Arts
(Choose one**)
- ART 214-3 Visual Art in Western Culture
- MUS 214-3 Music in Western Culture*
- TH 214-3 The Theatre in Western Culture

Area Three—The Non-Western World
6 hours
Comparative Studies
(Choose one)
- CST 220-3 Comparative Non-Western Environments
- CST 230-3 Comparative Non-Western Worldviews
- CST 230 Comparative Non-Western Literature
- CST 230 Comparative Non-Western Religions
- CST 240-3 Comparative Non-Western Cultures
- CST 240 Non-Western Cultural Systems
- CST 240 Art and Music of the Non-Western World
- CST 250-3 Comparative Non-Western Social Systems
- CSE 250-3 Comparative Non-Western Economic Systems
- CST 250-3 Comparative Non-Western Political Systems

Regional Studies
(Choose one)
- RST 260-3 Asia
  - RST 260 Asia: Japan
  - RST 260 Asia: China
  - RST 260 Asia: South Asia
- RST 270-3 Africa
- RST 280-3 Latin America
- RST 290-3 The Middle East

Area Four—Understanding the Contemporary World
25 hours

Natural Sciences
(Choose one sequence)
Biology Sequence*
- BIO 105-4 Cells, Genes, and Genetics
- BIO 106-4 Evolution and Ecology
- BIO 107-4 Human Biology

Chemistry Sequence*
- CHM 105-4 Chemistry of Our World: Living Things
- CHM 106-4 Chemistry of Our World: Materials
- CHM 107-4 Chemistry of Our World: Energy and the Environment

Geological Sciences Sequence*
- GL 105-3 The Planet Earth
- GL 115-1 The Planet Earth Laboratory
- GL 106-3 The Evolving Earth
- GL 116-1 The Evolving Earth Laboratory
- GL 107-4 The Earth and Human Affairs

Physics Sequence*
- PHY 105-3 Sound and Color
- PHY 115-1 Sound and Color Laboratory
- PHY 106-3 Revolutions in Physics
- PHY 116-1 Revolutions in Physics Laboratory
- PHY 107-3 Stars, Galaxies, and the Cosmos
- PHY 117-1 Stars, Galaxies, and the Cosmos Laboratory

Behavioral Science
(Required)
- PSY 105-4 Psychology: The Science of Behavior*

Social Institutions and Processes
(All required**)
- SOC 200-3 Social Life
- PLS 200-3 Political Life
- EC 200-3 Economic Life*

Total Hours Required
57

*Substitutions are allowed for these courses; see the course descriptions above and program requirements listed by the departments.

**Honors students may meet the Great Books or the Fine and Performing Arts requirement with UH 201. Honors students may substitute UH 202 for any one of the three required Social Institutions and Processes courses.
A second graduate program leading to a Master of Science degree is offered in social and applied economics. This program stresses the practical application of social science theory. The program includes an internship that integrates experience with a multidisciplinary instructional base. A third graduate program leading to a Master of Science degree is offered in logistics management. For information on the master's degree programs, see the Graduate Catalog.

A chapter of Beta Gamma Sigma, the national scholastic honor society in the field of business and administration, was established at Wright State in 1976. In 1984, the Alpha Delta chapter of Omicron Delta Epsilon, an international honor society for economics scholars and students, was chartered at Wright State. In addition, there is a chapter of Alpha Iota Delta, the national honor society of The Decision Sciences Institute for Outstanding Management Science Majors, and Beta Alpha Psi, the national honorary accountancy fraternity.

Admission

All students who seek a degree in business administration should apply to Wright State University’s Office of Undergraduate Admissions. When applying, students should indicate their preferred major within the college, if known. Business administration majors are required to complete the program of study that is current at the time of their admission to the College of Business and Administration. Specific requirements for admission to the college follow; these requirements are determined by the faculty and are subject to change.

Admission from University Division and Other WSU Colleges

The college has a two-tier admission process. Students in University Division or another unit of Wright State must meet the following Tier I requirements to transfer to the College of Business and Administration:

**Tier I**

1. 45 hours earned.
2. Completion of ENG 101 and 102, and either MTH 128 or 129 (or higher-level math class), all with a letter grade of C or better.
3. 2.5 minimum cumulative grade point average for at least 12 hours earned at Wright State.

Students meeting the above requirements will be assigned to a prebusiness category and will be required to meet the following Tier II requirements before being granted a business major number permitting enrollment in junior- or senior-level classes.
Tier II
1. Complete ACC 201 and 202; complete or be registered for ACC 203.
2. Complete EC 201; complete or be registered for EC 202 and 203.
3. Complete MS 201, 202, and CS 205.
4. Complete MTH 228.

Acceptable transfer credit will satisfy any of the above requirements.

Enrollment in 300- or 400-level business classes is restricted to business majors who have completed Tier II requirements and obtained junior standing. This is to ensure that students have the appropriate prerequisites and an adequate foundation for their professional course work in business.

Admission from Other Universities and Colleges

Transfer students who are seeking admission to the College of Business and Administration must satisfy the previously listed criteria for Wright State students except for the requirement that 12 hours be earned at Wright State University.

Returning Students

Students who return to Wright State University after an absence of four or more quarters must reapply for admission and satisfy the same admission requirements as listed above for Wright State students. These students will be required to complete the program requirements that are current at the time of their readmission to the college.

Transfer Credit

The college reserves the right to limit the number of transfer hours applied toward the degree. Credits earned in junior or community colleges will normally apply only to the requirements of the freshman and sophomore years. Credit may be accepted for work done at the 100–200 level in required courses offered by the College of Business and Administration. Course work corresponding to 100–400 level courses outside the college may be applied to the General Education requirements and nonbusiness electives.

Transfer credit from nonregionally accredited institutions will not apply toward the degree. Students should consult with an academic adviser in the College of Business and Administration to determine which courses will apply toward the degree.

Degree Requirements

The requirements for a Bachelor of Science in Business degree consist of four components. The first is the university General Education requirements (see pages 62–67 for an explanation of General Education requirements). The second are the business core requirements that all students in the College of Business and Administration complete. This is to provide the student with an understanding of all functional areas of business. The third component consists of the requirements of the student's particular major in business. The fourth is comprised of business and nonbusiness electives. Business electives must be chosen from junior or senior courses offered by the College of Business and Administration that are not already required by the student's major program of study. Nonbusiness electives are any nonbusiness courses above the 100 level except for MTH 102 and 127. Only 6 hours of HPR or physical education credit and 12 hours of military science credit may apply to the nonbusiness elective area. The exact number of electives required will depend on a student's major in business. At least 40 percent (but a maximum of 60 percent) of the work applied toward the degree must be outside the business college.

The last 45 hours of course work must be taken at Wright State University. All students must complete a total of 189 hours of acceptable academic work with at least a 2.0 cumulative average. In some cases students may find it necessary to earn more than 189 credit hours to complete the requirements of the program under which they seek to graduate.

Students wishing to pursue a double major within the College of Business and Administration must formally declare their intention to do so. To earn a double major, students must complete all minimum requirements for both programs of study.

Advising

Students are urged to plan their program of study with the help of a college adviser. Advisers are available by phone or appointment to answer questions, assist in program planning, or help with procedural and academic problems. Advisers are available in 110 Rike Hall.

Faculty members of the College of Business and Administration are available to discuss career opportunities and career planning, to recommend major and business electives, and to discuss the curriculum of their major field. A list of faculty advisers is available in 110 Rike Hall or the appropriate department office.
Business Minor

Non-business students may earn a minor in business in addition to their major program of study by completing the requirements for the business minor program. These students will receive the designation of "Minor in Business" on their transcript upon graduation. In many cases, students can use all 54 hours of course work to fulfill the elective requirements of their major program. The business minor is a professional core of coursework selected from the major functional areas of business. This set of courses provides a general foundation for understanding business and for graduate study in business administration and management.

The following courses are required for the business minor.

- CS 205 Computer Literacy and Office Automation
- MTH 228 Calculus for the Management, Life, and Social Sciences
- ACC 201, 202, 203 Accounting Concepts and Principles I, II, III
- EC 201, 202, 203 Principles of Economics
- MS 201 Introduction to Data Analysis
- MS 202 Introduction to Statistical Inference
- FIN 301, 302 Business Finance I, II
- LAW 350 The Legal Environment of Business
- MGT 301, 302 Principles of Management and Introduction to Organizational Behavior
- MKT 301, 302 Principles of Marketing and Marketing Management

Students in the minor program are restricted from taking business courses other than those required by the program. Students who complete course work in mathematics or statistics, other than those listed, may be permitted to count that coursework toward the business minor, with permission. For more information, contact an undergraduate adviser in the College of Business and Administration.

Admission to the Business Minor

Students will be admitted to the business minor when they have earned junior status (90 hours) and have completed all 200-level courses required by the business minor. Enrollment in 300-level courses will not be permitted until students have applied for and been admitted into the business minor program.

Honors Program

The College of Business and Administration sponsors an honors program to allow students who have demonstrated outstanding academic ability and superior accomplishments to complete a program in the college that will encourage and recognize their distinguished efforts and abilities. Such students may earn an honors degree by completing the departmental major requirements, by maintaining a high academic record, and by successfully completing the college honors program. Students who are interested in applying to the program may contact the college's advising office for eligibility requirements and further details.

Cooperative Education

The Cooperative Education Program at Wright State University provides the opportunity to integrate classroom theory with practical, career-related work experience. Business students may alternate full-time quarters of on-campus study with quarter of full-time educationally related jobs, or may choose to combine a part-time co-op work schedule with a reduced, but full-time, course load.

Through the co-op program, students can gain valuable learning experiences, test career interests, learn more about business career fields, and develop job-related skills, as well as earn income for college expenses.

If the co-op program interests you, details on program requirements and procedures can be obtained from the Cooperative Education Office.

Student Organizations

Professional Student Clubs

Each of the majors offered by the College of Business and Administration sponsors a student club. Participation in these clubs provides an opportunity to gain valuable career information and develop closer ties with the faculty and students in your major. Club activities include business meetings, speakers from business and industry, tours of local businesses, career fairs, and various social activities.

The current clubs are the Accounting Club, Advertising Club, Economics Club, Data Processing Management Association, Finance Club, International Association of Financial Planners, Management Science Club, Management Club, Marketing Club, and the MBA Association.

Memberships in these clubs are open to all students. Students may contact the appropriate department office or stop in 110 Rike Hall for information on how to join.

The Association of Black Business Students

The Association of Black Business Students was organized to strengthen the relations between black students and the entire campus and business community. The association accomplishes this by promoting academic excellence, professional and personal development, and cultural awareness.

Membership is open to any Wright State University student.

Graduation Requirements

All students will be required to satisfy the following minimum requirements for graduation:

1. Completion of 189 credit hours of acceptable academic work
2. Attainment of a 2.0 or better grade point average
3. Completion of all course requirements, as specified by the student's program of study
4. Completion of the last 45 hours of course work at Wright State
Completion of a minimum of 30 credit hours of upper division course work at Wright State
For accountancy majors, attainment of a 2.0 or better cumulative grade point average in accountancy courses
Seniors are advised to consult their academic adviser prior to the last quarter of study, to ensure that all requirements for graduation will be completed.

**Major Programs**

There are eight major programs available to students in the College of Business and Administration. For those students who wish to major in business, but do not know which major program they are interested in, there is an undecided category. To ensure timely graduation, it is recommended that students select a major prior to the junior year. However, students may remain undecided until the middle of their junior year. By that time they will have had course work in all the major areas in business and will be in a better position to determine their major. Advisers are available to help students with this decision. Students who intend to major in accountancy, management information systems, or operations management should declare their major prior to their junior year because of the sequential nature of the major requirements. Generally, it is possible to change majors within business during the junior year without delaying graduation.

**Accountancy**

*Professors* Castellano, Hassan, Pabst, Roehm (chair), Snively, Talbott

*Associate Professor* Hereth, Walker, Sprohge

*Assistant Professors* Brecha, Campbell, Kremer (WSU Lake Campus), Lightle

*Instructor* Houston

Wright State's accountancy program is accredited by the American Assembly of Collegiate Schools of Business. Only seven percent of the accountancy programs in the United States have this accreditation, which is awarded on the basis of overall quality of the faculty, students, and curriculum.

The objective of the Bachelor of Science degree with a major in accountancy is to educate students for professional careers in public, industrial, governmental, and not-for-profit accounting. As part of this goal, the program provides knowledge and skills to enable graduates to complete the CPA and CMA professional accounting examinations. This major also provides an excellent undergraduate background for a degree in law. Although only one general program is offered, the careful selection of electives under the guidance of a faculty adviser leads to a variety of career preparations. Accounting majors may complete a second major in finance. Information on this program can be obtained from an academic adviser.

Transfer students who major in accountancy should note that at least 18 credit hours of their accountancy courses must be taken at Wright State.

The department has a chapter of Beta Alpha Psi, the national accountancy honorary fraternity.
## Major Requirements

### Accountancy

**Bachelor of Science in Business Degree**  
The program in accountancy requires a minimum of 189 credit hours.  
The following program represents the optimum schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure prerequisite requirements of courses are observed.  
Planning schedules are available in the department office.

#### Junior Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Seventh</td>
<td>FIN 301</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 301</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MIS 300</td>
<td>4</td>
</tr>
<tr>
<td>Eighth</td>
<td>FIN 302</td>
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</tr>
<tr>
<td></td>
<td>MGT 301</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 302</td>
<td>3</td>
</tr>
<tr>
<td>Ninth</td>
<td>FIN 303</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHL 371</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MKT 302</td>
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</tr>
<tr>
<td>Senior</td>
<td>EC 301</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LAW 350</td>
<td>3</td>
</tr>
<tr>
<td></td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>Nonbusiness Elective</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MS 306</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LAW 360</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 491</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ACC Elective*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Tenth,</td>
<td>ACC 401</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ACC 407</td>
<td>3</td>
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<tr>
<td></td>
<td>ACC Elective</td>
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</tr>
<tr>
<td></td>
<td>Business Elective</td>
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</tr>
<tr>
<td>Eleventh</td>
<td>MGT 402</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ACC Elective</td>
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<tr>
<td></td>
<td>ACC 498/499</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ACC 407</td>
<td>3</td>
</tr>
</tbody>
</table>

*A list of approved accountancy electives is available from an adviser.

### Economics

**Professors** Blair, Fichtenbaum, Kumar, Premus, Renas, Sav (chair), Swaney, Treacy  
**Associate Professors** Dung, Gyimah-Brempong  
**Assistant Professors** Olson, Traynor  
**Instructors** Clayton, Endres, Staley, Sylvester (director, M.S. program)

The dimensions of economics range from the practical concerns of how a business firm strives for efficiency to the visionary questions concerning limits imposed by the laws of nature on the earth’s population and natural resources. Economics focuses on efforts to improve our welfare, by understanding individual decision making in the face of relative scarcity and by studying the complex relationships among the production, consumption, and distribution of material goods within systems of markets, governments, and supranational institutions.

Students of economics develop the ability to reason logically, integrate broad perspectives, measure empirically, manipulate in the abstract, and imagine grandly. These skills and talents serve well in preparing students for careers in business, law, and government, and for graduate programs in economics, business, and law. Graduates of our program have achieved success as executives in a wide variety of industries and are employed as professional economists in such diverse areas as urban economics, workforce and training analysis, business forecasting, school finance consulting, health and delivery systems evaluation, budget analysis, market consulting, government planning, banking, and statistical analysis. Some of our graduates continue their education in our master’s program in social and applied economics.

The program outlined here is designed to give our students both the background that will broaden and maintain their future options and the specific skills necessary to use and apply economic ideas. This includes the ability of students to effectively express economic ideas in a clear, concise, and grammatically correct manner. To build on and enhance writing skills, students are required to complete 12 hours of writing intensive courses as designated in the program by EC 315, 316, and 317.

Departmental undergraduate advisers are available to all students who need advice about formulating and attaining career goals, as well as making decisions concerning elective courses.
Finance, Insurance, and Real Estate

Professors: Bacon, Goulet, Gressis
Associate Professors: Ahmad, Ainina, Kaufman (chair), Sweeney, Williams
Assistant Professor: Fenice, Larsen
Instructors: Schaeff, Kane

Two majors are available: finance and financial services. The finance major includes a core of courses that cover all aspects of the theory and practice of financial management. Financial management involves managing the financial affairs of business firms and other organizations. The curriculum includes courses in accounting, investments, working capital management, international finance, and managerial finance.

Among the many job opportunities open to the finance major are capital budgeting analyst, cash manager, credit analyst, financial analyst, loan officer, and financial manager.

The financial services major is designed to meet the growing need for people who are knowledgeable in all areas of personal financial management including investments, insurance, tax planning, retirement planning, real estate, estate planning, and personal financial planning. Among the many career opportunities available to the financial services major are financial planner, stock broker, insurance agent, real estate broker, loan officer, and trust officer.

Students with an interest in both finance and accounting may wish to consider a dual major in finance and accounting. This dual major can be completed within the 189 hours required for graduation. Interested students should contact an academic adviser.

Finance

Bachelor of Science in Business Degree

The major in finance requires a minimum of 189 credit hours. The following program represents an optimum schedule for full-time students pursuing a four-year program with a major in finance. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure prerequisite requirements of courses are observed.

Continued on next page
Business and Administration

Finance, Insurance, and Real Estate Management

Major Requirements

Financial Services

Bachelor of Science in Business Degree

The major in financial services requires a minimum of 180 credit hours. The following represents an optimum schedule for full-time students pursuing a four-year program in financial services. Many individuals, especially part-time students, will be unable to follow the program as shown. These students should contact their advisers to plan their schedules.

Junior Year

Seventh Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
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<tr>
<td>MGT 301</td>
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</tr>
<tr>
<td>MKT 301</td>
<td>3</td>
</tr>
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</table>
| Eighth Quarter
| FIN 302      | 3       |
| MGT 302      | 3       |
| MKT 302      | 3       |

Ninth Quarter

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<tbody>
<tr>
<td>FIN 303</td>
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<tr>
<td>MS 306</td>
<td>3</td>
</tr>
<tr>
<td>EC 301</td>
<td>3</td>
</tr>
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Senior Year

Tenth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FIN 401</td>
<td>3</td>
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<tr>
<td>FIN Electives*</td>
<td>6</td>
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Eleventh Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>MGT 491</td>
<td>3</td>
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<tr>
<td>Business Elective</td>
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</table>

Twelfth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FIN Electives*</td>
<td>6</td>
</tr>
<tr>
<td>MGT 492</td>
<td>4</td>
</tr>
</tbody>
</table>

* A list of approved finance electives is available from an advisor.

Insurance

See Finance, Insurance, and Real Estate Management

Management

Professors Hartmann, Kirk, Stickney, Von der Embse (Emeritus)

Associate Professors Cooper, Daily, Scherer (chair), Wagley

Assistant Professors Evans (Emeritus), Owen, Petrick, Slonaker, Wendt

Management is a universal process that applies to all career fields and to both private and public organizations. The curriculum offers two alternative courses of study to students: the management major and the human resource management major.

The management major should be selected by students who are seeking a broad background in preparing them for administrative careers in a wide range of settings. Course work is appropriate for individuals considering entry-level organizational careers or management trainee programs. In addition, the major provides a firm grounding in the management of organizational and institutional resources.

The human resource management major is intended for students who have decided on a career in personnel management. The field is recognized as one playing an increasingly significant role in the success of all types of organizations. Graduates will typically qualify for entry-level positions in such areas as recruiting, testing, interviewing, compensation, benefits, and labor relations.
# Major Requirements

## Management

**Bachelor of Science in Business Degree**

The program in management requires a minimum of 189 credit hours. The following program represents the optimum schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure prerequisite requirements of courses are observed.

### Junior Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Seventh</td>
<td>FIN 301</td>
<td>MIS 300</td>
<td>3</td>
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<td></td>
<td>MGT 301</td>
<td>ACC 300</td>
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<td></td>
<td>MKT 301</td>
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<td>3</td>
</tr>
<tr>
<td>Eighth</td>
<td>FIN 302</td>
<td>LAW 350</td>
<td>3</td>
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<tr>
<td></td>
<td>MGT 302</td>
<td>PHL 371</td>
<td>4</td>
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<tr>
<td></td>
<td>MKT 302</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Ninth</td>
<td>MS 306</td>
<td>Nonbusiness</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 321</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EC 301</td>
<td>LAW 360</td>
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### Senior Year

<table>
<thead>
<tr>
<th>Quarter</th>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Tenth</td>
<td>MGT 410</td>
<td>Business Elective</td>
<td>6</td>
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<td>MGT 411</td>
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<tr>
<td></td>
<td>MGT 412</td>
<td>Elective</td>
<td>2</td>
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<tr>
<td>Eleventh</td>
<td>MGT 491</td>
<td>Business Elective</td>
<td>3</td>
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<tr>
<td></td>
<td>MS 435</td>
<td>Nonbusiness</td>
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<tr>
<td></td>
<td>Business Elective</td>
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</table>

### Twelfth Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 492</td>
<td>Business Elective</td>
<td>4</td>
</tr>
<tr>
<td>MS 439</td>
<td>Nonbusiness</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective</td>
<td>3</td>
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</tr>
</tbody>
</table>

### Human Resource Management

**Bachelor of Science in Business Administration**

The program in human resource management requires a minimum of 189 credit hours. The following program represents the optimum schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure prerequisite requirements of courses are observed.

### Junior Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Seventh</td>
<td>FIN 301</td>
<td>MIS 300</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MGT 301</td>
<td>ACC 300</td>
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<tr>
<td></td>
<td>MGT 301</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Eighth</td>
<td>FIN 302</td>
<td>LAW 350</td>
<td>3</td>
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<tr>
<td></td>
<td>MGT 302</td>
<td>PHL 371</td>
<td>4</td>
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<tr>
<td></td>
<td>MGT 302</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Ninth</td>
<td>MS 306</td>
<td>Nonbusiness</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 321</td>
<td>Elective</td>
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<tr>
<td></td>
<td>EC 301</td>
<td>LAW 360</td>
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### Senior Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>Tenth</td>
<td>MGT 410</td>
<td>Business Elective</td>
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<tr>
<td></td>
<td>MGT 411</td>
<td>Human Resource</td>
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<td>MGT 412</td>
<td>Elective</td>
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</tr>
<tr>
<td>Eleventh</td>
<td>MGT 491</td>
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<tr>
<td></td>
<td>MGT 423</td>
<td>Elective</td>
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</table>

### Human Resource Electives (Select 3)

- SOC 440
- SOC 441
- PSY 304
- EC 351
- PSY 307
- EC 352
- SOC 350
- EC 354
- MGT 415
Management Science and Information Systems

Two majors are available: management information systems, and operations management.

The management information systems major provides training for careers in information analysis, business systems design, and information systems management. There is a strong emphasis on business and organizational studies as well as information systems technology. The program includes the study of business systems analysis, business systems design, and computer programming, along with other technical and business areas pertinent to the development, implementation, and maintenance of information systems in a variety of organizational settings. In addition to education in business fundamentals in accounting, finance, marketing, management, and management science, the program includes course work in information system design and development methodologies, database structures, database management systems, computer programming, and data communications.

The MIS program provides preparation for initial positions as business applications programmers and analysts. With additional experience, graduates of the program will have a sufficiently rigorous background to advance along several career paths leading to management positions in systems analysis, systems design, programming and systems project leadership, and systems management.

Major Requirements

Management Information Systems

Bachelor of Science in Business Degree

The program in management information systems requires a minimum of 189 credit hours. The following program represents the optimum schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure prerequisite requirements of courses are observed.

Freshman Year

First Quarter 18
- ENG 101 4
- MTH 128 or 129 3
- CS 141 4

Second Quarter 15
- ENG 102 4
- MTH 228 5
- HST 101 3

Third Quarter 15
- Science II* 4
- CS 142 4
- HST 103 3

Sophomore Year

Fourth Quarter 16
- EC 201 3
- ACC 201 3
- CS 205 4
- MIS 210 3

Fifth Quarter 15
- EC 202 3
- ACC 202 3
- MIS 202 3

Sixth Quarter 16
- EC 203 3
- ACC 203 3
- Great Books* 3
- ENG 330 4

Junior Year

Seventh Quarter 16
- MIS 321 3
- MGT 301 3
- ACC 321 3

Eighth Quarter 15
- PIN 301 3
- ACC 328 3
- MGT 302 3
- MIS 322 3
- MKT 301 3

Ninth Quarter 15
- PIN 302 3
- MIS 323 3
- MS 306 3
- MKT 302 3
- MIS 400 3

Senior Year

Tenth Quarter 18
- Fine Arts* 3
- MIS Elective 4

Eleventh Quarter 15
- MGT 491 3
- MIS Elective 4
- EC 301 3
- Business Elective 3
- LAW 350 3

Twelfth Quarter 15
- MGT 492 4
- MIS Elective 4
- Nonbusiness Elective 4

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

MIS Electives (select 2)
- CS 300
- MS 450
- CS 301
- CS 315
- CS 400
- MIS 460
- MIS 430
Operations Management

Students majoring in operations management (OM) will learn the strategies, concepts, management tools, and analytical techniques that enable organizations to be competitive in the world economy. The curriculum for the OM major is concerned with identifying and solving the problems that confront the operations and manufacturing manager today. Broadly speaking, the curriculum has three major areas:

1. The study of basic problem solving and data analysis tools to assist the operations/ manufacturing manager in making good decisions.
2. The development of a basis for understanding the overall operation/manufacturing function.
3. The integration of the operations and manufacturing function into the corporate strategy.

Manufacturing management and the management of technology and innovation have always been central in the long term success of business and industry in the United States and throughout the industrial world. Over the past decades, however, the disciplines involved in the production of goods and services have generally been eclipsed by financial and marketing issues. Many corporate decision makers have become increasingly aware that the operations/manufacturing activity need to be amplified, studied, and improved. The OM major was established by the Department of Management Science and Information Systems to respond to these needs. Operations management concerns the management of the direct resources required to produce the goods and services provided and supplied by an organization. It is the process that allows organizations to achieve their goals through efficient acquisition and use of resources.

The OM major qualifies graduates for entry-level positions in a wide variety of areas. Some applicable areas would be production and operations management, quality management, and materials management. Entry-level positions would include production supervisor, production control analyst, inventory specialist, statistical process control coordinator/specialist, purchasing agent/manager, and materials scheduler. OM graduates have also found jobs in hospitals, insurance companies, and the government.

Although OM has been developing as a discipline since the beginning of the Industrial Revolution, the process has accelerated dramatically with the development of large high-speed computers. The proliferation of personal computers has made use of management science techniques possible even in small businesses and organizations. Students who major in operations management will be exposed to both large computers and personal computers and will learn to use them in the decision-making process.
Marketing

Professors Brown (chair), Carusone, Kegerres, Khera, Wise
Associate Professor Dovel
Assistant Professors Ping, Saunders

Students who major in marketing receive a thorough foundation in the concepts and techniques necessary to make marketing decisions in any organization. In addition to survey courses in Principles of Marketing (MKT 301) and Marketing Management (MKT 302), which are part of the professional business core, marketing majors complete required study in Consumer Behavior (MKT 303), Personal Selling (MKT 336), Product Management (MKT 416), Price Management (MKT 418), Advertising (MKT 441), a course in distribution—either Physical Distribution (MKT 431) or Retailing (MKT 461)—and the capstone marketing policy course (MKT 492).

Marketing careers are far reaching and diverse as they touch on all components of the marketing mix—product, promotion, pricing, and channels of distribution. In turn, each of these functional areas also offers dozens of specific job opportunities. For example, the promotional area includes potential employment in advertising, public relations, personal selling, and merchandising. Moreover, a single area, such as advertising, can offer more than two dozen special career orientations.

Other major employment tracks include retailing, marketing research, product management, personal selling, and strategic planning. Faculty advisers can discuss specific marketing career plans with students.

For advice pertinent to specific academic programs, see an academic adviser in the dean's office.

Major Requirements

Marketing

Bachelor of Science in Business Degree

The program in marketing requires a minimum of 189 credit hours. The following program represents the optimum junior- and senior-year schedule for full-time students pursuing a four-year program. See the section on Required Courses for business and administration majors on page 73 for the freshman- and sophomore-year schedule. Many individuals, especially part-time students, will be unable to follow the program as shown. These students should contact their academic advisers to plan their schedules.

Junior Year

Seventh Quarter
- FIN 301 3
- MIS 300 4
- Elective 4

Eighth Quarter
- FIN 302 3
- LAW 350 3
- Elective 4

Ninth Quarter
- MKT Elective 3
- EC 301 3
- Elective 3

Senior Year

Tenth Quarter
- MKT 416 3
- Business Elective 4

Eleventh Quarter
- MKT 418 3
- MKT 431 or 461 3
- Nonbusiness 3
- Elective 3

Twelfth Quarter
- MKT 491 3
- Business Elective 3

*A list of approved marketing electives is available from an adviser.

Real Estate

See Finance, Insurance, and Real Estate
Education and Human Services
Wright State University recognizes the preparation of teachers, educational leaders, and professionals in human services as a primary function. The College of Education and Human Services assumes responsibility for furthering the objectives of the university in these areas of concern. A variety of programs is offered by the college through its Departments of Teacher Education; Educational Leadership; Human Services; Health, Physical Education, and Recreation; and Educational Technology, Vocational Education and Allied Programs. Both undergraduate and graduate programs leading to certification by the Ohio Department of Education in primary, elementary, special education, secondary, and K-12 school teaching fields are offered within the college. The Departments of Educational Leadership and Human Services are concerned with programs preparing both certified and noncertified leaders for public and private schools and for community agencies. These leaders include public school principals, curriculum supervisors, central office administrative specialists, school psychologists, school guidance counselors, personnel counselors, and rehabilitation specialists.

The Bachelor of Science in Education degree and the Bachelor of Science degree with a major in rehabilitation are offered. Graduate degrees include the Master of Arts, Master of Art Therapy, Master of Education, Master of Rehabilitation Counseling, and Master of Science.

Degree programs include General Education requirements, an intensive study of an academic or a specialized professional area, and a professional component that integrates theoretical considerations with clinically based practicum experiences.

In addition to regular degree programs, the College of Education and Human Services offers both credit and noncredit special courses and workshops for community educational personnel. Throughout its history, the college has maintained a close working relationship with the public schools of the area. Cooperative efforts through the teacher education laboratory centers facilitate inservice and preservice teacher education by providing a variety of theoretical and clinical experiences for students. Frequent involvement of the College of Education and Human Services faculty in the schools of the area and the advice and planning assistance of public school personnel serve to improve both the teacher education programs and the programs of the schools of the community.

The College of Education and Human Services meets the certification standards of and has been approved by the Ohio State Board of Education and is a member of the American Association of Colleges for Teacher Education. The college is accredited by the National Council for Accreditation of Teacher Education.
Undergraduate Programs

The College of Education and Human Services offers four-year curricula leading to the Bachelor of Science in Education degree and recommendation for Ohio teacher certification in the fields listed below. Teacher certification in Ohio also requires passing scores on examinations administered by the state's Department of Education.

The elementary and secondary programs meet the State of Ohio Standards for Colleges of Universities preparing teachers. One of the requirements mandated by these standards is the completion of 300 clinical/field experience hours prior to student teaching. Students will be required to take five full days of prequarter field experience in the public schools in ED 221 and one half day per week in ED 223 as a part of the requirements of Phase I. In Phase II there will be one day per week field experience in ED 321 and ED 332. These requirements should be taken into account when scheduling other courses. Upon acceptance into the College of Education and Human Services, students should meet with a teacher certification adviser to determine specific program changes, which may not be reflected in this catalog.

Early Childhood Education
Pre-K–KP Program

Elementary—Grades 1–8

Special Education K–12
Developmentally Handicapped
Multihandicapped
Orthopedically Handicapped
Specific Learning Disability

Special Fields—Grades K–12
Computer Science
Language (French, German, Spanish, Latin)
Music Education
Physical Education
Visual Art

Secondary—Grades 7–12

Major Teaching Fields
Biological Sciences
Chemistry
Earth Science
English
History
Latin
Mathematics
Physics
Vocational Business

Secondary Comprehensive
Business Education
Communications
Science
Social Sciences

Second Teaching Fields
Biological Sciences
Chemistry
Earth Science
Economics
English
General Science
Geography
History
Mathematics
Physics
Political Science
Psychology/Sociology
Speech

Rehabilitation Education

The College of Education and Human Services offers a four-year curriculum leading to a Bachelor of Science degree with a major in rehabilitation education. This program prepares students to work with the physically/mentally disabled and disadvantaged, but does not include teacher certification. Students may choose one of two major concentrations: generalist or mental health.

Validation of Standard Teaching Certificates

Curricula are available to validate standard teaching certificates in the following areas:
- Adapted Physical Education
- Teaching English to speakers of other languages (TESOL)
- Kindergarten

Education Honors Program

Outstanding students enrolled in programs in the Department of Teacher Education have an opportunity to complete the University Honors Program or an honors program in education. This program provides students expanded opportunities for creativity, self-direction, and excellence through special honors courses and an extended period of independent study.

Junior- or senior-level students enrolled in the College of Education and Human Services are eligible for the honors program if they have maintained a 3.0 overall cumulative grade point average, a 3.0 cumulative average in professional education, and have been recommended by a faculty member from the program area in which they plan to work.

Students interested in pursuing an honors program should consult an education adviser.
students orally and in writing; provide a stable, supportive environment that will facilitate student growth; and manage the instructional program for individuals and for small and large groups.

Faculty members, on the basis of their knowledge of students and their professional observations, evaluate students' progress in meeting these criteria and decide on retention and the recommendation for certification.

Advising

Upon admission to the College of Education and Human Services, each student is assigned two advisers: a faculty adviser and a teacher certification adviser. The faculty adviser will be available to support and guide the student in the development of his or her professional goals and objectives. The teacher certification adviser will prepare an individual program of study and send one copy to the student, one copy to the faculty adviser, and file a copy in the student's file in the Office of Student Services. The teacher certification adviser will be available to answer questions about teacher certification, program requirements, course prerequisites, sequences, and university and college rules and regulations. Because of the sequential character of many courses, the prerequisites needed in both the professional and academic components of education degree programs, students are strongly urged to consult an adviser before registering. Any deviation from the specified curriculum should be discussed in detail with the teacher certification adviser before it is undertaken. An undergraduate education guidebook is provided for all students. This book should be studied carefully and kept with all academic records.

Degree Requirements

The Bachelor of Science in Education degree is earned by College of Education and Human Services students completing teacher preparatory programs. The program leading to the Bachelor of Science degree with a major in rehabilitation prepares students to work with the disabled and disadvantaged, but is not associated with a teaching certificate.

A candidate for teaching certification at Wright State University must be deemed to be of good moral character, have successfully completed the approved program of teacher preparation, and be recommended by the dean of the College of Education and Human Services.

The definition of "good moral character" is an individual who has not pleaded guilty to or been convicted of any felony, any violation of Section 2907.04 (Corruption of a Minor), Section 2907.06 (Sexual Imposition), or Division (A) or (C) of
Section 2907.07 (Importuning) of the Revised Code, any offense of violence, theft offense, or drug abuse offense that is not a minor misdemeanor, or any substantively comparable ordinance of a municipal corporation or of another state. An individual who has pleaded guilty to or has been convicted of any such offense may have an application for certification considered by the State Board of Education, provided said individual meets the conditions specified in rule 3301-23-23 of the Administrative Code.

General Degree Requirements
1. Completion of a minimum of 192 credit hours
2. Fulfillment of university General Education requirements
3. An overall cumulative grade point average of 2.5 or higher for teacher education and 2.35 for rehabilitation education
4. Satisfactory completion of all required professional laboratory experiences

Specific Requirements
Elementary Education and Early Childhood
Pre-K-K-3
1. General requirements listed previously
2. Of the 192 credit hours required for graduation, a minimum of 58 to 60 quarter hours in professional education
3. Completion of prescribed pattern of courses
4. A thirty credit hour area of concentration in a discipline selected from the humanities, mathematics, natural sciences, or social studies

Elementary Education and Early Childhood
PreK-K-3
1. General requirements listed previously
2. Of the 192 credit hours required for graduation, a minimum of 58 to 60 quarter hours in professional education
3. Completion of prescribed pattern of courses

Special Education K-12
1. General requirements listed previously
2. Of the 192 credit hours required for graduation, a minimum of 58 to 60 quarter hours in professional education
3. Completion of prescribed pattern of courses

Specific Fields
(preparation to teach special subjects in grades K-12)
1. General requirements listed previously
2. Of the 192 hours required for graduation, a minimum of 45 hours in professional education
3. Completion of appropriate speech course
4. Fulfillment of requirements established in major teaching field with a 2.5 GPA in each field
5. For specific degree requirements in computer science, languages education, physical education, and visual arts, see the program descriptions on subsequent pages. For specific degree requirements in music education, see Music, College of Liberal Arts.

Secondary Education
(preparation to teach academic subjects in grades 7-12)
1. General requirements listed previously
2. Of the 192 credit hours required for graduation, a minimum of 45 hours in professional education
3. Completion of appropriate speech course
4. Fulfillment of requirements established in one or more major teaching fields with a 2.5 grade point average in each field.
   Students may have a major and one or more second teaching fields, two majors, or a comprehensive field. Students are strongly advised to prepare in at least two teaching fields or a comprehensive field.

Rehabilitation Education
(preparation for work with disabled and disadvantaged individuals)
1. General requirements listed previously
2. Completion of prescribed pattern of courses
   This program does not include teacher certification.

Recommendation for Certification
Every teacher in Ohio public schools is required to have a certificate covering the field or fields in which he or she is teaching. This certificate is issued by the Ohio Department of Education upon the recommendation of the College of Education and Human Services. Students may apply for certification in the College of Education Office of Student Services during the last quarter of their professional undergraduate programs.

Certification of Students from Other Colleges within the University
Students who receive degrees from other colleges within the university may also wish to obtain teaching certificates. They will be recommended for certification only upon satisfactory completion of all the requirements of the College of Education and Human Services. These include admission, selective retention, the major teaching field and related requirements, the preprofessional and professional courses included in the secondary education programs listed on subsequent pages, and the minimum of 192 credit hours. Upon completion of 45 hours, students from other colleges who are seeking certification should
review their programs with a teacher certification adviser and make application to the certification program.

Certification for Holders of Nonprofessional Degrees

Students who are graduates of other accredited colleges or universities may be recommended for certification upon satisfactory completion of the general, major, and professional courses required for the teaching field or fields in which they seek certification and successful completion of competency tests. Certification candidates are urged to have their records evaluated and their programs planned by a teacher certification adviser upon application to the college.

Certification for School Nurses

The requirements for a provisional school nurse’s certificate are a bachelor’s degree from an approved institution, a current license as a registered nurse in the state of Ohio, successful completion of the prescribed program of professional education, and successful completion of the state-approved competency exam. Registered nurses who do not hold a bachelor’s degree may complete degree and certification requirements concurrently.

School Nursing Certification

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPR 330 or NUR 413</td>
<td>4-10</td>
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<tr>
<td>ED 214, 218, 302, 327, 221, 223, 321, 323</td>
<td>15</td>
</tr>
<tr>
<td>HPR 440</td>
<td>3</td>
</tr>
<tr>
<td>HPR 419, ED 440</td>
<td>13-15</td>
</tr>
<tr>
<td>NUR 414</td>
<td>3</td>
</tr>
</tbody>
</table>

Biological Sciences Education

The biological sciences education program prepares students to teach biology and general science in grades 7-12. The concentration in biology provides greater depth in that area by encompassing all the departmental core courses, including cell biology, genetics, microbiology, developmental biology, animal biology, and plant biology. The program also includes basic and supporting courses in chemistry and physics, related course work in mathematics and/or other areas of science, and the professional education courses required of all candidates for secondary school certification.

Degree Requirements—Biological Sciences Education

Bachelor of Science in Education Degree

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121, 122, 123</td>
<td>53-55</td>
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</table>

Professional Education Requirements

<table>
<thead>
<tr>
<th>Phase I*</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ED 214, 216, 218, 220, 221, 223</td>
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<table>
<thead>
<tr>
<th>Phase II*</th>
<th>Credits</th>
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<tbody>
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<td>ED 302, 327, 342, 464, 431, 436, 321, 323</td>
<td>26</td>
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<tr>
<td>EDT 280; COM 101</td>
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<table>
<thead>
<tr>
<th>Phase III*</th>
<th>Credits</th>
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</thead>
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<tr>
<td>ED 429, 440</td>
<td>13-15</td>
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</table>

Biology Concentration Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 112, 115</td>
<td>8</td>
</tr>
<tr>
<td>BIO 202, 203, 204, 205</td>
<td>20</td>
</tr>
<tr>
<td>BIO 302/312, 307, or 402/405</td>
<td>11</td>
</tr>
<tr>
<td>BIO 208, 209</td>
<td>9</td>
</tr>
<tr>
<td>PHY 111/112, 112/113, 113/1103</td>
<td>15</td>
</tr>
<tr>
<td>GL 251/252, 253/254, 255/256, 259</td>
<td>13.5</td>
</tr>
<tr>
<td>MTH 229</td>
<td>5</td>
</tr>
</tbody>
</table>

Total (minimum requirement) 193.5

*Field and clinical requirement required.

Sample

Biological Sciences Education

Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>16</th>
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</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>BIO 112</td>
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<tr>
<td>MTH 105</td>
<td>3</td>
</tr>
<tr>
<td>PSY 111/1101</td>
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</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>17</th>
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</thead>
<tbody>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>BIO 114</td>
<td>4</td>
</tr>
<tr>
<td>PSY 112/1102</td>
<td>4</td>
</tr>
<tr>
<td>PHY 113/1103</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 200</td>
<td>3</td>
</tr>
<tr>
<td>BIO 115</td>
<td>4</td>
</tr>
<tr>
<td>MTH 229</td>
<td>5</td>
</tr>
<tr>
<td>PHY 113/1103</td>
<td>5</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 203</td>
<td>5</td>
</tr>
<tr>
<td>CHM 121</td>
<td>5</td>
</tr>
<tr>
<td>ED 214</td>
<td>3</td>
</tr>
<tr>
<td>ED 216</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 205</td>
<td>5</td>
</tr>
<tr>
<td>CHM 122</td>
<td>5</td>
</tr>
<tr>
<td>ED 218</td>
<td>3</td>
</tr>
<tr>
<td>ED 220</td>
<td>3</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Sixth Quarter</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 204</td>
<td>5</td>
</tr>
<tr>
<td>CHM 123</td>
<td>5</td>
</tr>
<tr>
<td>BIO 202</td>
<td>5</td>
</tr>
<tr>
<td>COM 101</td>
<td>3</td>
</tr>
</tbody>
</table>
Junior Year
Seventh Quarter 16.5
BIO 302/312  5  ED 302  3
GL 251/252  4.5  ED 321  1
ED 327  3
Eighth Quarter 18
BIO 208  4.5  GL 253/254  4.5
ED 436  3  HST 101  3
EDT 280  3
Ninth Quarter 18
BIO 209  4.5  GL 255/256  4.5
ED 464  3  SOC 200  3
HST 102  3
Senior Year
Tenth Quarter 15
ED 432  3  HST 103  3
Great Books*  3  EC 200  3
Fine Arts*  3
Eleventh Quarter 16
BIO 307**  6  ED 431  3
CST*  3  ED 323  1
RST*  3
Twelfth Quarter 13
ED 429  10  ED 440  3

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**BIO 307 or BIO 402 (spring quarter)

Biological Sciences Education as a Second Teaching Field
Forty-eight credit hours in biology are required for biological sciences as a second teaching field. Required courses are BIO 112, 115, 202, 203, 204, 205, 302/312, 307 or 402/405, 208, 209; ED 431, 436; and MTH 229.

Business Comprehensive Education
Business comprehensive education leads to the Bachelor of Science in Education degree and state certification. The provisional high school comprehensive certificate in Business Education in Ohio is valid for teaching in the curriculum area named in the certificate in grades seven and eight and for teaching any subject in grades nine to twelve in which the candidate has completed 30 quarter hours of course work. The comprehensive major meets high school certification requirements in comprehensive business education. The comprehensive major can lead to certification in all areas of secondary business education, including bookkeeping/basic business; typing, word processing, and office procedures; stenography, typing, and office procedures; sales; economics; and computer science. By taking three additional courses (EDT 407, EDT 408, and OA 401) and having two years of recent, related work experience, the candidate can be eligible for the vocational business education certificate.

Degree Requirements—
Business Comprehensive Education
Bachelor of Science in Education Degree

General Education Requirements 57

Professional Education Requirements 55-57

Phase I*
ED 214, 216, 218, 220, 221, 223  14

Phase II*
ED 302, 321, 323, 327, 432, 464,
EDT 280, 433, 434; COM 101  28

Phase III*
ED 429, 440  13–15

Required Core Courses 19

MIS 100  3
CS 205  4
EDT 335  3
OA 211  3
OA 212  3
OA 220  3

Concentrations* 71

Bookkeeping/Basic Business 27
Typing, Word/Information Processing, and Office Procedures 21
Stenography, Typing, Word/Information Processing, and Office Procedures 33
Sales 24
Economics 30
Computer Science 30

Total (minimum requirement) 201

*This program requires the core courses, the first concentration (Bookkeeping/Basic Business), your choice of either a second or third concentration (Typing, Word/Information Processing, and Office Procedures or Stenography, Typing, Word/Information Processing, and Office Procedures), and your choice of additional concentration(s) for a total of at least 90 credit hours.

**This program is under revision at the time of catalog publication. Please consult an adviser in the College of Education and Human Services.
Chemistry Education

The chemistry education program prepares students to teach chemistry and general science in the secondary school. The concentration provides a strong preparation in chemistry with courses in general, organic, analytical, and physical chemistry. The program includes basic and supporting courses in biology, physics, and earth science and the professional education courses required of all candidates for secondary school certification. Students are strongly advised to complete at least one second teaching field in biological sciences or earth science or physics in addition to the basic program in chemistry.

Degree Requirements—Chemistry Education

Bachelor of Science in Education Degree

General Education Requirements 64

Required substitutions:
BIO 112, 114, 115
MTH 229, 230

Professional Education Requirements 52–54

Phase I*
ED 214, 216, 218, 220, 221, 223

Phase II*
ED 302, 321, 323, 327, 432, 436, 464, 431;
EDT 280; COM 101

Phase III*
ED 429, 440

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

Note: Business electives may be chosen to complete concentrations in sales, economics, or computer science.
Chemistry Concentration Requirements

**Freshman Year**

First Quarter

ENG 101 4 SOC 200 3
CHM 121 5 MTH 229 5

Second Quarter

ENG 102 4 PSY 105 4
CHM 122 5 MTH 230 5

Third Quarter

COM 101 3 EDT 280 3
CHM 123 5 MTH 231 5

**Sophomore Year**

Fourth Quarter

CHM 211/215 6 ED 214 3
BIO 112 4 ED 216 3
ED 221 1

Fifth Quarter

CHM 212/216 6 ED 218 3
BIO 114 4 ED 220 3
ED 223 1

Sixth Quarter

CHM 213/217 6 PHY 250/255 5
BIO 115 4

**Junior Year**

Seventh Quarter

PHY 251/256 4 ED 302 3
GL 251/252 4.5 ED 321 1
ED 307 1

Eighth Quarter

CST* 3 GL 253/254 4.5
ED 436 3
PHY 250/257 4

Ninth Quarter

CST* 3 GL 255/256 4.5
ED 432 3
Great Books* 3

**Senior Year**

Tenth Quarter

CHM 312 3 ED 464 3
CHM 314 4.5 HST 103 3
CHM 451 3

Eleventh Quarter

CHM 452 3 ED 431 3
RST* 3 ED 323 1
Fine Arts* 3 EC 200 3

Twelfth Quarter

ED 429 10 ED 440 3

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**Chemistry Education as a Second Teaching Field**

Forty-five credit hours are required:

CHM 121, 122, 123, 211, 212, 213, 215, 216, 217, 312, 314, 451, 452; MTH 229, 230, 231; ED 431, 436.

**Communications Comprehensive Education**

**Degree Requirements**

**Bachelor of Science in Education Degree**

**General Education Requirements** 57

**Professional Education Requirements** 50-52

**Phase I**

ED 214, 216, 218, 220, 221, 223

**Phase II**

ED 327, 302, 432, 464, 424, 321, 323; ED 280; COM 101

**Phase III**

ED 429, 440

**Communication Requirements** 92

**Speech:**

COM 101, 102, 111, 133, 141, 221, 232, 233, 439, 457

**Journalism:**

COM 152, 256, 358, 360, 365, 411, 458, 464

**Organizational:**

COM 303, 343, 441, 445, 447, 449, 453, 455

**Total (minimum requirement)** 199-203
Computer Science Education K–12

The computer science education program prepares students to teach computer science courses in K–12 schools in the state of Ohio. Course work in physics and math are required as part of this program. It is possible to combine this teaching field with mathematics education.

Degree Requirements—Computer Science Education K–12

Bachelor of Science in Education Degree

General Education Requirements 70

Required substitutions:

MTH 229, 230
PHY 250/255, 251/256, 252/257

Professional Education Requirements 50–52

Phase I*

ED 214, 216, 218, 220, 221, 223

Phase II*

ED 302, 321, 323, 327, 432, 450, 464;
EDT 280; COM 101

Phase III*

ED 429, 440

Related Requirements 10

MTH 253 or 355, 257
STT 360

Computer Science Requirements 51

CS 240, 241, 242, 400
CEG 260, 320, 433
CS 480 or 340
CS 316, 405, 470
EDT 487, 470 Logo/Logowriter

Electives

10–12

Total (minimum requirement) 192

*Field and clinical experiences required.
### Early Childhood Education Pre-K–KP Program

The Pre-K–KP certification program prepares you to teach children three years of age through grade three. The Pre-K–KP certification qualifies you for employment in day care, nursery school, head start, public and private preschools, and primary (K–3) elementary grades. Students will be required to work with children of ages three through third grade in Phase 1, 2, and 3. The program offers courses in general education, professional education, content curriculum, and concentration in one of six areas. A grade point average of 2.5 must be maintained throughout the program.

### Certification Requirements—Early Childhood Education Pre-K–KP

#### General Education Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I*</td>
<td>16</td>
</tr>
<tr>
<td>Phase II*</td>
<td>44</td>
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<tr>
<td>Phase III*</td>
<td>44</td>
</tr>
<tr>
<td>Content Curriculum</td>
<td>44</td>
</tr>
</tbody>
</table>

#### Required Substitutions:
- Area Two—Fine and Performing Arts
  - Select ART 214
- Area Three—The Non-Western World
  - Select CST 240
- Area Four—Natural Sciences
  - Select BIO 105, 106, 107

#### Professional Education Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I*</td>
<td>16</td>
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<tr>
<td>Phase II*</td>
<td>44</td>
</tr>
<tr>
<td>Phase III*</td>
<td>44</td>
</tr>
</tbody>
</table>

#### Concentrations (must select one of the following concentrations)
- Humanities/English
  - ED 421; select one linguistics: ENG 478, 479, 480, 485; select one writing: ENG 301, 302, 303, 344, 341. Also select three literature courses (each from a different group): Introduction to Literature ENG 255 or 211; American Literature ENG 355, 356, or 357; Literature for Young People EDT 463; Literature Multicultural Perspective ENG 205, or CST 230 (Literature)
**Humanities/Foreign Language and Culture** 30
- ED 369; CLS 150, 160; select one of the following languages:
  - FR 101, 102, 103, 201, 202; ML 211
  - GER 101, 102, 103, 201, 202; ML 212
  - RUS 101, 102, 103, 201, 202; ML 215
  - SPN 101, 102, 103, 201, 202; ML 213

**Humanities/Interdisciplinary Arts** 26–29
- AED 441; select four courses from the following:
  - MUS 214, ART 206, TH 147, DAN 111, ENG 204; select four courses from the following: ENG 211, 255, 301; MUS 114; ART 207, 208, 209; TH 148, 149; DAN 101, 121

**Mathematics** 19–22
- MTH 345; ED 418; STT 343; select two of the following: MTH 128 or 129, 130, 131; select one of the following: EDT 485 or EDT 487

**Social Sciences** 19
- Select one: HST 218, 219; select one: HST 470, 475, 480, 485; select one: HST 318, 393, 445, 455, 465; select one: PLS 322, 331, 340, 351, 371; select one: GEO 262, 252, 330, 370, 375

**Natural Sciences** 16

**Electives** 0–2

**Total (minimum requirement)** 192–204

---

### Sample

**Early Childhood Education**

**Pre-K–KP**

**Freshman Year**

**First Quarter** 15
- ENG 101 4 HST 101 3
- BIO 106 4 PSY 105 4

**Second Quarter** 17
- ENG 102 4 HST 102 3
- BIO 106 4 PLS 200 3
- COM 103 3

**Third Quarter** 16
- ENG 204 3 MTH 105 3
- BIO 107 4 SOC 200 3
- HST 103 3

**Sophomore Year**

**Fourth Quarter** 19
- ED 214 3 ART 214 3
- ED 216 3 MTH 243 4
- ED 221 (P-K) 3 EDE 200 2
- CST 240 3

**Fifth Quarter** 17
- ED 218 3 MTH 244 4
- ED 220B 3 HST 211 3
- ED 223 (P-K) 1 GEO 201 (or 202, 203) 3

**Sixth Quarter** 17
- ED 321 (P-K) 1 EDE 231 4
- ED 302 3 HST 212 3
- ED 327 3 ENG 342 3

---

**Junior Year**

**Seventh Quarter** 16–17
- EDE 303 (P-K) 4 ED 241 3
- ED 315B 3 ED 200 3
- Concentration 3–4

**Eighth Quarter** 16–17
- EDE 309 (K-P) 3 Concentration 3–4
- ED 311 3 Concentration 3–4
- ED 242 3

**Ninth Quarter** 16–17
- EDE 312 (P-K) 3 MUS 365B 3
- ED 243 3
- ED 317B 3

**Senior Year**

**Tenth Quarter** 17
- ED 437B 3 EDT 280 3
- ED 464 3 HPR 310B 4
- AED 431B 3

**Eleventh Quarter** 18
- HPR 260 3 EDE 401 3
- Concentration 3 EDS 455 3
- Concentration 3 RST* 3

**Twelfth Quarter** 13
- ED 419 3 ED 440 3

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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World and Regional Studies. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

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**Earth Science Education**

The earth science program prepares students to teach earth science and general science in the secondary school. The concentration in earth science provides intensive preparation in that area with courses in mineralogy, structural geology, and invertebrate paleontology. The program also includes basic and supporting courses in biology, chemistry, and physics, related course work in geography, and the professional education courses required of all candidates for secondary school certification. Students are strongly advised to complete at least one second teaching field in biology or chemistry or physics in addition to the basic program in earth science.

**Degree Requirements—Earth Science Education**

**Bachelor of Science in Education Degree**

General Education Requirements 60

Required substitutions:
- CHM 121, 122, 123
### Earth Science Education as a Second Teaching Field

A minimum of 46.5 credit hours minimum are required for earth science as a second teaching field. Required courses are GL 251/252, 253/254, 255/256, 311, 341, 333, 420, 429; GEO 201, 334; PHY 107/117; MTH 229; ED 431, 436.

### Economics Education

Economics education may be chosen as a second teaching field only. (See Social Studies Comprehensive Education for the major teaching field requirements in this area.) To be recommended for Ohio Provisional Certification in this teaching field, students must also have completed the program of a major teaching field. Forty-five credit hours are required, including EC 201, 202, 203. Select courses from the following: EC 301, 315, 316, 317, 326, 340, 351, 352, 354, 370, 401, 402, 425, 431, 432, 436, 440, 441, 442, 444, 454.
Elementary Education

The minimum requirement for graduation with the Bachelor of Science in Education degree and Ohio certification in elementary education is 192 credit hours and a cumulative grade point average of 2.5. A minimum of 58 to 60 credit hours of professional education and a thirty-hour area of concentration are required.

Degree Requirements—Elementary Education

Bachelor of Science in Education Degree

General Education Requirements

Area Two—Fine and Performing Arts
Select ART 214
Area Three—The Non-Western World
Select CST 240
Area Four—Natural Sciences
Select BIO 105, 106, 107

Professional Education Requirements

Phase I
ED 214, 216, 218, 220, 221, 223
Phase II
ED 302, 311, 315, 316, 317, 321, 323, 327, 417, 437, 464; EDT 280
Phase III
ED 419, 440

Content Curriculum

AED 431; COM 103; ED 241, 242, 243; ENG 342, 346; HPR 281, 331; MTH 243, 244; MUS 365; GEO 201 or 202 or 203; HST 211, 212

Concentrations

Humanities/English
ED 421; select one linguistics: ENG 478, 479, 480, 485; select one writing: ENG 301, 302, 303, 344, 341. Also select three literature courses (each from a different group): Introduction to Literature ENG 255 or 211; American Literature ENG 355, 356, or 357; Literature for Young People EDT 463; Literature Multicultural Perspective ENG 205, or CST 230 (Literature)

Humanities/Foreign Language and Culture
ED 369; CLS 150, 160; select one of the following languages:
FR 101, 102, 103, 201, 202; ML 211
GER 101, 102, 103, 201, 202; ML 212
RUS 101, 102, 103, 201, 202; ML 215
SPAN 101, 102, 103, 201, 202; ML 213

Sample

Elementary Education

Freshman Year

First Quarter
BIO 105 4  
ENG 101 4  
HST 101 3  
PSY 105 4  
SOC 200 3

Second Quarter
BIO 106 4  
ENG 102 4  
HST 102 3  
MTH 105 3

Third Quarter
BIO 107 4  
ENG 103 3  
CST 240 3

Sophomore Year

Fourth Quarter
ED 214 3  
ED 221 1  
MTH 243 4  
ED 241 3  
ART 214 3

Fifth Quarter
ED 218 3  
ED 220 3  
MTH 243 4  
ED 223 1  
ED 242 3

Sixth Quarter
ED 243 3  
COM 103 3

Junior Year

Seventh Quarter
ED 302 3  
ED 314 3  
ED 321 1  
ED 327 3  
EDT 280 3

HST 212 3  
HPR 261 3  

SOC 200, 203 3  

Elective* 3

Concentration/  
Elective** 3

Total (minimum requirement) 192-197
English Education

The English education program is intended only for those seeking secondary certification. Departmental requirements are similar to those for the Bachelor of Arts degree in English, but college requirements differ. Advisers will be assigned in the College of Education and Human Services; however, all English education majors are welcome to consult the Department of English concerning the major program. It is suggested that students elect advanced courses in either American history or British history, depending on their major interest. Students are advised to consult the department for a list of the 300- to 400-level courses that will be offered during a given academic year.

Degree Requirements—English Education

Bachelor of Science in Education Degree

General Education Requirements 57

Area Two—Great Books of the Western World
Select ENG 204

Professional Education Requirements 50-52

Phase I*  
ED 214, 216, 218, 220  
221, 223 14

Phase II*
ED 321, 322, 327, 302, 432, 464, 423;  
EDT 280; COM 101 23

Phase III*
ED 429, 440 13-15

English Education Major Requirements 46
ENG 255, 341, 478 or 479
Choose one of the following:
ENG 204, 490; CST 230 (literature)
Three of the following (each from a different category):
ENG 351 or 352, 353 or 354, 355 or 356 or 357
and one other 300-level literature course.
Three of the following (each from a different category):
ENG 410, 420, 430, 440, 450, 460, 470, 490
Four hours of electives from the following:
ENG 301, 302, 303, 330, 333, 343, 344, 480, 485
Electives 38-40
Second or supporting field suggested.
Total (minimum requirement) 192

*Field and clinical experiences required.

Sample

English Education

Freshman Year

First Quarter 14
Science I* 4 ENG 101 4
HST 101 3 SOC 200 3

Second Quarter 14
Science II* 4 ENG 102 4
HST 102 3 PLS 200 3

Third Quarter 17
Science III* 4 CST 4
HST 103 3 EC 200 3
PSY 105 4

Sophomore Year

Fourth Quarter 16
ENG 255 4 MTH 105 3
ENG 204 3 2nd Teaching Field/Elective 3
RST* 3

Fifth Quarter 18
ENG 341 3 COM 101 3
ENG Literature (300 level)** 4 2nd Teaching Field/Elective 8

Sixth Quarter 17
Fine Arts* 3 ENG Literature (300 level)** 4
ENG Elective—Writing 4 2nd Teaching Field/Elective 6

Continued on next page
Junior Year

Seventh Quarter 18
ED 214 3 ENG Literature (300 level)** 4
ED 221 1 2nd Teaching 3
ED 216 3 Field/Elective 3

Eighth Quarter 17
ENG Literature (300 level) 4 ED 223 1
2nd Teaching Field/Elective 6 ED 220 3

Ninth Quarter 18
ED 327 3 ENG Literature (400 level)** 4
ED 302 3 2nd Teaching Field/Elective 4
ED 321 1 ED 221 3
EDT 280 3

Senior Year

Tenth Quarter 16
ENG Literature (400 level)** 4 2nd Teaching Field/Elective 6
ED 432 3 ED 464 3

Eleventh Quarter 17
ENG Literature (400 level)** 4 2nd Teaching Field/Elective 9
ED 423 3 ED 423 3

Twelfth Quarter 13
ED 429 10 ED 440 3

*Students have a choice of courses that meet General Education requirements in the following areas: Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**Choose three of the following: 351/352, 353/354, 355/356/357, and one other course from this group.

***Choose three of the following (each from a different category): Eng 410, 420, 430, 440, 460, 470, 490

English Education as a Second Teaching Field

Forty-five credit hours are required, including ENG 101, 102, 204 or 490 or CST 230; ENG 255, 341, 478 or 479; ENG 351 or 352, 353 or 354, 355 or 356 or 357; two 300- or 400-level electives in literature, linguistics, or writing; ED 432, 423.

Geography Education

Geography education may be chosen as a second teaching field only. (See Social Studies Comprehensive Education for the major teaching field requirements in this area.) To be recommended for Ohio Provisional Certification in this teaching field, students must also have completed the program of a major teaching field. Forty-five credit hours are required, including GEO 201, 202, 203; and nine advanced courses chosen from GEO 302, 322, 325, 330, 331, 340, 353, 354, 360, 365, 370, 375.

History Education

The history education program prepares students to teach history in the secondary schools. The program requires advanced work in U.S., European, and other history. Students must also complete the requirements of at least one second teaching field in a related social science (economics, geography, political science, or sociology). More than one supporting field is recommended (see Social Studies Education for comprehensive program). Advisers will be assigned in the College of Education and Human Services; however, students are encouraged to consult an adviser in the Department of History for specific course recommendations.

Degree Requirements—History Education

Bachelor of Science in Education Degree

General Education Requirements 57
Area Two—The Western World
Select HST 101, 102, 103
Professional Education Requirements 53-55

Phase I*
ED 214, 216, 218, 220, 221, 223 14
Phase II*
ED 321, 323, 327, 302, 432, 464, 439, 448; EDT 280; COM 101 26
Phase III*
ED 440, 429 13-15

General Science Education

General science may be elected as a second teaching field only. Required are 59 credit hours, including BIO 112, 114, 115; CHM 121, 122, 123; PHY 111/101, 112/102, 113/103; GL 251/252, 253/254, 255/256; MTH 229; ED 431, 436.
### History Education Major Requirements

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<th>Credits</th>
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<td>HST 300, 498</td>
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</tr>
<tr>
<td>HST 211, 212</td>
<td>6</td>
</tr>
<tr>
<td>U.S. history (upper division)</td>
<td>8</td>
</tr>
<tr>
<td>European history (upper division)</td>
<td>4</td>
</tr>
<tr>
<td>Non-Western history—Latin American, African, Asian (upper division)</td>
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</tr>
<tr>
<td>History electives</td>
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</tr>
</tbody>
</table>

Related Social Science
Second Teaching Field 36–45

Courses to complete the requirements of a second teaching field in one of the following areas: political science (recommended), sociology/psychology, geography, economics.

Electives 0–10

Total (minimum requirement) 192

*Field and clinical experiences required.

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### Languages Education

#### Degree Requirements—Languages Education K–12

**Bachelor of Science in Education Degree**

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>57</th>
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<tbody>
<tr>
<td>Professional Education Requirements</td>
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**Phase I***

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**Phase III***

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### Languages Major Requirements

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<td>Ninth Quarter</td>
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<tr>
<td>Senior Year</td>
<td></td>
<td>17</td>
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<tr>
<td>Tenth Quarter</td>
<td></td>
<td>16</td>
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<tr>
<td>Total (minimum requirement)</td>
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<td>192</td>
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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

---

### Sample Languages Education—French K-12

#### Freshman Year

<table>
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<tr>
<th>Quarter</th>
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<th>Course Name</th>
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</tr>
<tr>
<td>Science I*</td>
<td>ENG 101</td>
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<tr>
<td>HST 101</td>
<td>FR 101</td>
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<tr>
<td>Second Quarter</td>
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</tr>
<tr>
<td>Science II*</td>
<td>ENG 102</td>
<td></td>
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<td>HST 102</td>
<td>FR 102</td>
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<td>3</td>
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<tr>
<td>Third Quarter</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Science III*</td>
<td>PSY 105</td>
<td></td>
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<td>HST 103</td>
<td>FR 103</td>
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<tr>
<td>MTH 106</td>
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#### Sophomore Year

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<tr>
<td>FR 201</td>
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<td>SOC 200</td>
<td>PL 200</td>
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<tr>
<td>Fifth Quarter</td>
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<tr>
<td>ED 214</td>
<td>EC 200</td>
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<td>ED 216</td>
<td>RST*</td>
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<td>ED 221</td>
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<tr>
<td>ED 218</td>
<td>COM 101</td>
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<td>Fine Arts*</td>
<td>ED 223</td>
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<tr>
<td>ED 220</td>
<td>FR 203</td>
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### Sample Languages Education—German K-12

#### Freshman Year

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<td>GER 101</td>
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<td>Second Quarter</td>
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<td>Third Quarter</td>
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<td>Science III*</td>
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#### Sophomore Year

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<td>SOC 200</td>
<td>PL 200</td>
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<td>ED 214</td>
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<td>ED 221</td>
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<td>Sixth Quarter</td>
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<td>COM 101</td>
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<td>ED 220</td>
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### Junior Year

**Seventh Quarter**

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**Eighth Quarter**

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**Ninth Quarter**

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<td>ED 302</td>
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**Senior Year**

**Tenth Quarter**

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**Eleventh Quarter**

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**Twelfth Quarter**

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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

### Education and Human Services

### Languages Education

#### Sample Languages Education—Spanish K–12

**Freshman Year**

**First Quarter**

<table>
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<th>Course</th>
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<tbody>
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**Second Quarter**

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**Third Quarter**

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**Sophomore Year**

**Fourth Quarter**

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**Fifth Quarter**

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<td>ED 216</td>
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<tr>
<td>ED 221</td>
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**Sixth Quarter**

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<tr>
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<tr>
<td>Fine Arts*</td>
<td>3</td>
</tr>
<tr>
<td>ED 220</td>
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*Some Spanish courses are offered every other year. Check with the Department of Modern Languages.

#### Sample Languages Education—Latin (K–12)

**Freshman Year**

**First Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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**Second Quarter**

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<thead>
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**Third Quarter**

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<tr>
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<tr>
<td>HST 103</td>
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<td>MTH 105</td>
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**Sophomore Year**

**Fourth Quarter**

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<tr>
<td>LAT 103</td>
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<td>SOC 200</td>
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**Fifth Quarter**

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ED 218</td>
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<tr>
<td>Fine Arts*</td>
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<tr>
<td>ED 220</td>
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*Continued on next page*
Latin Education

Degree Requirements—Latin Education 7–12

Bachelor of Science in Education Degree

General Education Requirements 57

Professional Education Requirements 50–52

Phase I*
ED 214, 216, 218, 220, 221, 223 14

Phase II*
ED 302, 321, 322, 327, 425, 432, 464;
EDT 280; COM 101 23

Phase III*
ED 429, 440 13–15

Major Requirements 48
LAT 101, 102, 103, 201, 202 20
CLS electives
Choose three courses from the following:
CLS 100, 101, 150, 160, 300, 310, 320 16
Latin electives 12

Second Field 35–37

Total (minimum requirement) 192

Sample

Latin Education (7–12)

Freshman Year
First Quarter 13
Science I* 4 ENG 101 4
HST 101 3 PSY 105 4

Second Quarter 15
Science II* 4 ENG 102 4
HST 102 3 LAT 101 4

Third Quarter 17
Science III* 4 CST* 3
HST 103 3 LAT 102 4
MTH 105 3

Sophomore Year
Fourth Quarter 16
LAT 103 4 RST* 3
SOC 200 3 PLS 200 3
Great Books* 3

Fifth Quarter 18
LAT 201 4 ED 200 3
CLS 100 4 ED 214 3
ED 216 3 ED 221 1

Sixth Quarter 18
LAT 202 4 ED 218 3
Fine Arts* 3 ED 223 1
ED 220 3

Junior Year

Seventh Quarter 15
ED 327 3 LAT Elective** 4
ED 329 3 CLS Elective*** 4

Eighth Quarter 15
ED 425 3 LAT Elective** 4
ED 432 3 CLS Elective*** 4
ED 323 1

Ninth Quarter 18
Second Teaching Field/Elective 11 ED 464 3
LAT Elective** 4

Senior Year
Tenth Quarter 13
ED 429 10 ED 440 3
Eleventh Quarter 16
Second Teaching Field/Elective 16
Twelfth Quarter 16
Second Teaching Field/Elective 16

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**Choose upper level Latin electives

***Choose three Classics courses from: CLS 100, 101, 150, 160, 310, 320

1 A second field is strongly recommended

Mathematics Education

The mathematics education program prepares students to teach mathematics in the secondary schools. Students may select either a physics sequence or a computer science sequence to fulfill the mathematics education major requirements.

Degree Requirements—Mathematics Education

Bachelor of Science in Education Degree

General Education Requirements 64-68

Required substitutions:

MTH 229, 230

If physics option is chosen, PHY 250/255, 251/256, 252/257 can be applied toward General Education requirements.

Professional Education Requirements 53-55

Phase I*

ED 214, 216, 218, 220, 221, 223 14

Phase II*

ED 327, 302, 432, 464, 437, 438, 321, 323;
EDT 280; COM 101

Phase III*

ED 429, 440 13-15

Mathematics Education Major Requirements 50-52

MTH 231 5

MTH 280, 355, 431, 440, 451, 471 20

STT 360 4

Two of the following:

MTH 432, 452, 457, 458, 472; STT 361 6-7

Students must choose either a physics or computer science option.

Physics option:

PHY 250/255, 251/256, 252/257 16

If these courses are applied toward General Education requirements, do not add these credit hours toward major requirements.

Computer science option:

CS 141, 142, 241, 242, or
CS 141, 240, 241, 242
CEG 260, 320 recommended
MTH 257 strongly recommended

Electives 26

Second or supporting field suggested.

Total (minimum requirement) 192

*Field and clinical experiences required.

Sample Mathematics Education

Freshman Year

First Quarter

PSY 105 4 ENG 101 4
HST 101 3 MTH 229 5

Second Quarter

SOC 200 3 ENG 102 4
HST 102 3 MTH 230 5

Third Quarter

EC 200 3 PLS 200 3
HST 103 3 MTH 231 5

Sophomore Year

Fourth Quarter

ED 214** 3 CST 3
MTH 280 3 GCM 101 3
Ed.B. Great Books* 3 Fine Arts* 3

Fifth Quarter

ED 216 3 EDT 280 3
ED 221 3 MTH 355 5

Sixth Quarter

ED 218 3 PHY 250/255 5
ED 223 1 or Science I* 5
ED 220 3 STT 360 4

Junior Year

Seventh Quarter

ED 327** 3 PHY 251/256 5
ED 302 3 Science II* 5
ED 321 1 MTH 431 3

Eighth Quarter

ED 437 3 PHY 252/257 5
ED 438 3 Science II* 5
ED 323 1 MTH 451 3
MTH 471 3

Ninth Quarter

ED 432 3 MTH 440 3
ED 464 3 Elective or
Mathematics Education

Continued on next page
Senior Year

Tenth Quarter 15
ED 429 12 ED 440 3

Eleventh Quarter 16

Twelfth Quarter 16
Elective or
Second Field 13
MTH*** 3

*Students have a choice of courses that meet General Education requirements in the following areas. Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chart on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in those areas. You must also add computer science concentration required CS 141, 142, or 240, 241, 242. Recommended CEG 260, 320; strongly recommend MTH 257.

**Admission to TED—45 Quarter Hours, 2.5 GPA, PPST Scores of 172 in Math, Writing, and Reading.

***Courses to be chosen from the following: MTH 432, 452, 457, 458, 472; STT 361.

Physical Education K-12

Degree Requirements—Physical Education K-12

Bachelor of Science in Education Degree

General Education Requirements 61

Required substitutions:
HPR 250, 251, 350, 351

Professional Education Requirements 53-55

Phase I* ED 214, 216, 218, 220, 221, 223 14

Phase II* ED 327, 321, 323, 432; EDT 280 11
ED 302; COM 101 6
HPR 381, 382, 383 9

Phase III* ED 419, 429, 440 13-15

Physical Education Major Requirements 79
HPR 212, 220, 221, 241 12
HPR 340, 355 7
HPR 410, 440, 450, 455 15

Sports Skills Requirement 14-15

Seven different sports are required as follows: two individual sports, two team sports, two fitness areas and one lifetime sport. Three courses must be at the intermediate level or higher and the remaining four courses can be taken at the beginning level.

Electives 31

Students are required to select 30 hours of electives from an approved list and may choose to concentrate these electives in an area such as adapted physical education, athletic training, coaching, or exercise science.**

Total (minimum required) 192

*Field and clinical experiences required.

**K-12 Physical Education majors who desire to add health education certification are required to take HPR 230, 330, and 380.

Sample

Physical Education K-12

Freshman Year

First Quarter
ENG 101 4 HST 101 3
HPR 241 3 Fine Arts* 3
PSY 105 4

Second Quarter
ENG 102 4 HST 102 3
HPR 220 3 MTH 105 3
HPR 221 3 HPR 108 2

Third Quarter
HPR 260 3 HST 103 3
COM 101 3 RST* 3

Sophomore Year

Fourth Quarter
Conc. Elective 3 PLS 200 3
HPR 212 3 EC 200 3
HPR 100 2 EDT 280 3

Fifth Quarter
HPR 250 4 SOC 200 3
ED 221 1 CST* 3
ED 214 3 ED 216 3

Sixth Quarter
HPR 261 4 Great Books* 3
ED 218 3 ED 220 3
ED 223 1 Conc. Elective 3

Junior Year

Seventh Quarter
ED 302 3 HPR 350 4
ED 327 3 HPR 455 4
ED 321 1 HPR 381 3
Physics Education

The physics education program prepares students to teach physics, integrated physical science, and general science in the secondary school. The concentration in physics provides intensive preparation in that area with courses in modern physics, electricity and magnetism, and analytical mechanics. The program also includes basic and supporting courses in biology, earth science, and chemistry, related course work in mathematics, and the required professional education courses. Students are strongly advised to complete a second teaching field in biological sciences, chemistry, earth science, or mathematics, in addition to the basic program in physics.

Degree Requirements—Physics Education

Bachelor of Science in Education Degree

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>68</th>
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Required substitutions:
- MTH 229, 230
- PHY 250/255, 251/256, 252/257

<table>
<thead>
<tr>
<th>Professional Education Requirements</th>
<th>53–55</th>
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Sample

Physics Education

Freshman Year

First Quarter
- ENG 101 4 HST 101 3
- BIO 112 4 MTH 229 5

Second Quarter
- ENG 102 4 HST 102 3
- BIO 114 4 MTH 230 5

Third Quarter
- BIO 115 4 HST 103 3
- PHY 250/255 6 MTH 231 5

Sophomore Year

Fourth Quarter
- PHY 251/256 5 MTH 232 5
- CHM 121 5 CST* 3

Fifth Quarter
- PHY 252/257 5 MTH 233 5
- CHM 122 5 FST* 3

Sixth Quarter
- ED 214 3 CHM 123 5
- ED 216 3 PHY 260 4
- ED 221 1

Junior Year

Seventh Quarter
- ED 218 3 EC 200 3
- ED 220 3 GL 251/252 4.5
- ED 223 1 PHY 371 3

Eighth Quarter
- ED 436 3 GL 253/254 4.5
- ED 327 3 PHY 372 3
- PSY 105 4

Ninth Quarter
- PLS 200 3 Great Books* 3
- ED 302 3 GL 255/256 4
- ED 321 1 Fine Arts* 3

*Field and clinical experiences required.

Continued on next page
**Senior Year**

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<td>ED 464</td>
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<td>ED 432</td>
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<td>PHY 316</td>
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<td>PHY 107/117</td>
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<td>ED 429</td>
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<tr>
<td>ED 440</td>
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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 65-67, lists the specific courses that meet the requirements in these areas.*

**Physics Education as a Second Teaching Field**


**Political Science Education**

Political science may be chosen as a second teaching field only. To be recommended for Ohio Provisional Certification in this teaching field, students must also have completed the program of a major teaching field. Forty-eight credit hours are required, including PLS 212, 222, 301, 305, 321, 322, 323, 324, 331, 335, 380, 440; ED 439, 448.

**Psychology/Sociology Education**

Sociology education may be chosen as a second teaching field only. To be recommended for Ohio Provisional Certification in this teaching field, students must also have completed the program of a major teaching field. Forty-eight hours are required, including PSY 105, 110, 311, 321, 331, 351; SOC 200, 201. Select four of the following: SOC 221, 301, 330, 332, 340, 360, 363; ED 439, 448.

**Rehabilitation**

The rehabilitation program offers two areas of concentration: generalist and mental health. Graduates are employed in human service agencies that serve individuals who are physically, mentally, or socially disadvantaged. The program also prepares students for graduate study in rehabilitation counseling or related areas. Curriculum flexibility attracts students who are interested in modifying program requirements to reflect their special interests. Students must have a 2.35 gpa for admission to the program, and must earn a minimum grade of C in each professional rehabilitation course requirement. All students must complete a 400 clock hour practicum. Prerequisites for practicum include a 2.50 gpa plus several other courses. (See course description.)

**Degree Requirements—Rehabilitation/Generalist Concentration**

**Bachelor of Science Degree**

General Education Requirements 57

Area Four—Natural Sciences
Select BIO 105, 106, 107

Professional Rehabilitation Requirements 59

RHB 201, 202, 301, 303, 304 20
RHB 401, 402, 403, 404, 407 28
ED 445; CNL 461, 467 11

Related Requirements 43

Management (MGT 200) 3
Sociology/Anthropology 16
Psychology: must include PSY 311 16
Communication 8

Electives 33

Total 192

**Degree Requirements—Rehabilitation/Mental Health Concentration**

**Bachelor of Science Degree**

General Education Requirements 57

Area Four—Natural Sciences
Select BIO 105, 106, 107

Professional Rehabilitation Requirements 52

RHB 201, 202, 302, 303, 304 20
RHB 401, 402, 403, 404, 407 28
CNL 461 4
Sample

Rehabilitation

Freshman Year

First Quarter

ENG 101 4  HST 101 3
BIO 101 4  PSY 105 4

Second Quarter

ENG 102 4  HST 102 4
BIO 105 4  MTH 105 3
PLS 200 3

Third Quarter

BIO 107 4  HST 103 3
CST* 3  SOC 200 3

Sophomore Year

Fourth Quarter

RHB 201 4  EC 200 3
PSY Elective 4  MGT 200 3
COM Elective 3

Fifth Quarter

PSY Elective 4  SOC Elective 4
RHB 202 4  Elective 4

Sixth Quarter

PSY Elective 4  SOC Elective 4
RHB 301 4  COM Elective 4

Junior Year

Seventh Quarter

PSY 311 4  SOC Elective 4
RHB 304 4  CNL 461 4

Eighth Quarter

RHB 303 4  ED 445 3
RHB 401 4  Elective 4
(PSY 331)

Ninth Quarter

RHB 404 4  CNL 467 4
Elective 4
(MIS 100)

Senior Year

Tenth Quarter

RHB 402 4  Elective 4
Elective 4

Eleventh Quarter

RHB 407 4  Elective 4
Elective 3  Elective 2
Elective 4
(ED 459) 4  (CNL 464) 2

Twelfth Quarter

RHB 403 12  Elective 4

*Because of an articulation agreement with Sinclair Community College, Clark Technical College, Edison State Community College, and North Central Technical College, graduates of their mental health/social services program may apply many of their previous courses to the mental health concentration. Other students must also complete related requirements listed in the generalist program.

Minor in Rehabilitation/Generalist

The minor in rehabilitation/generalist requires 34 credit hours including RHB 201, 301, 303, 304, 401, 402, 403 (6 credit hours), 407.

Dual Major in Rehabilitation/Generalist

The dual major in rehabilitation/generalist requires 99 credit hours including RHB 201, 202, 301, 303, 304, 401, 402, 403 (12 credit hours), 404, 407, CNL 461, 467; 8 credit hours of COM electives; MGT 200; PSY 311 and an additional 12 hours of PSY courses; 16 hours of SOC/ATH courses; and BIO 105, 106, and 107 for General Education science requirements.

Science Comprehensive Education

The completion of the science comprehensive program permits students to teach any science course offered in the secondary school. The program includes basic and supporting courses in physics, chemistry, biology, earth science, mathematics, and the professional education courses required of all candidates for secondary school certification.
Degree Requirements—Science Comprehensive Education

Bachelor of Science in Education Degree

General Education Requirements 64

Required substitutions:
MTH 229, 230
Area Four—Natural Sciences
Select BIO 112, 114, 115

Professional Education Requirements 53–55

Phase I*
ED 214, 216, 218, 220, 221, 223 14

Phase II*
ED 327, 302, 432, 464, 431, 436, 321, 323; EDT 280; COM 101 26

Phase III*
ED 429, 440 13–15

Science Comprehensive Education

Major Requirements 119.5

BIO 202, 302/312, 208, 209 19
Two of the following:
BIO 204, 205, 206, 303 10
CHM 121, 122, 123 15
CHM 211/215, 212/216, 213/217 18
GEO 201, 334 7
GL 251/252, 253/254, 255/256, 311 or 341, 342 22.5
PHY 107/117, 250/255, 251/256, 252/257, 260, 315 27

Total (minimum requirement) 235.5

*Field and clinical experiences required.

Sample

Science Comprehensive Education

Freshman Year

First Quarter 16
ENG 101 4 HST 101 3
BIO 112 4 HST 102 3

Second Quarter 16
ENG 102 4 HST 103 3
BIO 114 4 MTH 230 5

Third Quarter 18
BIO 115 4 HST 103 3
PHY 250/255 6 MTH 231 5

Sophomore Year

Fourth Quarter 18
PHY 251/256 5 MTH 232 5
BIO*** 6 RST* 3

Fifth Quarter 17.5
PHY 250/257 5 MTH 233 5
Fine Arts* 3 BIO 208 4.5

Social Studies Comprehensive Education

The social studies comprehensive program prepares students to teach integrated social studies and all component areas in which they have at least 18 credit hours of course work. The program consists of basic and advanced courses in American history, world history, political science, economics, sociology, and geography; advanced courses in U.S. history and non-U.S. history; and a concentration of advanced courses in one or more social science fields.
Degree Requirements—Social Studies Comprehensive Education

Bachelor of Science in Education Degree

General Education Requirements 57

Area Two—Select REL 204

Professional Education Requirements 53–55

Phase I
ED 214, 216, 218, 220, 221, 223 14

Phase II
ED 321, 323, 327, 302, 432, 464, 439, 448; EDT 280; COM 101 26

Phase III
ED 429, 440 13–15

Social Studies Comprehensive Education Major Requirements 84

HST 211, 212, 300, 498 14
American History (upper division) 4
European History (upper division) 4
Non-Western History (upper division) 4
PLS 212, 222 8

Choose from the following:
PLS 301, 305, 321, 322, 323, 324, 331, 335, 380, 440 20

Choose one of the following concentrations 30

Geography
GEO 201, 202, or 203 (choose one) 3
Choose from the following:
GEO 262, 303, 311, 325, 330, 331, 340, 343, 354, 360, 365, 370, 375 28–29

Economics
EC 201, 202, 203 (may substitute for EC 200) 9
Choose from the following:

Psychology/Sociology
SOC 201 3
PSY 110, 311, 331, 351 16
Choose three from the following:
SOC 221, 301, 330, 332, 340, 360, 363 11–12

Total (minimum requirement) 206

*Field and clinical experiences required

Sample

Social Studies Comprehensive Education

Freshman Year

First Quarter 14

Science I* 4  ENG 101 4
HST 101 3  SOC 200 3

Second Quarter 17

Science II* 4  ENG 102 4
HST 102 3  PLS 200 3
MTH 105 3

Third Quarter 18

Science III* 4  PSY 105 4
HST 103 3  PLS 212 4
EC 200 3

Sophomore Year

Fourth Quarter 17

HST 211 3  CST* 4
PLS 222 4  Concentration/
REL 204 3  Elective** 4

Fifth Quarter 18

HST 212 3  ED 216 3
PLS Elective*** 4  ED 214 3
Concentration/
Elective** 4  ED 221 1

Sixth Quarter 18

HST—Advanced† 4  PLS Elective*** 4
ED 218 3  ED 220 3
ED 223 1  Great Books* 3

Junior Year

Seventh Quarter 18

ED 327 3  HST 300 4
ED 302 3  PLS Elective*** 4
ED 321 1  RST* 3

Eighth Quarter 17

ED 448 3  HST—Advanced† 4
ED 439 3  Fine Arts* 3
ED 323 1  COM 101 3

Ninth Quarter 17

Concentration/
Elective** 4  ED 464 3
HST 498 4  ED 432 3

Senior Year

Tenth Quarter 13

ED 429 10  ED 440 3

Eleventh Quarter 16

Concentration/
Elective** 8  PLS Elective*** 4
HST—Advanced† 4

Twelfth Quarter 17

Concentration/
Elective** 13  PLS Elective*** 4

*Students have a choice of courses that meet General Education requirements in the following areas: Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

**Choose courses from one of the following concentrations: Geography, Economics, or Psychology/Sociology

***Choose five courses from the following: PLS 301, 305, 321, 322, 323, 324, 335, 380, 440

†Choose one American, one Non-Western, and one European upper level History course

107

Education and Human Services

Social Studies Comprehensive Education
Special Education

The undergraduate program at Wright State for teaching exceptional individuals has as its purpose the preparation of competent teachers to work with persons exhibiting marked learning differences due to cognitive, psychomotor, or affective handicaps. Recommendation for certification can be earned in areas of specific learning disabilities (SLD), multiply handicapped (MH), developmentally handicapped (DH), and orthopedically handicapped (OH).

Prospective certification candidates will pursue education and training experiences in liberal arts, professional education, and special education. The special education requirements vary by certification area, and student teaching is completed in a classroom with individuals for whom certification is being earned. Observation and participation in school sites are integrated and essential requirements in the course patterns.

Degree Requirements—Special Education

General Education 57
Area Two—Fine and Performing Arts
Select ART 208
Area Three—The Non-Western World
Select CST 200
Area Four—Natural Sciences
Select BIO 105, 106, 107

Professional Education Requirements 59–61

Phase I
ED 214, 216, 221, 218, 220, 223 14

Phase II
ED 327, 302; EDT 280; ED 464, 315, 316, 317, 311, 417, 437, 321, 323 32

Phase III
ED 419, 440 13–15

Content Curriculum 45–50
AED 431; COM 103; ED 241, 242, 243; ENG 342; GEO 201 or 202 or 203; HPR 281 or 311, 331; HST 211, 212; MTH 243, 244; MUS 365 18–27

Concentrations
Select one of the following special education certification areas:

Developmentally Handicapped
EDS 442, 444, 445, 451, 454, 455, 456, 459 27

Multihandicapped
EDS 443, 444, 445, 451, 452, 453, 456, 459
HPR 311

Orthopedically Handicapped
EDS 443, 444, 445, 451, 452, 453, 455, 459 25

Specific Learning Disability
EDS 442, 444, 445, 454, 455, 456, 459 24
### Sample

#### Special Education: SLD and/or DH

**Freshman Year**

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<th>Course Title</th>
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<td>PSY 105</td>
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<td>EG 200</td>
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<tr>
<td><strong>Second Quarter</strong></td>
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<tr>
<td>ENG 102</td>
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<td>HST 102</td>
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<td>BIO 106</td>
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<td>PLS 200</td>
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<td>CST 240</td>
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<td>Great Books*</td>
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<td>BIO 107</td>
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#### Sophomore Year

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<tr>
<td>ED 216</td>
<td>3</td>
<td>MTH 243</td>
<td>3</td>
</tr>
<tr>
<td>ED 221</td>
<td>3</td>
<td>ED 241</td>
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</tr>
<tr>
<td><strong>Fifth Quarter</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ED 218</td>
<td>3</td>
<td>MTH 244</td>
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</tr>
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<td>ED 220</td>
<td>3</td>
<td>ED 242</td>
<td>3</td>
</tr>
<tr>
<td>ED 223</td>
<td>1</td>
<td>ENG 340</td>
<td>4</td>
</tr>
<tr>
<td><strong>Sixth Quarter</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ED 321</td>
<td>1</td>
<td>ED 316</td>
<td>3</td>
</tr>
<tr>
<td>ED 320</td>
<td>3</td>
<td>ED 249</td>
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</tr>
<tr>
<td>ED 327</td>
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<td>ENG 342</td>
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#### Junior Year

<table>
<thead>
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<td></td>
<td></td>
</tr>
<tr>
<td>ED 316</td>
<td>3</td>
<td>ED 464</td>
<td>3</td>
</tr>
<tr>
<td>EDS 456</td>
<td>4</td>
<td>EDS 444</td>
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<td>ED 323</td>
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<tr>
<td>(for DH take</td>
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<td></td>
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<tr>
<td>EDS 461 instead</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>of elective)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eighth Quarter</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDS 445</td>
<td>3</td>
<td>EDS 454</td>
<td>3</td>
</tr>
<tr>
<td>ED 317</td>
<td>3</td>
<td>EDT 280</td>
<td>3</td>
</tr>
<tr>
<td>ED 437</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ninth Quarter</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ED 417</td>
<td>3</td>
<td>EDS 459</td>
<td>3</td>
</tr>
<tr>
<td>ED 311</td>
<td>3</td>
<td>EDS 442</td>
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</tr>
<tr>
<td>RST*</td>
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</table>

#### Degree Requirements—Visual Arts

**Bachelor of Science in Education Degree**

| General Education Requirements | 57 |
| Professional Education Requirements | 49-51 |

**Phase I**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 214, 216, 218, 220, 221, 223</td>
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**Phase II**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
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<tr>
<td>ED 327, 302, 432, 464; AED 438; ED 321, 323;</td>
<td>23</td>
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<tr>
<td>EDT 280; COM 101</td>
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</table>
**Visual Arts Education**

**Freshman Year**

- **First Quarter**
  - Science I* 4 ENG 101 4
  - HST 101 3 PSY 105 4

- **Second Quarter**
  - Science II* 4 ENG 102 4
  - HST 102 3 MTH 105 3

- **Third Quarter**
  - Science III* 4 SOC 200 3
  - HST 103 3 EC 200 3

- **Sophomore Year**
  - Fourth Quarter
    - PLS 200 3 ART 207 4
  - Fine Arts* 3 ART 211 4
  - Great Books* 3

- **Fifth Quarter**
  - Fourth Quarter
    - ART 208 4 ART 212 4
  - AED 214 4 CST* 3

- **Sixth Quarter**
  - ART 209 4 RST* 3
  - ART 228 4 COM 101 3

- **Junior Year**
  - Seventh Quarter
    - ART 347 4 ED 214 3
    - Elective 3 ED 216 3
    - AED 224 4 ED 221 1

- **Eighth Quarter**
  - ART 348 4 ED 218 3
  - AED 431 4 ED 220 3
  - Elective 3 ED 223 1

- **Ninth Quarter**
  - ART 327 3 EDT 280 3
  - ED 302 3 ART 367 3
  - ED 321 1 AED 432 3

- **Senior Year**
  - Tenth Quarter
    - AED 441 4 ED 432 3

Vocational Business Education

Vocational business education leads to the Bachelor of Science in Education degree and state certification. The provisional vocational business certificate is valid for teaching the subjects named in the certificate (business education comprehensive with shorthand and data processing, business education without data processing, business education without shorthand, and business education without data processing and shorthand) and requires technical course work and two years of recent related work experience in the teaching area or a directed occupational experience under the supervision of a vocational teacher educator. A candidate completing the requirements for business comprehensive education at Wright State University, who has two years of recent related work experience, can take three additional courses (EDT 407, EDT 408, and OA 401) and be eligible for recommendation for the vocational business education certificate.

Degree Requirements—Vocational Business Education

**Bachelor of Science in Education Degree**

| General Education Requirements | 63 |
| Required substitutions: EC 201, 202, 203 |
| Professional Education Requirements | 60 |

**Phase I**

- ED 214, 216, 218, 220, 221, 223 14

**Phase II**

- ED 327, 302, 432, 464, 321, 322, 323;
  - EDT 280, 433, 434, 407, 408; COM 101 32
**Phase III**

**Curriculum Content**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACC 201, 202, 203</td>
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<tr>
<td>CS 205</td>
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</tr>
<tr>
<td>EC 300</td>
<td>3</td>
</tr>
<tr>
<td>EDT 335</td>
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<tr>
<td>ENG 330</td>
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</tr>
<tr>
<td>LAW 350</td>
<td>3</td>
</tr>
<tr>
<td>MGT 301</td>
<td>3</td>
</tr>
<tr>
<td>MIS 100</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301, 302</td>
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**Shorthand Option**

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**Data Processing Option**

<table>
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<td>CS 141, 142</td>
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<tr>
<td>EDT 487</td>
<td>4</td>
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</table>

**Total (minimum requirement)**

192

*Field and clinical experiences required.

**Note:** This program is under revision at the time of the catalog publication. Please consult an adviser in the College of Education and Human Services if you are interested in this program.

---

### Sample

**Vocational Business Education**

#### Freshman Year

**First Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENG 101</td>
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<tr>
<td>HST 101</td>
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</tr>
<tr>
<td>Science I*</td>
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**Second Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENG 102</td>
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<tr>
<td>HST 102</td>
<td>3</td>
</tr>
<tr>
<td>Science II*</td>
<td>4</td>
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**Third Quarter**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CST*</td>
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</tr>
<tr>
<td>HST 103</td>
<td>3</td>
</tr>
<tr>
<td>Science III*</td>
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**Sophomore Year**

**Fourth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>ACC 201</td>
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</tr>
<tr>
<td>EC 202</td>
<td>3</td>
</tr>
<tr>
<td>OA 211</td>
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</tr>
<tr>
<td>MIS 100</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts*</td>
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**Fifth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>EC 203</td>
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</tr>
<tr>
<td>OA 212</td>
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<td>CS 205</td>
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<tr>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Steno take</td>
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---

### Juniors

#### Junior Year

**Seventh Quarter**

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<tbody>
<tr>
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<tr>
<td>OA 306</td>
<td>3</td>
</tr>
<tr>
<td>MGT 301</td>
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**Eighth Quarter**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>OA 221</td>
<td>3</td>
</tr>
<tr>
<td>OA 305</td>
<td>3</td>
</tr>
<tr>
<td>ENG 330</td>
<td>3</td>
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**Ninth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>OA 222</td>
<td>3</td>
</tr>
<tr>
<td>OA 411</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301</td>
<td>3</td>
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**Senior Year**

**Tenth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ED 464</td>
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</tr>
<tr>
<td>ED 323</td>
<td>1</td>
</tr>
<tr>
<td>Business</td>
<td></td>
</tr>
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**Eleventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ED 432</td>
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</tr>
<tr>
<td>LAW 350</td>
<td>3</td>
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**Twelfth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ED 429</td>
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**Thirteenth Quarter**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ED 407</td>
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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.
Dean James E. Brandeberry  
Associate Dean Marc E. Low  
Assistant Dean Clark E. Beck  
Assistant Dean Richard K. Rathbun  
Department/Chair

Biomedical and Human Factors Engineering  
Blair A. Rowley  
Computer Science and Computer Engineering  
Alastair D. McAulay  
Electrical Engineering  
Belle A. Shenoi  
Mechanical and Materials Engineering  
Richard J. Bethke (interim chair)

The College of Engineering and Computer Science offers programs leading to both bachelor's and master's degrees in several programs and a Doctor of Philosophy degree in computer science and engineering. Bachelor of Science degrees are offered in biomedical engineering, computer engineering, electrical engineering, engineering physics, human factors engineering, materials science and engineering, and mechanical engineering. Bachelor of Science and Bachelor of Arts degrees are offered in computer science. A dual major program is available with the Department of Mathematics and Statistics.

One important objective of the programs is to best prepare students for the engineering and computer science professions. It is therefore important that students pursue a program that prepares them for present standards of the profession. To this end, the faculty reserves the right to periodically update the students' remaining program of study as the faculty recognizes the need to bring it in line with the latest professional standards.

Admission and Advising

All new students are assigned to the University Division for academic advising. Admission to a degree program in the college is contingent upon the student:

1. completing at least 45 quarter credits of college-level work.
2. attaining a cumulative grade point average of at least 2.25.
3. completing required core courses in English, mathematics, computer programming, and chemistry or physics with a grade of C or better in each course. Computer science students must attain a 2.25 grade point average in all computer science and computer engineering courses.

Upon acceptance into a degree program, students will be assigned an academic adviser in the appropriate department who will assist them in developing a program of study.

Transfer students seeking admission to an engineering degree program must have transfer credit equivalent to the first-year requirements for the program and meet the requirements listed above. Transfer students not meeting these requirements will be assigned to the University Division or to a pre-engineering or pre-computer science program for academic advising.

Students who believe they have the knowledge and background required for a particular course, but who do not meet all of the course prerequisites, may petition the department involved for permission to enroll in the course. The petition must be presented to the department involved not less than two weeks (fourteen days) prior to the beginning of the quarter.

Master of Science Degree

The college offers graduate programs in engineering and computer science. The Master of Science in Systems Engineering degree program is broad in scope, offering students the opportunity to concentrate in biomedical, electrical, human factors, materials science, or mechanical engineering course areas. The Master of Science in Computer Engineering degree program emphasizes the theory and application of both hardware and software in the areas of computer design and analysis. The Master of Science in Computer Science degree program blends theory, software, and hardware in the areas of computer theory and software.

Doctor of Philosophy Degree

The college offers a Ph.D. program in computer science and engineering. The program requires concentrated study in specific areas of computer science and engineering. The program's strength lies in its unique blend of faculty expertise, in the balance of theory with software and hardware design, and in the laboratory facilities available to the program.
Degree Requirements

To be eligible for the Bachelor of Science degree, students must:
1. fulfill the university General Education requirements.
2. complete the residency requirement of 45 credit hours at Wright State University, 30 of which must be earned in courses numbered 300 or above. At least fifteen of the last 45 hours of the degree must be taken in residence.
3. complete all academic work with at least a 2.0 cumulative grade point average and at least a 2.0 cumulative grade point average in the major.
4. complete all the requirements in one of the programs of study established by the departments or within the college.

To be eligible for the Bachelor of Arts degree with a major in computer science, students must complete the requirements listed for the Bachelor of Science degree and must also complete at least 16 hours in departments outside the College of Engineering and Computer Science and the College of Science and Mathematics. The level and type of courses to be taken are subject to the discretion and approval of the Department of Computer Science and Engineering. These courses are in addition to those needed to fulfill the General Education requirements.

Honors Program

Honors programs are available in all departments. These honors programs give well-qualified students the opportunity to carry out an independent research project and pursue advanced course work. Students interested in pursuing an honors program should consult with the chair of the appropriate department. Honors are awarded at graduation.

Cooperative Education Program

The cooperative education program permits students to integrate work experience into their academic program. Interested students should contact the Cooperative Education office.

Biomedical and Human Factors Engineering

Professors Cacioppo (visiting), Phillips, Rowley (chair)
Associate Professors Hangartner, He, Reynolds
Assistant Professors Ezenwa (research), Gallimore, Koubek

The Department of Biomedical and Human Factors Engineering currently offers programs in biomedical engineering and human factors engineering leading to the degrees of Bachelor of Science in Biomedical Engineering or Bachelor of Science in Human Factors Engineering and Master of Science in Systems Engineering.

A Doctor of Philosophy is offered through programs in biomedical sciences and computer science and engineering.

Curriculum design changes from time to time to meet educational and accreditation needs. The following curricula are typical; however, students should check with the department for the current curriculum guides.

Biomedical Engineering

Biomedical Engineering is that branch of applied science that is concerned with solving and understanding problems in biology and medicine using principles, methods, and approaches drawn from engineering science and technology.

Biomedical engineering students receive intensive academic training in engineering design and analysis principles as well as life science concepts.

The undergraduate biomedical engineering program is a four-year program accredited by the Accreditation Board for Engineering and Technology (ABET). All of the faculty participate in the instructional program. Students and faculty enjoy a favorable student/professor ratio in class, which leaves room for good interaction. The senior design course brings all of the course work together in creative work on actual biomedical engineering problems that help prepare students for employment. The modern teaching laboratories have the latest equipment and are structured around computer-based engineering work stations. The curriculum provides a mix of engineering courses that produce an engineer with strong capabilities in biomedical engineering based on communication skills, life sciences, math, physical science, electronics, control systems, mechanics, and computers. In addition, the general education courses provide an appropriate broadening of students' horizons in a university setting.
Current efforts in biomedical engineering include the development of medical and surgical instrumentation, the design of rehabilitation assistive devices, the interfacing of complex systems in data collection and analysis, medical imaging, and the adaptation of computer technology to assist people with severe physical disabilities.

Two separate curricula are available. Curriculum A is the basic degree program. Curriculum B is a premedical program that prepares students for application to medical school. Students who transfer between curricula must complete the final curriculum in total. Graduates may also be qualified to pursue graduate studies in engineering or the life sciences.

Degree Requirements—Biomedical Engineering

Bachelor of Science in Biomedical Engineering Degree

General Education Requirements 68

Required substitutions:
MTH 229, 230
PHY 250/255, 251/256, 252/257

Engineering Requirements 82

BME 419, 420, 422, 428, 439, 440 20
BME 461, 462, 463, 464, 493, 495 24
EGR 153 4
EE 301/302, 321, 401/402, 413/414 18
ME 202 (waived for curriculum B) 4
ME 212, 213, 315 12

Technical Electives (waived for curriculum B) 12

Technical electives are designed to provide one or two emphasis areas in BME. These courses must provide in-depth study versus breadth. Courses must be chosen in concert with a BME adviser and be at the 300 level or above. (These electives are waived for curriculum B).

Related Course Requirements 41

BIO 112, 208, 209 13
CHM 121, 122 10
MTH 231, 232, 233 15
STT 363 (waived for curriculum B) 3

Curriculum B additional courses 23

CHM 123, 211/215, 212/216, 213/217

Total Curriculum A 203

Total Curriculum B 207

Sample

Biomedical Engineering

Freshman Year

First Quarter
ENG 101 4  CST* 3
CHM 121 5  MTH 229 5

Second Quarter
ENG 102 4  RST* 3
CHM 122 5  MTH 230 5

Third Quarter
PSY 105 4  ME 202 4
MTH 231 5  EGR 153 4

Sophomore Year

Fourth Quarter
PHY 250/255 6  MTH 232 5
ME 212 4  BIO 112 4

Fifth Quarter
PHY 251/256 5  BIO 208 4.5
Great Books* 3  ME 213 4

Sixth Quarter
PHY 252/257 5  BIO 209 4.5
MTH 233 5  Fine Arts* 3

Junior Year

Seventh Quarter
EE 301 4  HST 101 3
EE 302 1  STT 363 3

Eighth Quarter
EE 321 4  BME 419 3
EE 401 4  BME 463 3
EE 402 1  HST 102 3

Ninth Quarter
EE 413 3  BME 420 3
EE 414 1  BME 464 4
HST 103 3  Tech. Electives** 3

Senior Year

Tenth Quarter
BIO 112, 208, 209 13
CHM 121, 122 10
MTH 231, 232, 233 15

Tenth Quarter
BME 422 3  BME 461 4
BME 439 4  BME 493 3
Tech. Electives** 3

Eleventh Quarter
BME 440 4  PLS 200 3
BME 462 4  Tech. Electives** 3
BME 494 3

Twelfth Quarter
BME 428 3  EC 200 3
BME 495 3  SOC 200 3
Tech. Electives** 3

*Students in this program have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.
Waived for Curriculum B

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<td>ME 202</td>
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<td>STT 363</td>
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<td>Tech. Elective**</td>
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</table>

Curriculum B Additional Courses

<table>
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<tr>
<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Third</td>
<td>CHM 123</td>
<td>5</td>
</tr>
<tr>
<td>Seventh</td>
<td>CHM 211</td>
<td>4</td>
</tr>
<tr>
<td>Eighth</td>
<td>CHM 212</td>
<td>4</td>
</tr>
<tr>
<td>Ninth</td>
<td>CHM 213</td>
<td>4</td>
</tr>
</tbody>
</table>

**Technical Electives are chosen in concert with a departmental adviser based on departmental policy.

Degree Requirements—Human Factors Engineering

Bachelor of Science in Human Factors Engineering Degree

General Education Requirements 68

Required substitutions:

- MTH 229, 230
- PHY 250/255, 251/256, 252/257

Engineering Requirements 85

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BME 419</td>
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<tr>
<td>EGR 153</td>
<td>4</td>
</tr>
<tr>
<td>EE 301/302, 321, 322, 401/402</td>
<td>17</td>
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<tr>
<td>EE 413/414, 415/416</td>
<td>8</td>
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<td>HFE 471, 472, 473, 474, 476</td>
<td>15</td>
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<tr>
<td>ME 202, 212, 213, 315</td>
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Related Courses 49

<table>
<thead>
<tr>
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<td>CS 205</td>
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<tr>
<td>MTH 231, 232, 233</td>
<td>15</td>
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<tr>
<td>STT 360, 361</td>
<td>8</td>
</tr>
<tr>
<td>PSY 110, 321, 371</td>
<td>12</td>
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</tbody>
</table>

Total 202

Human Factors Engineering

Human factors engineering is concerned with the design and evaluation of machine systems for human use, with emphasis on the interface between the operator and the system. The human factors engineer describes the pertinent properties of people and machines, rationally allocates tasks to one or the other, and provides a flow of information between the two through the optimization of displays and controls.

Human factors engineers design by visualizing themselves as users, operators, and maintainers of systems, making certain the designs promote efficiency, effectiveness, safety, and comfort. Three key design goals can be identified: (1) to ease the burden placed on the human operator; (2) to build more efficient person-machine systems; and (3) to design for maintainability.

The human factors engineering program incorporates systems engineering and applied experimental psychology. Students with varied interests and multiple talents are attracted to the program, which develops expertise in several disciplines, including design and systems engineering, industrial and experimental psychology, and statistics. The student in human factors engineering is exposed to a balance of courses in mathematics, engineering, psychology, computer science, physical science, and general education.

Human factors engineers work in diverse areas such as automobile design, highway safety, aviation and space programs, household appliances, manufacturing, biomedical applications, protective body gear, and automated systems. Graduates may qualify for graduate studies in engineering or psychology.
Eighth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 321</td>
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</tr>
<tr>
<td>HST 102</td>
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<tr>
<td>RST*</td>
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Ninth Quarter

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<th>Course</th>
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<tr>
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<td>HST 103</td>
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<td>PSY 321</td>
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Senior Year

<table>
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<th>Course</th>
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<tbody>
<tr>
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<td>EE 402</td>
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<td>CST*</td>
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Eleventh Quarter

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<th>Course</th>
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<tbody>
<tr>
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<td>EE 413</td>
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<td>BME 419</td>
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Twelfth Quarter

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<tr>
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<tr>
<td>HFE 476</td>
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</table>

*Students in this program have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

Admission

Students are eligible for admission to the baccalaureate degree program in computer engineering when they have:

1. completed at least 45 quarter credits of college-level work.
2. a cumulative grade point average of at least 2.25.
3. completed the following core courses with a grade of C or better in each course: ENG 101, 102; MTH 229, 230, 231; CHM 121 or PHY 250/255; CS 240, 241

When these requirements have been met, students will be advised by the computer engineering faculty. Until that time, they will be assigned to the University Division or to a pre-computer engineering program for academic advising.

Computer Engineering Honors Program

The honors program in computer engineering provides an opportunity for talented students to develop their interests and abilities by pursuing carefully coordinated programs of independent study that improve the breadth and depth of their educational experience.

To gain admission to the honors program in computer engineering, students must have:

1. an overall grade point average of 3.25.
2. completed the following courses: CEG 433, 434, or equivalent transfer hours.
3. senior standing (at least 135 hours earned, including accepted transfer credit).
4. at least three quarters of study remaining.
5. demonstrated academic excellence, strong self-motivation, perseverance, and in general the ability to pursue advanced study.

For additional information on the honors program, contact the computer science and engineering department.
Cooperative Education Program

The cooperative education program allows students to integrate work experience into their academic programs. The nonacademic credit model is available in this area.

Cooperative education students are expected to have completed the first two years of the computer engineering degree model program before beginning the work experience component. Students having completed only one year of the model program may be considered providing that they have at least a 3.0 grade point average overall and in their major. Such students are strongly encouraged to take CEG 260 before the first work experience.

Degree Requirements—Computer Engineering

Bachelor of Science in Computer Engineering Degree

General Education Requirements 68

Required substitutions:
MTH 229, 230
PHY 250/255, 251/256, 252/257

Departmental Requirements 50

CS 240, 241, 242, 400, 415 18
CEG 260, 320, 360 12
CEG 402, 433, 434, 453, 460 20

Engineering Requirements 44

ME 212, 213 8
EE 301/302, 303/304, 321, 322 17
EE 331, 345, 431/434, 449 16
EGR 335 3

Related Course Requirements 35

CHM 121 5
MTH 231, 232, 233, 253, 257 21
PHY 300, 420 6
STT 363 3

Electives 12

Electives must be chosen with the consent of an adviser to provide coherent major concentration and design experience.

Total 209

The order in which science courses are taken is important. Students should obtain a model program sheet from the computer science and engineering departmental office or from their adviser. All programs should be planned in consultation with an adviser.

Sample

Computer Engineering

Freshman Year

First Quarter

<table>
<thead>
<tr>
<th>Course</th>
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<td>ENG 101</td>
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<td>MTH 229</td>
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Second Quarter

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<tbody>
<tr>
<td>ENG 102</td>
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</tr>
<tr>
<td>CS 241</td>
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<td>MTH 230</td>
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<td>SOC 200</td>
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Third Quarter

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<td>ENG 101</td>
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Sophomore Year

Fourth Quarter

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<th>Course</th>
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<tr>
<td>PHY 251/256</td>
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<tr>
<td>CEG 320</td>
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</tr>
<tr>
<td>MTH 253</td>
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Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHY 252/257</td>
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<tr>
<td>CEG 260</td>
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<td>MTH 257</td>
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Sixth Quarter

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<tr>
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<tr>
<td>CS 240</td>
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<tr>
<td>ME 213</td>
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Junior Year

Seventh Quarter

<table>
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<th>Course</th>
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<tbody>
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<td>EE 301/302</td>
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<tr>
<td>CEG 433</td>
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<td>PHY 300</td>
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<td>STT 363</td>
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<td>HST 101</td>
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Eighth Quarter

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<th>Course</th>
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<tbody>
<tr>
<td>EE 303/304</td>
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<td>PSY 105</td>
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<td>HST 102</td>
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Ninth Quarter

<table>
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<th>Course</th>
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<tr>
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<td>HST 103</td>
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<td>CEG 460***</td>
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Senior Year

Tenth Quarter

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<th>Course</th>
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<td>CEG 453</td>
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<td>CS 415</td>
<td>2</td>
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<tr>
<td>EE 322</td>
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Eleventh Quarter

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</thead>
<tbody>
<tr>
<td>EE 331</td>
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<tr>
<td>TECH. ELECTIVES**</td>
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<tr>
<td>CEG 402</td>
<td>4</td>
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Twelfth Quarter

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>CEG 431/434</td>
<td>5</td>
</tr>
<tr>
<td>TECH. ELECTIVES**</td>
<td>4</td>
</tr>
<tr>
<td>EE 449</td>
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</tbody>
</table>

*Students in this program have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

**Technical Electives must be chosen with consent of an adviser to provide a coherent concentration and design experience.

***Background in Ada language is required (may be acquired in CS 480 or CS 340).
Computers

Engineering and Computer Science

Computer Science

Professors: Crum, Davis, McAulay (chair), McKee
Associate Professors: Matei, Rizki, Shock, Sudkamp
Assistant Professors: Chung, Dasigi, Dobbs, Farnum, Hawley (WSU Lake Campus), Hara, Kim, Kirby, Thirunarayan
Instructors: Datta, Ficken, Finkelstein
Research Adjunct Associate Professor: Tamburino
Research Adjunct Assistant Professor: Hanson

The Bachelor of Science degree program in computer science at Wright State University is accredited by the Computing Sciences Accreditation Board (CSAB). The curriculum is carefully designed to provide a balanced and modern program.

Reasons to study computer science at Wright State University include our well-equipped educational laboratories, balanced curricula, excellent faculty, flexible programs for working professionals, and unique opportunities for research in the local area. The program balances the study of hardware, software, theory, and practice. The program prepares students to be skillful practitioners by balancing and combining these studies with a thorough foundation in science, mathematics, and computer science. The degree program allows for a second concentration in an area of mathematics, science, business, or the arts.

The department offers both Bachelor of Science and Bachelor of Arts degrees in computer science. Each allows for a concentration in the discipline of the student's choice. All courses of study may be taken as cooperative education programs.

Curriculum design changes from time to time to meet educational and accreditation needs. The curriculum outlined is typical; however, students should check with the department for the current curriculum guides.

Admission

Students are eligible for admission to the baccalaureate degree programs in computer science when they have:
1. completed at least 45 quarter credits of college-level work.
2. a cumulative grade point average of at least 2.25.
3. completed the following core courses with a grade of C or better in each course: ENG 101, 229, 230; CS 240, 241, 242.
4. attained a grade point average of 2.25 in all CS and CEG courses.

When these requirements have been met, students will be advised by the computer science faculty. Until that time, they will be assigned to the University Division or to a pre-computer science program for academic advising.

Computer Science Honors Program

The department offers an honors program in computer science that provides an opportunity for intellectually gifted students to develop their interests and abilities by pursuing carefully coordinated programs of independent study that improve the breadth and depth of their background.

To gain admission to the honors program in computer science, students must have:
1. an overall grade point average of 3.25.
2. completed three of the following four courses: CS 466; CEG 360, 433, 434, or equivalent transfer hours.
3. senior standing (135 hours earned, including accepted transfer credit).
4. at least three quarters of study remaining.
5. demonstrated academic excellence, strong self-motivation, perseverance, and in general, the ability to pursue advanced study.

For additional information on the honors program, contact the computer science and engineering department.

Cooperative Education Program

The cooperative education program permits students to integrate work experience with their academic programs. The nonacademic credit model is available in this department.

Cooperative education students are expected to have completed the first two years of the computer science degree model program before beginning the work experience component. Students having completed only one year of the model program may be considered providing they have at least a 3.0 grade point average overall and in their major.

Degree Requirements—Computer Science

Bachelor of Science Degree

General Education Requirements 68

Required substitutions:
MTH 229, 230
PHY 250, 255, 251/256, 252/257

Computer Science Requirements 30
CS 240, 241, 242
CS 400, 405, 415, 466, 480

Computer Engineering Requirements 24
CEG 260, 360
CEG 320
CEG 433, 434, 460

Computer Science/Engineering Electives 16

Electives must be chosen with the consent of an adviser to provide a coherent major concentration.
Mathematics/Statistics Requirements 19
MTH 231, 253, 257 11
STT 360, 361 8
Language Requirements 12
English (200 level or above) or foreign language* 3
EGR 335

Second Concentration Requirements 24
Twenty-four hours from a single liberal arts department or a specific program approved by the computer science and engineering department

Science Requirements** 3–5
CHM 121 or BIO 111 or physics course with PHY 252 as a prerequisite

Elective Requirements 5–7
Select from acceptable General Education list, or any 200-level and above course.

Total 203

*Includes comparative literature, linguistics, modern language humanities, and classics (CLS, CPL, DN, FR, GER, GR, ITA, JPN, LAT, LI, ML, POL, POR, RUS, SPN)
**The number of hours taken to fulfill the Science Requirement in each program will determine the number of hours required for the other areas with variable hours in each program (e.g., for B.S.C.S., 3 hours for Science Requirements, 7 hours for Elective Requirements).

No course may count toward two distinct sets of degree requirements.

A model program showing a recommended order in which courses should be taken is available in the computer science and engineering department office.

Sample

Computer Science

Freshman Year
First Quarter 16–18
CS 240 4
Science** 3–5
ENG 101 4
MTH 229 5
Second Quarter 16
ENG 102 4
CS 241 4
HST 101 3
MTH 230 6
Third Quarter 18
PHY 250/255 6
MTH 231 5
HST 102 3
CS 242 4
Sophomore Year
Fourth Quarter 18
PHY 251/256 5
CEG 320 4
HST 103 3
MTH 253 3
First Quarter 18
CEG 320 4
CEG 260 4
MTH 257 3
CST* 3

Degree Requirements—Computer Science

Bachelor of Arts Degree

General Education Requirements 67

Required substitutions:
MTH 229, 230
PHY 111/101, 112/102, 113/103

Computer Science Requirements 30
CS 240, 241, 242
CS 400, 405, 415, 466, 480

Computer Engineering Requirements 24
CEG 260, 360
CEG 320
CEG 433, 434, 460

Computer Science/Engineering Electives 16
Electives must be chosen with the consent of an adviser to provide a coherent major concentration
### Mathematics/Statistics Requirements

<table>
<thead>
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<th>Hours</th>
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<tbody>
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<tr>
<td>STT 360, 361</td>
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### Language Requirements

<table>
<thead>
<tr>
<th>Language</th>
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<tbody>
<tr>
<td>English (200 level or above) or foreign language*</td>
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<tr>
<td>EGR 335</td>
<td>3</td>
</tr>
</tbody>
</table>

### Second Concentration Requirements

Twenty-eight hours from a single liberal arts department or a specific program approved by the computer science and engineering department.

### Elective Requirements

Select from acceptable General Education list, or 200-level and above courses.

### Total

201

*Includes comparative literature, linguistics, modern language humanities, and classics (CLS, CPL, DN, FR, GER, GR, ITA, JPN, LAT, LI, ML, POL, POR, RUS, SPN).

No course may count toward two distinct sets of degree requirements.

A model program showing a recommended order in which courses should be taken is available in the computer science and engineering department office.

### Specific Programs

#### Business as a Second Concentration

Second Concentration Requirements 33–35

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 201, 202, 203*</td>
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<tr>
<td>ACC 201, 202, 203</td>
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<tr>
<td>MGT 301</td>
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<tr>
<td>MKT 301</td>
<td>3</td>
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<td>FIN 301</td>
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</tr>
<tr>
<td>Electives**</td>
<td>6–8</td>
</tr>
</tbody>
</table>

*Substitute for EC 200 in Area Four of the General Education Requirements.

**Choose two courses from the following: FIN 302, MGT 302, MKT 302, MS 203, LAW 350, CS 225, CS 300, CS 301.

This concentration applies to either the Bachelor of Science or Bachelor of Arts program. However, for the Bachelor of Arts program, the language requirements are increased to 16 hours. The elective requirements are eliminated in both programs.

### Sample

**Computer Science (Business Concentration)**

**Freshman Year**

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<td>Science**</td>
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<tr>
<td></td>
<td>MTH 229</td>
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**Second Quarter**

<table>
<thead>
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<tbody>
<tr>
<td>ENG 102</td>
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<td>CS 241</td>
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<td>MTH 230</td>
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**Third Quarter**

<table>
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<tr>
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<tbody>
<tr>
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**Sophomore Year**

**Fourth Quarter**

<table>
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<tbody>
<tr>
<td>PHY 251/256</td>
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**Fifth Quarter**

<table>
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<tbody>
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**Sixth Quarter**

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**Junior Year**

**Seventh Quarter**

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<tbody>
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<td>EC 201</td>
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<td>CEG 433</td>
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<td>ACC 201</td>
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**Eighth Quarter**

<table>
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<th>Course</th>
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<td>EGR 434</td>
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<td>EC 202</td>
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<tr>
<td>ACC 202</td>
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<td>STT 361</td>
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**Ninth Quarter**

<table>
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<td>CEG 460**</td>
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<td>EC 203</td>
<td>3</td>
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<td>EGR 335</td>
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**Senior Year**

**Tenth Quarter**

<table>
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<tbody>
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<tr>
<td>CS 415</td>
<td>2</td>
</tr>
<tr>
<td>Language*</td>
<td>5</td>
</tr>
<tr>
<td>MGT 301</td>
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</tr>
</tbody>
</table>

**Eleventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MKT 301</td>
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</tr>
<tr>
<td>Language*</td>
<td>3</td>
</tr>
<tr>
<td>CEG Elective</td>
<td>4</td>
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</tbody>
</table>

**Twelfth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>CS/CEG Elective</td>
<td>8</td>
</tr>
<tr>
<td>Concentration</td>
<td>5–7</td>
</tr>
</tbody>
</table>

*Students in this program have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

**CHM 121 or BIO 111 or physics course with PHY 252 as a prerequisite.

**Background in ADA is required (may be acquired in CS 480 or CS 340).

*English (200 level or above) or foreign language.

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122

Engineering and Computer Science

Computer Science
Science Option as a Second Concentration

Second Concentration Requirements 26–28

MTH, EE* 12
Courses from one mathematics, science, or engineering department program 14–16


The Elective requirement for this option is reduced to 3 hours.

This option applies only to the Bachelor of Science program.

Sample

Computer Science (Science Option)

Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>16–18</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 240 4</td>
<td>ENG 101 4</td>
</tr>
<tr>
<td>Science** 3–5</td>
<td>MTH 229 5</td>
</tr>
</tbody>
</table>

Second Quarter

| ENG 102 4 | HST 101 3 |
| CS 241 4  | MTH 230 5 |

Third Quarter

| PHY 250/255 6 | HST 102 3 |
| MTH 231 5     | CS 242 4 |

Sophomore Year

| Fourth Quarter | 18 |
| PHY 251/255 5  | HST 103 3 |
| CEG 320 4      | MTH 253 3 |

| Great Books* 3 |

Fifth Quarter

| PHY 252/257 5 | CEG 260 4 |
| MTH 257 3     | CST* 3 |

Sixth Quarter

| PSY 105 4     | CS 400 4 |
| SOC 200 3     |

Junior Year

| Seventh Quarter | 16 |
| STT 360 4      | CEG 433 4 |
| MTH/EE 4       | CS 466 4 |

Eighth Quarter

| CS 480 4       | CEG 434 4 |
| STT 361 4      | MTH/EE 4 |

Ninth Quarter

| CS 405 4       | CEG 460*** 4 |
| MTH/EE 4       | EGR 335 3 |

Tenth Quarter

| CS 415 2       | CS/CEG Elective 4 |
| Concentration 4 | Language† 3 |
| PLS 200 3      |

Eleventh Quarter

| Concentration 6 | Language† 3 |
| Fine Arts* 3    | CS/CEG Elective 4 |

Twelfth Quarter

| CS/CEG Elective 8 | Elective 3 |
| Concentration 4–6 |

*Students in this program have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

**CHM 121 or BIO 111 or physics course with PHY 252 as a prerequisite

***Background in ADA is required (may be acquired in CS 480 or CS 340)

†English (200 level or above) or foreign language

Electrical Engineering

Professors Brandeberry, Rattan, Shenoi (chair)

Associate Professors Andrews, Bethke, Hannen, Kazimierczuk, McCormick, Pujara, Siferd, Spalding

Assistant Professors Chen, Eppers, Garber, Hong, Misra, Naishadham, Shaw, Shiu, Xue

Instructor Smith

The Department of Electrical Engineering offers programs leading to the Bachelor of Science in Electrical Engineering degree (B.S.E.E.) and the Bachelor of Science in Engineering Physics degree (B.S.E.P.). These two engineering programs are accredited by the Accreditation Board for Engineering and Technology (ABET).

Advising

Students accepted into department programs are assigned an academic adviser from the faculty.

Honors Programs

Honors programs are available to all qualified students in the department. These programs provide the opportunity for students to advance their knowledge beyond the provisions of the regular curricula. For additional information, contact the department chair.
Cooperative Education Program

The cooperative education program permits students to integrate work experience into their academic program. Interested students should contact the Cooperative Education office.

Electrical Engineering

As a result of rapid technological advances in electronics, the demand for electrical engineering graduates exceeds the supply and the resulting starting salaries are very competitive. This situation is forecast to continue for several decades with minor cyclical changes. Challenging employment opportunities exist in most segments of the industrial and service sectors of the economy as well as in local, regional, and national governments. Career areas include research, design, teaching, management, manufacturing, and marketing.

The electrical engineering degree program at Wright State is crafted to provide a balanced and modern curriculum. Engineering design with extensive laboratory experience is emphasized throughout. Courses in computer language and applications, mathematics, chemistry, physics, engineering mechanics, English, social science, humanities, and electric circuits provide the foundation for the student. Required courses in electronic circuits, control theory, communication theory, and electromagnetic theory give the student an overview of the electrical engineering discipline. At least one elective design sequence in either control, electronics, communication, or electromagnetic systems is required to provide strength and depth for each graduate. For example, the two required courses in electronic circuits lead to a three-course elective sequence in very large scale integrated (VLSI) circuit design. Students typically lay out a chip using commercial computer-aided design software, send the design to a commercial laboratory for fabrication, and test the result in a department laboratory. Similarly, the required course in control theory leads to analog and digital control design courses. Again, students design and test sophisticated control circuits in department laboratories. The VLSI and control laboratories are only two of many well-equipped laboratories used by Wright State electrical engineering students.

The large and talented electrical engineering faculty is committed to excellence in teaching and research. Small classes provide the students interaction with their instructors. Qualified students are given the opportunity to perform independent research under faculty guidance.

Degree Requirements—Electrical Engineering

Bachelor of Science in Electrical Engineering Degree

General Education Requirements 68

Required substitutions:
- MTH 229, 230
- PHY 250/255, 251/256, 252/257

Engineering Requirements 61
- ME 212, 213, 315
- EE 301/302, 303/304, 321, 322, 325, 331, 345, 351
- EE 413/414, 421, 431/434
- CEG 411

Related Course Requirements 35
- CHM 121, 122
- CS 220
- MTH 231, 232, 233, 253
- STT 363

Technical Electives 8

Engineering Technical Electives 28

Design Sequence I
- EE 449, 451, 454 12

Design Sequence II
- EE 413/414, 427 8

Design Sequence III
- EE 473, 474 7

Design Sequence IV
- EE 346, 446 8

Total 200

*Technical elective courses (8 credit hours required) are to be selected from those numbered 200 and above in either the College of Engineering and Computer Science, the College of Science and Mathematics, or the College of Business and Administration, and approved by the adviser. Redundant courses such as MTH 200, 228, and 300; MS 201; PHY 420; and co-listed courses may not be used as technical elective courses.

†Engineering technical elective courses (28 credit hours required) are to be selected from those numbered 300 or above in the College of Engineering and Computer Science and approved by the adviser. Electives must be chosen such that ABET design content is at least 24 credit hours. At least 20 of the 28 credit hours must be from electrical engineering courses and at least one design sequence must be completed.
adviser. Redundant courses such as MTH 200, 228, and 300, MS 201, PHY 420 and co-listed courses may not be used as TE courses.

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**Engineering Physics**

The engineering physics interdisciplinary program is offered jointly by the Department of Electrical Engineering and the Department of Physics, and is administered by the Department of Electrical Engineering. In the title, the word physics implies a strong knowledge of the basic science while the word engineering implies the application of the basic knowledge to the design of unique engineering systems, processes, and devices. An engineering physicist completes the link between the scientist and the engineer by combining the generalized theoretical approach with practical problems.

This curriculum contains a core of engineering science, mathematics, and physics, thus preparing students for conceptual research and development work in industry or for graduate school. Study in this field provides a sound foundation for graduate study in physics, applied physics, nuclear science and engineering, aerospace engineering, and other areas of engineering research based on physics and applied mathematics, such as component and systems studies in electrical and mechanical engineering. It opens the way to several modern technological areas such as recent advances in semiconductors, lasers, aerodynamics, plasmas, radio astronomy, electro-optics, superconductivity, space science, and transducer instrumentation. The engineering physicist, for example, is ideally prepared to undertake such problems as

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### Sample

#### Electrical Engineering

**Freshman Year**

**First Quarter**
- ENG 101  4  HST 101  3  
- CHM 121  5  MTH 229  5

**Second Quarter**
- ENG 102  4  HST 102  3  
- CHM 122  5  MTH 230  5

**Third Quarter**
- PHY 260/255  6  HST 103  3  
- CS 220  4  MTH 231  5

**Sophomore Year**

**Fourth Quarter**
- PHY 251/256  5  MTH 233  5  
- ME 212  4  Great Books*  3

**Fifth Quarter**
- PHY 262/257  5  MTH 237  5  
- ME 213  4  EE 301/302  5

**Sixth Quarter**
- EE 303/304  5  MTH 253  5  
- ME 315  4  CST*  3
- Fine Arts*  3

**Junior Year**

**Seventh Quarter**
- EE 321  4  PST*  3  
- EE 331  3  EC 200  3  
- EE 351  4

**Eighth Quarter**
- EE 322  4  EE 431  3  
- EE 413/414  4  EE 434  2  
- STT 363  3

**Ninth Quarter**
- EE 326  4  EE 421  4  
- EE 345  4  CEG 411  4

**Senior Year**

**Tenth Quarter**
- EGR Electives***  8  Tech. Electives**  4  
- PSY 105  4

**Eleventh Quarter**
- EGR Electives***  8  Tech. Electives**  4  
- SOC 200  3

**Twelfth Quarter**
- EGR Electives***  12  PLS 200  3

*Students in this program have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**Technical Elective courses (eight credit hours required) are to be selected from those numbered 200 and above in either the College of Engineering and Computer Science, the College of Science and Mathematics, or the College of Business and Administration and approved by the student's adviser. Redundant courses such as MTH 200, 228, and 300, MS 201, PHY 420 and co-listed courses may not be used as TE courses.

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**Design Sequence I—Electronics**

- EE 449  4  Pulse and Digital Circuits  
- EE 451  4  Digital Systems Design  
- EE 454  4  VLSI Design

**Design Sequence II—Controls**

- EE 413  3  Control Systems I  
- EE 414  1  Control Systems II  
- EE 427  4  Digital Control Systems

**Design Sequence III—Communications**

- EE 473  4  Communication Systems I  
- EE 474  3  Communication Systems II

**Design Sequence IV—Electromagnetics**

- EE 346  4  Transmission Lines, Waveguides, and Radiating Systems  
- EE 446  4  Microwave Circuit Design

Note: The order in which engineering courses are taken is important. Students should obtain a current Program Guide from the Electrical Engineering Department Office and consult with an adviser to make sure that course choice and sequencing is current and correct.
nonpolluting energy sources and new technologies for efficient use of natural resources.

The faculty/student ratio in this program is high and allows for independent research or design projects in faculty member research laboratories or in some cases with external government and industry laboratories. These hands-on senior projects have been valuable in increasing the opportunities for employment and higher starting salaries. Thus, the engineering physics graduate is in strong demand, and our students have found employment in industry as well as government laboratories.

Degree Requirements—
Engineering Physics

Bachelor of Science in
Engineering Physics Degree

General Education Requirements 68

Required substitutions:
MTH 229, 230
PHY 250/255, 251/256, 252/257

Engineering Requirements 52–54

ME 202, 212, 315
(PHY 420 may be substituted for ME 315)
EE 231, 301/302, 303/304, 321, 322, 331
EE 413/414, 415/416, 421, 499
(Nine hours of PHY 494 or 8 hours of
ME 490/491 may be substituted for 8 hours of EE 499)

Physics Requirements 29–31

PHY 260 4
PHY 316, 371, 372 9
PHY 450, 451, 452, 460, 461 16–18
(Students may select either PHY 460, 461, or PHY 300, 301)

Related Course Requirements 39–43

CHM 121, 122 10
EGR 153, CS 220 8–12
(CS 141/142 may be substituted for EGR 153)
MTH 231, 232, 233, 253, 333 21

Technical Electives 15

At least three courses chosen from:
CEG 411; EE 431/434; ME 317, 318; PHY 322, 332.
Technical electives must be chosen to provide at least 24 design hours in the total curriculum.

Total (minimum hours required) 203
Mechanical and Materials Engineering

**Professors** Dadras, Faghri, Hankey, Lipsitt, Thomas, Weiss

**Associate Professors** Bethke (interim chair), Grandhi, Hong, Mehrotra

**Assistant Professors** Cornelius, Friar, Lieh, Srinivasan

The Department of Mechanical and Materials Engineering offers programs leading to the Bachelor of Science in Mechanical Engineering degree (B.S.M.E.) and the Bachelor of Science in Materials Science and Engineering degree (B.S.M.S.E.). Both programs are fully accredited by the Accreditation Board for Engineering and Technology (ABET).

The programs in the Department of Mechanical and Materials Engineering present a broad coverage of traditional engineering fundamentals relevant to the departmental programs and develop the skills required for modern engineering analysis and design. Laboratory experience and computer usage are integrated throughout the curriculum. Students have ready access to VAX and micro VAX computers as well as a microcomputer laboratory for CAD and related engineering analysis. Laboratory facilities cover the areas of computer-aided design, strength of materials, fluid mechanics, heat transfer, control systems, robotics, vibrations, metallography, electron microscopy, materials testing, physical ceramics, and manufacturing processes. Both departmental programs require students to complete a capstone design project during the senior year.

**Advising**

Students accepted into the department programs are assigned an academic adviser from the faculty.

**Honors Program**

An honors program is available to all qualified students in the department. This program provides the opportunity for talented students to advance their knowledge beyond the provisions of the regular curricula. For additional information on the honors program, contact the department chair.

**Cooperative Education Program**

The cooperative education program permits students to integrate work experience into their academic program. Interested students should contact the Cooperative Education office.

**Mechanical Engineering**

Mechanical engineering is a modern, creative discipline encompassing a wide variety of technical activities. It is changing rapidly with the progress of the computer era. The key element that links the various activities within mechanical engineering is design. The design function is now largely computer based and involves computation, modeling, graphics, and process control.

Historically, mechanical engineering includes two principle stems. One stem concerns heat, fluids, and energy. Engineers who study combustion in a turbine engine or aircraft lift and drag are practicing in this area. The other stem concerns force and motion in mechanical systems. Problems here include determining robot trajectories, analyzing vibrations to minimize noise, or predicting the stresses in a rotating disc.

The B.S.M.E. curriculum includes basic requirements in mathematics, laboratory science, computer programming, English, social sciences, and humanities, as well as engineering course work in mechanics, thermal sciences, fluids, materials, electronics, mechanical systems, and design. All required courses are offered in both day and evening sections at least once a year.

The mechanical engineering program is fully accredited by the Accreditation Board for Engineering and Technology (ABET).

**Degree Requirements—Mechanical Engineering**

**Bachelor of Science in Mechanical Engineering Degree**

| General Education Requirements | 68 |

**Required substitutions:**

MTH 229, 230

PHY 250/255, 251/256, 252/257
Sample

Mechanical Engineering

Freshman Year

First Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 101</td>
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<td>CHM 121</td>
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Second Quarter

<table>
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<tbody>
<tr>
<td>ENG 102</td>
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<tr>
<td>CHM 122</td>
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Third Quarter

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<th>Course</th>
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<tbody>
<tr>
<td>PHY 250/255</td>
<td>6</td>
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<tr>
<td>EGR 153</td>
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</table>

Sophomore Year

Fourth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 251/256</td>
<td>5</td>
</tr>
<tr>
<td>ME 212</td>
<td>4</td>
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</table>

Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 252/257</td>
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</tr>
<tr>
<td>MTH 233</td>
<td>5</td>
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Sixth Quarter

<table>
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<th>Course</th>
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<tr>
<td>ME 313</td>
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<tr>
<td>ME 370</td>
<td>4</td>
</tr>
<tr>
<td>MTH 253</td>
<td>3</td>
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</table>

Junior Year

Seventh Quarter

<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>EE 301</td>
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<tr>
<td>CS 316</td>
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Eighth Quarter

<table>
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<tbody>
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<tr>
<td>ME 408</td>
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</tr>
<tr>
<td>EE 321</td>
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Ninth Quarter

<table>
<thead>
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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ME 317</td>
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</tr>
<tr>
<td>ME 360</td>
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</tbody>
</table>

Materials Science and Engineering

Materials science and engineering is increasingly recognized as a key engineering discipline which enables new developments in advanced technology. Over the past several decades, scientists and engineers have successfully developed radically new materials. Lightweight alloys for structural use, composites of high-strength fibers in ductile matrices, semiconductors for electronic devices, and, most recently, high-temperature semiconductors are prominent examples. These advances typify the challenge faced by materials engineers—to select, modify, or develop the right materials for new applications and technologies.

Materials science and engineering has evolved over the last fifteen years from metallurgical engineering, polymer chemistry, and ceramic science. With the increased importance of materials technology, materials science and engineering provides an outstanding career opportunity.

The B.S.M.S.E. curriculum includes basic requirements in mathematics, laboratory science, computer programming, English, social sciences and humanities, as well as advanced course work in engineering mechanics, materials science, ceramics, metallurgy, polymer science, electric circuits, materials testing, processing, and design. Most required courses are offered late in the day for the convenience of both day and evening students.
Degree Requirements—Materials Science and Engineering

Bachelor of Science in Materials Science and Engineering Degree

General Education Requirements 68

Required substitutions:
- MTH 229, 230
- PHY 250/255, 251/256, 252/257

Engineering Requirements 80

EGR 153 4
EE 301, 302 5
ME 202, 212, 213, 313, 315 20
ME 370, 371, 375, 376, 385, 386 17
ME 470, 477, 479, 482, 483, 492 (8 credit hours) 26
ME 485, 486, 487, 488, 489 (select any two) 8

Required Course Requirements 36

CHM 121, 122 10
MTH 229, 232, 233, 253 18
CHM 361, 465, 467 8

Technical Electives 21

Includes 15 credit hours to be selected from an approved list.

Total 205

Sample

Materials Science and Engineering

Freshman Year

First Quarter 17
- ENG 101 4
- CHM 121 5
- HST 101 3
- MTH 229 5

Second Quarter 17
- ENG 102 4
- CHM 122 5
- HST 102 3
- MTH 230 5

Third Quarter 18
- PHY 250/255 6
- EGR 153 4
- HST 103 3
- MTH 231 5

Sophomore Year

Fourth Quarter 18
- PHY 251/256 5
- ME 212 4
- MTH 232 5

Fifth Quarter 17
- PHY 252/257 4
- ME 213 5
- Great Books* 3

Sixth Quarter 18
- ME 313 4
- ME 370 4
- MTH 253 3
- Fine Arts* 3
- PSY 106 4

Junior Year

Seventh Quarter 16
- ME 386 2
- CHM 361 4
- CST* 3

Eighth Quarter 18
- ME 375 3
- RST* 3
- ME 386 2
- SOC 200 3
- ME 470 3
- CHM 465/467 4

Ninth Quarter 18
- ME 376 3
- PLS 200 3
- ME 470 4
- MR*** 3
- EE 301 4
- EE 302 1

Senior Year

Tenth Quarter 16
- ME 477 4
- ME 482 4
- MR*** 4

Eleventh Quarter 17
- ME 483 3
- EC 200 3
- ME 492 4
- AE*** 3

Twelfth Quarter 15
- ME (processing course)** 4
- MR*** 4
- AE*** 3

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

**Processing courses include ME 485, 486, 487, 488, and 489. At least two are required.

***Materials Related (MR) and Advanced Elective (AE) courses are listed on the Materials Science and Engineering Program Guide available through the department office.
Admission and Advising

Admission Requirements

Admission to the College of Liberal Arts requires that students complete 24 credit hours with a grade point average of 2.0. As part of these 24 hours, students entering B.A. or B.S. programs must complete ENG 101, ENG 102, and HST 101 plus at least two additional General Education courses. Some departments have additional requirements for admission, and students not meeting such criteria are designated as Undecided Liberal Arts.

Transfer Credit

Credits earned in junior or community colleges will normally apply only to the requirements of the freshman and sophomore years. Students should consult their departmental adviser to see which transfer courses will apply toward specific major requirements.

Returning Students

Students who return to Wright State University after an absence of four or more quarters must reapply for admission and satisfy the same admission requirements as the previously listed criteria for Wright State students. Those students who return after eight or more quarters will have to complete the program requirements that are current at the time of their readmission to the college.
Advising

The liberal arts advising office advises all undecided majors in liberal arts. The office sends out checklists covering university and college requirements to all new students in the college and to seniors at the appropriate time. Students who have declared a major in one of the liberal arts disciplines are assigned an academic adviser in that discipline. Students are encouraged to consult with departmental advisers for their major and with the advising office for their college and university requirements.

Degrees and Areas of Study

General Requirements

To be eligible for a degree from the College of Liberal Arts, students must:
1. fulfill the university General Education requirements.
2. complete the residency requirement of 45 credit hours at Wright State. At least fifteen of the last 45 hours for the degree must be taken in residence.
3. complete at least 192 credit hours with at least a 2.0 cumulative average. No more than 8 hours of physical education courses will apply toward the degree.
4. complete at least 100 credit hours of work within the college.
5. complete at least 60 credit hours in upper division courses (those numbered 300 and above). At least 30 of these credit hours must be taken at Wright State.

The Bachelor of Arts Degree

Successful study for the Bachelor of Arts degree includes the development of basic skills as well as a general introduction to issues of the culture. The degree provides career opportunities in such areas as communication, foreign service, government, journalism, teaching, and social work, and prepares students for professional or graduate study in law, medicine, and business.

In addition to requirements of the major, composed of a departmental unit in courses taken in one or more departments, the Bachelor of Arts degree includes completion of the foreign language or research methods requirement. Except in unusual circumstances students are limited to 68 hours in the major department; exceptions must have prior approval of the dean of the college. To satisfy the foreign language requirement, students must demonstrate proficiency at the 202 level in a foreign language either by satisfactorily completing course work or by examination. Students who wish to fulfill the college language requirement in French, German, Spanish, or Russian by proficiency testing should consult the Department of Modern Languages; students who wish to fulfill the requirement in Greek or Latin should consult the Department of Classics. Other languages are acceptable, subject to approval by the Department of Modern Languages and students’ major department. In continuing a language begun elsewhere, students are placed at an appropriate level. For details on proficiency and placement testing, see guidelines under the Department of Modern Languages or (for Latin or Greek) consult the Department of Classics. Students who select the research methods option must complete 21 to 24 credit hours, approved by their major department, distributed as follows: computer science (two courses); philosophy (two courses); statistics and methodology (two courses). These students should check with the department or the advising office for further details. One or the other requirement must be satisfied in its entirety; they may not be mixed.

Bachelor of Fine Arts, Bachelor of Science, and Bachelor of Music Degrees

Bachelor of Fine Arts

The curricula for the B.F.A. degree provide more specialized training than that offered in the B.A. programs. The Bachelor of Fine Arts programs in art and in theatre arts are preprofessional programs with intensive concentrations in the departmental major and related concentrations in the creative arts.

Bachelor of Science

Curricula for the Bachelor of Science degree are offered in geography and urban affairs. Those programs should be planned in close consultation with advisers in these areas. The B.S. degree attempts to achieve a different focus, especially in the areas of computer programming, mathematics, and statistics, and to meet needs not currently serviced by the B.A. degree.

Bachelor of Music

This degree is designed for students who are seeking a professional career in music. Consequently, the B.Mus. major is a more concentrated, more highly structured program than the program for the B.A. The Bachelor of Music degree is offered with majors in performance, music education, music theory, composition, and music history and literature.

Interdisciplinary Study

Interdisciplinary majors within the College of Liberal Arts are offered in international studies, selected studies, and urban affairs. Interdisciplinary course work, offered jointly by participating departments within the college or with departments in other colleges, is available in
the Departments of Art and Art History, Classics, Communication, English, Geography, History, Philosophy, Political Science, Religion, Sociology and Anthropology, and Urban Affairs. See individual programs and course listings.

Minors within the Liberal Arts

An official designated minor program within the college is a structured and coherent secondary concentration of study. It is intended to allow undergraduates the option of presenting a second field of specialization in addition to a major as part of their permanent record at the university. The minor consists of about 30 credit hours and must have a balance of lower and upper division courses. Further details can be obtained from the department concerned or the college advising office. Minors are offered in African and African-American studies, anthropology, classical humanities, communication, English, French, geography, German, history, music, political science, religion, sociology, and Spanish.

Combined Liberal Arts/Business Program

While working on the satisfactory completion of a baccalaureate degree program in the College of Liberal Arts, students can use free elective credits to take a professional core of business courses to earn a minor in business and satisfy most of the course prerequisites for the Master of Business Administration program. Students with an adequate Admission Index can then earn an M.B.A. degree from the College of Business and Administration with an additional (fifth) year of successful full-time study. Contact the liberal arts advising office for details.

Health Sciences Minor

Degree requirements in the College of Liberal Arts permit students to complete both the core of premedical science requirements and a major of their choice. Majors in liberal arts is an excellent way to help develop the broad range of intellectual and intuitive skills that make successful physicians. For a sample four-year curriculum, contact the liberal arts advising office.

Honors at Graduation

Honors are awarded at graduation to students in recognition of the superior quality of their work. Currently, departmental honors programs are available in anthropology, art history, classics, communication, English, geography, history, modern languages, motion pictures, music, philosophy, political science, religion, selected studies, social work, and sociology. Students interested in pursuing an honors program as prescribed by one of these departments should consult with the chair of the appropriate department.

Cooperative Education Program

A number of departments in the College of Liberal Arts offer an optional cooperative education program for academic credit. (See the Liberal Arts listing in the course descriptions section.) Cooperative education is a plan which combines academic study with related work experience. As a result, participation in cooperative education provides students with an opportunity to apply classroom learning and interest to practical work settings while exploring potential career fields.

A maximum of 16 quarter hours of cooperative education credits can be counted toward graduation requirements as elective hours. For more information, see the specific Liberal Arts department programs and contact the Liberal Arts cooperative education coordinator in the Cooperative Education office.

Teacher Certification

The Bachelor of Arts degree with Ohio teacher certification is offered in art, English, and history for students who meet the requirements of the College of Liberal Arts and the College of Education and Human Services. Certification in speech and theatre education is available to students who combine it with English as a second teaching field. French, German, Latin, and Spanish may be elected as second teaching fields only. These candidates are counseled in their academic programs by faculty advisers in the College of Liberal Arts and in their choice and fulfillment of professional education requirements by advisers in the College of Education and Human Services. Prospective teachers who wish to pursue the Bachelor of Science in Education degree with a major in one of the liberal arts disciplines should register in one of the teacher education curricula in the College of Education and Human Services and indicate their choice of teaching fields. See individual programs under College of Education and Human Services.

Anthropology

See Sociology and Anthropology
Art and Art History

Professors Cantelupe (University, Emeritus), Macaulay
Associate Professors Fitch, Geibert, Kiser, Koerlin, Leach, McDowell (chair), Must, Nathanson
Assistant Professor Caron

The Department of Art and Art History offers programs leading to the Bachelor of Arts and the Bachelor of Fine Arts degrees, with areas of concentration in art history, drawing, painting, photography, printmaking, and sculpture; and with course sequences in visual communications and museology/gallery management. The B.A. degree is designed for those students who wish to combine a liberal education with specific studies in art. The B.F.A. degree is designed for students who want to pursue a more intense professional studio program in art.

Because self-expression and self-learning are ultimate goals of the program, students are largely responsible for determining the options which best meet individual needs and interests.

In the studio area, studies begin with introductory courses in drawing, sculpture, and photography. These courses are designed for the beginning artist and will direct and accelerate development in the visual arts. One resource which students bring to the program is their personal sensibility and understanding. The program aids in expanding and expressing these qualities by exploring the essential processes and language basic to all visual arts. Rather than following a system or structure of independent courses in a given dimension, medium, or discipline, issues and ideas are investigated in a variety of visual modes.

B.F.A. students are required to have their work reviewed by the entire staff. The B.F.A. review is normally conducted when students have completed between 40 and 60 credit hours in the department. Those who wish to become B.F.A. candidates must petition the faculty at the time of their review. The department will notify those students in writing of its decision. Students who do not meet the basic proficiency standards of the department during their first review may petition to have a second review of their work prior to the completion of eighty-four credits in art. All candidates for the B.F.A. degree must be represented in the senior exhibition.

First-year students are required to submit examples of their work only if they are seeking advanced placement; otherwise, all first-year students in art are admitted to the general curriculum.

Candidates for a degree in art may prepare for graduate study, careers in teaching, or the professional practice of art. Candidates for the B.A. or B.F.A. with teaching certification must complete specific requirements as outlined by the laws and regulations governing Ohio teachers' education and certification. 

Art History Honors Program

The honors program of the Department of Art and Art History is designed to give students who have demonstrated outstanding academic ability and superior accomplishments in art history the opportunity to complete a program which will encourage and recognize their distinguished efforts. Such students may earn an honors degree by completing the departmental major requirements, by maintaining a high academic record, and by successfully completing a senior honors project.

Information regarding eligibility, application procedures, and specific requirements may be obtained from the Department of Art and Art History office. Students are usually admitted to the program during the fourth quarter prior to graduation.

Degree Requirements—Art

Bachelor of Fine Arts Degree

General Education Requirements 57
Departmental Requirements* 122
Nondepartmental Electives 13
Total 192

* B.F.A. degree students should enroll in two studio courses each quarter.

B.F.A. Review Minimum Requirements

Total 40

Degree Requirements—Art

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements

Foreign Language or Research Methods Requirement 20–24
Nondepartmental Electives 43–47

Total 192

Degree Requirements—Art History

After completion of seven art history courses and prior to graduation, art history majors are required to participate in a writing workshop conducted by art history faculty members. The workshop may require expansion or further investigation of a paper submitted for a completed 400-level course.
Bachelor of Arts Degree

General Education Requirements 57
Departmental Requirements 68
Foreign Language Requirement 20
Nondepartmental Electives 47
Total 192

Degree Requirements—Art History/Art Studio

Bachelor of Arts Degree

General Education Requirements 57
Departmental Requirements 88
One course each from five of the following art history areas: American, ancient-classical, medieval, Renaissance, Baroque, nineteenth-century, twentieth-century, or non-Western 20
Two courses each from four of the following studio areas: drawing, painting (see prerequisites), photography, printmaking (see prerequisites), or sculpture 32
Art History Writing Workshop
Foreign Language Requirement 20
Nondepartmental Electives 47
Total 212

Sample

Art and Art History
(Bachelor of Fine Arts)

Freshman Year
First Quarter 15
ENG 101 4 HST 101 3
ART 206 4 ART 208 4
Second Quarter 15
ENG 102 4 HST 102 3
ART 207 4 ART 228 4
Third Quarter 14
MTH 105 3 HST 103 3
ART 278 4 ART 258 4

Sophomore Year
Fourth Quarter 19
ART 211 4 ART 209 4
Science 1* 4 ART 347 4
Great Books* 3

Fifth Quarter 16
ART 212 4 ART 369 4
Science 1* 4 ART 348 4
Sixth Quarter 19
ART 213 4 ART 367 4
Science 1* 4 ART 349 4
Fine Arts* 3

Junior Year
Seventh Quarter 15
CST* 3 ART Concentration 4
ART History 4 ART Elective 4
Eighth Quarter 18
SOC 200 3 ART Elective 4
RST* 3 ART Concentration 4
PSY 105 4
Ninth Quarter 14
PLS 200 3 ART Concentration 4
Elective 3 ART Elective 4

Senior Year
Tenth Quarter 16
HPR 100 2 ART Elective 4
ART History 4 ART Concentration 4
ART 400 2
Eleventh Quarter 17
HPR 100 2 ART Elective 4
ART History 4 ART Concentration 4
Elective 3
Twelfth Quarter 14
EC 200 3 ART Concentration 4
Elective 3 ART Elective 4

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

Classics

Associate Professors Gabbert (chair), C. King, W. King

The Department of Classics offers majors leading to the Bachelor of Arts degree in classical humanities and in classical languages (Greek or Latin).

The study of the classics is concerned with the examination of the civilizations of Greece and Rome. It is the oldest area-study and students must range through the disciplines of language and literature, art, archaeology, and history to appreciate fully the contributions of Greece and Rome to western civilization.

Requirements for the major in classical humanities are quite flexible, but it is advisable for students to consult the Department of Classics in order to ensure a well-rounded and representative curriculum. An inflexible requirement is study of
Latin or Greek on the college level; the classical humanities major must complete at least 24 hours of language study and attain proficiency in at least one of the languages beyond the 202 level. Students may also major in either Greek or Latin; students will be expected to develop some facility in the nonmajor language.

The major in classical humanities is a useful major for those who have not decided upon a specific vocation and who are interested in the humanities. A bachelor’s degree in classical humanities is suitable for students who plan to terminate their formal education at the undergraduate level. The major in one of the classical languages is more suitable for students who wish to continue their studies on the graduate level; the areas of ancient history and classical archaeology as well as classics are open to them. Students who major in either classical humanities or classical languages will find the bachelor’s degree useful in any position for which a liberal arts degree is appropriate.

Early consultation with the Department of Classics is important for students who wish to teach Latin or Greek in secondary schools. They will also need to consult the College of Education and Human Services for professional certification requirements.

**Classics Honors Program**

Superior students may, upon application to the Department of Classics, participate in the departmental honors program. They should have a grade point average of 3.5 in classics and 3.0 overall and should have completed a substantial portion (27 to 30 hours) of the major requirements. For further details, consult the department.

**Degree Requirements—Classical Humanities**

**Bachelor of Arts Degree**

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departmental Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Electives and Related Courses</td>
<td>78</td>
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<td><strong>Total</strong></td>
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</table>

**Degree Requirements—Greek**

**Bachelor of Arts Degree**

<table>
<thead>
<tr>
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<tr>
<td>Departmental Requirements</td>
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</tr>
<tr>
<td>Electives and Related Courses</td>
<td>78</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
</tr>
</tbody>
</table>

**Degree Requirements—Latin**

**Bachelor of Arts Degree**

<table>
<thead>
<tr>
<th>General Education Requirements</th>
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</thead>
<tbody>
<tr>
<td>Departmental Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Electives and Related Courses</td>
<td>78</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
</tr>
</tbody>
</table>

**Minor in Classical Humanities**

The department also offers a minor in classical humanities, which is an appropriate second field for many students, such as a major in religion who is curious about the world in which Christianity grew and flourished, majors in history, anthropology, or art history who are interested in ancient culture, or majors in such fields as modern languages, English, communication, computer science, philosophy, and mathematics who are concerned with linguistic precision, literary genius, and logical thought. The minor requires a total of 32 hours, with a minimum of twelve hours in the Greek or Latin language, and a minimum of 16 hours in classical humanities courses, 8 of which must be at or above the 300 level.

**Sample**

**Classical Humanities**

**Freshman Year**

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>Science I*</td>
<td>4</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>15</td>
</tr>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>Science II*</td>
<td>4</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>14</td>
</tr>
<tr>
<td>MTH 105</td>
<td>4</td>
</tr>
<tr>
<td>Science III*</td>
<td>4</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAT 103</td>
<td>4</td>
</tr>
<tr>
<td>CST*</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>17</td>
</tr>
<tr>
<td>LAT 201</td>
<td>4</td>
</tr>
<tr>
<td>Fine Arts*</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>17</td>
</tr>
<tr>
<td>LAT 202</td>
<td>4</td>
</tr>
<tr>
<td>RST*</td>
<td>3</td>
</tr>
</tbody>
</table>

Continued on next page
Communication

Professors Byrum, Pruett, Rickert, Sayer (chair), Shupe
Associate Professors DeStephen, Eakins, Fetzer, Hanks
Assistant Professors John, Krischak (WSU Lake Campus), Ruminski, Spicer
Instructor Much

Study in the Department of Communication provides a comprehensive understanding of communication. Specifically, students develop skills to communicate effectively in interpersonal, group, and organizational settings.

The Bachelor of Arts in communication is desirable for persons planning a communication-related career and/or individuals interested in personal development. Therefore, the department offers major programs of study in mass communication, organizational communication, and communication studies. Study in organizational communication is appropriate for students seeking careers in public relations, training and development, or other organizational communication specialties. Study in mass communication is appropriate for students interested in journalism or media management and production. The communication studies program allows students to select courses from all of the major areas of the department to meet specific needs.

The Department of Communication, in conjunction with the Department of Sociology and Anthropology, also offers a Bachelor of Arts in social and industrial communication. This degree is designed to provide an understanding of social and communication variables affecting organizational productivity.

The communication major can expect to be involved in both theoretical and practical courses of study, and to understand communication from both the traditional and experiential points of view. Because of this interrelationship between theory and practice, students are advised to take advantage of the communication activities associated with the department, college, and university. Such activities include intercollegiate forensics and debate, cable television, WWSU-FM radio station, The Daily Guardian, the Public Relations Club, communication assignments through the College of Liberal Arts cooperative education program, and involvement in Dayton area professional organizations.

Communication Honors Program

The honors program of the Department of Communication provides opportunities for advanced study to outstanding students. The program is intended as an enrichment for the existing program rather than as an alternative. The immediate goals for which individual student programs are constructed include: (1) developing abilities in conceptualization, research, and analysis, and (2) pursuing one or more selected areas of interest in the field of communication studies.

Entrance to the program requires students to have completed 40 credit hours in communication. In addition, students must have a grade point average of 3.5 in the major and 3.0 overall. Departmental honors will be awarded upon the completion of the required number of hours necessary for a major in communication and must include at least 12 credit hours in approved communication honors courses. Students must also complete a departmental honors project and maintain a 3.0 cumulative grade point average and 3.5 grade point average in communication courses during the quarters in which they are members of the honors program.

It is highly recommended that students participate in the University Honors Program, taking courses deemed relevant by the students and the adviser.

Cooperative Education Program

Cooperative education experience is available to qualified communication majors in both the public and private sectors. Cooperative job opportunities exist in the areas of mass communication, interpersonal and organizational communication, and public communication. Cooperative education offers students a means of partially financing their education while gaining career-oriented experiences. Students interested in cooperative education opportunities should contact the chair of the department.
**Degree Requirements—Communication**

**Bachelor of Arts Degree**

The major in communication is for students interested in personal development and/or a career in education, industry, or government.

Communication majors are expected to achieve basic proficiency in communication skills and to master the essentials of communication theory. All communication majors must take 18 hours of required courses, as well as a minimum of 46 additional hours in communication. All communication majors are encouraged to participate in communication activities outside the university.

Communication majors may qualify for state certification at the secondary level by taking the required professional courses in the College of Education and Human Services.

To be admitted as majors, students must have at least a 2.5 grade point average.

**General Education Requirements** 57

**Departmental Requirements** 55

**Foreign Language or Research Methods Requirement** 20–24

**Electives** 47–51

**Total** 192

**Communications Major Curricula**

**Communication Studies**

The aim of the communication studies major is the development of broadly trained students in the liberal arts. Students are encouraged to develop abilities as effective communicators and as informed critical receivers. The communication studies major permits students maximum freedom of choice in designing their programs of study and areas of specialization.

**Communication Studies Major Requirements** 40

**Mass Communication**

The mass communication major is intended to provide students with an understanding of the workings of the mass media and the impact of mass communication on today's world.

**Mass Communication Major Requirements** 40

**Organizational Communication**

The organizational communication major is intended to provide students with knowledge, skills, attitudes, and values that permit them to understand the impact of communication, messages, and structures on organizational growth and development.

**Organizational Communication Major Requirements** 40

**Minor in Communication**

The communication minor is appropriate for students who want additional skill development in communication or for whom theoretical understanding of communication processes will serve as a useful adjunct to a major program of study. Students in business, computer science, education, and nursing, in addition to students majoring in other areas of the liberal arts, may find the minor in communication enhances them both professionally and personally.

**Minor in Communication Requirements** 36

---

**Sample Communication**

**Freshman Year**

**First Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>MTH 105**</td>
<td>3</td>
</tr>
<tr>
<td>COM 101</td>
<td>3</td>
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</table>

**Second Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>CST*</td>
<td>3</td>
</tr>
<tr>
<td>COM 102</td>
<td>3</td>
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**Third Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Books*</td>
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</tr>
<tr>
<td>COM 141</td>
<td>3</td>
</tr>
<tr>
<td>COM 152</td>
<td>3</td>
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**Sophomore Year**

**Fourth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 200</td>
<td>3</td>
</tr>
<tr>
<td>PSY 105</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fifth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 200</td>
<td>3</td>
</tr>
<tr>
<td>RST*</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Sixth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 443</td>
<td>4</td>
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<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td>EG 200</td>
<td>3</td>
</tr>
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</table>

**Junior Year**

**Seventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language/RM0**</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total** 192
Dance
See Theatre Arts

Economics

Professors Blair, Fichtenbaum, Kumar, Premus, Renas, Sav (chair), Swaney, Treacy
Associate Professors Dung, Gyimah-Brempong
Assistant Professors Olson, Traynor
Instructors Clayton, Endres, Staley, Sylvester (director, M.S. program)

The dimensions of economics range from the practical concerns of how a business firm strives for efficiency to the visionary questions concerning limits imposed by the laws of nature on the earth's population and natural resources. Economics focuses on humanity's efforts to improve its welfare, by understanding individual decision making in the face of relative scarcity and by studying the complex relationships between the production, consumption, and distribution of material goods within systems of markets, governments, and supranational institutions.

Students of economics develop the ability to reason logically, integrate broad perspectives, measure empirically, manipulate in the abstract, and imagine grandly. These skills and talents serve well in preparing students for careers in business, law, and government. Graduates of our program are business executives, bankers, attorneys, judges, professors, and hold positions employed as professional economists in such diverse areas as urban economics, manpower and training analysis, business forecasting, school finance consulting, health and delivery systems evaluation, budget analysis, marketing consulting, government planning, and statistical analysis. Some of our graduates continue their education in our master's program in social and applied economics.

The program outlined below is designed to give our students both the background that will broaden and maintain their future options and the specific skills necessary to use and apply economic ideas. This includes the ability of students to effectively express economic ideas in a clear, concise, and grammatically correct manner. To build upon and enhance writing skills, students are required to complete 12 hours of writing intensive courses as designated in the program by EC 315, 316, and 317.

Departmental undergraduate advisers are available to students who may need advice about formulating and attaining career goals, as well as making decisions concerning elective courses.

Candidates for a Bachelor of Arts degree with a major in economics are required to take a minimum of 42 credit hours in the Department of Economics. Basic courses are supplemented by economics electives.

Degree Requirements—Economics

Bachelor of Arts Degree

General Education Requirements 63
Departmental Requirements 33
Related Requirements 29
Foreign Language or Research Methods Requirement 11–20
Electives 47–56
Total (minimum requirement) 192
The English major provides a balanced program of introductory and advanced work in English and American literature, world literature in English, English language and linguistics, and writing. The program offers students the chance to engage in a major humanistic discipline, the study of literature, which is challenging and enriching in itself. The English major also provides sound professional training for those interested in high school or college teaching, the teaching of English as a second language, business or technical writing, or graduate work. And the program is an excellent background for students entering professional schools or planning business careers.

The English major offers three concentrations (specified below), which have been designed to meet the needs of students with a general interest in literature and with a special creative or professional interest in writing. Students seeking a strong background in literature, history, theory, and analysis should take the general concentration in English, which combines the historical and critical study of literature with innovative approaches to critical methods, women's studies, nontraditional literatures, and non-Western literature in English. The concentration in English with an emphasis on creative writing offers students a full series of introductory and advanced creative writing courses. Finally, the concentration in English with an emphasis on professional writing gives interested students a strong combination of literature and professional writing instruction, including course work in business and technical writing, and journalism.

In choosing electives, students should try to select, in consultation with the departmental adviser, courses that complement their major interest and form a coherent unit of study, or courses that provide an appropriate career-oriented concentration. English majors must also satisfy a foreign language or research methods requirement by completing the second-year course (202) in a foreign language, by passing a proficiency examination, or by taking courses chosen from the research methods core.
# Degree Requirements—English

## Bachelor of Arts Degree
### General Concentration in English

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>57</td>
</tr>
<tr>
<td>English Major Requirements</td>
<td>56</td>
</tr>
<tr>
<td>Foreign Language or Research Methods Requirement</td>
<td>20–24</td>
</tr>
<tr>
<td>Electives</td>
<td>55–59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
</tr>
</tbody>
</table>

## Concentration in English with an Emphasis on Creative Writing

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>57</td>
</tr>
<tr>
<td>English Core Requirements</td>
<td>32</td>
</tr>
<tr>
<td>ENG 351, 352, 353, or 354 (one course); ENG 355, 356, 357 (one course); and one other course from the ENG 351 through 357 group</td>
<td>12</td>
</tr>
<tr>
<td>Creative Writing Requirement</td>
<td>24</td>
</tr>
<tr>
<td>Foreign Language or Research Methods Requirement</td>
<td>20–24</td>
</tr>
<tr>
<td>Electives</td>
<td>55–59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
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</tbody>
</table>

## Concentration in English with an Emphasis on Professional Writing

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>57</td>
</tr>
<tr>
<td>English Core Requirements</td>
<td>32</td>
</tr>
<tr>
<td>ENG 351, 352, 353, or 354 (one course); ENG 355, 356, 357 (one course); and one other course from the ENG 351 through 357 group</td>
<td>12</td>
</tr>
<tr>
<td>Professional Writing Requirements</td>
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<tr>
<td>Any two of the following:</td>
<td></td>
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<tr>
<td>ENG 330, 333, 343, 344</td>
<td>7–8</td>
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<tr>
<td>Three or four courses from the following:</td>
<td>12</td>
</tr>
<tr>
<td>ENG 347, 364, 400, 402, 405, 454, 458, 495</td>
<td>12</td>
</tr>
<tr>
<td>One more course from among those listed immediately above</td>
<td>4</td>
</tr>
<tr>
<td>Foreign Language or Research Methods Requirement</td>
<td>20–24</td>
</tr>
<tr>
<td>Electives</td>
<td>55–59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
</tr>
</tbody>
</table>

## English Honors Program

The honors program in English is designed to encourage and recognize superior academic accomplishments by undergraduate English majors. With the approval of the chair of the English department and the departmental honors adviser, students who meet the standards of eligibility may enter the English honors program before the beginning of the senior year. Students may be admitted to the program on the recommendation of any member of the English department faculty, or students may petition to enter the program. Under the direction of a faculty tutor, students in the honors program will complete an honors project which will culminate in the writing of an honors thesis or project report. For further information on eligibility and enrollment, consult the departmental honors adviser.
Certificate Program in Professional Writing
A certificate in professional writing is available to all students who successfully complete six courses from a list of approved writing courses (21–23 hours total). The certificate program can be taken as a supplement to any of the three English concentrations or to any other major. The courses in the program prepare students for careers as writers in business and related fields, as journalists, and as editors. Please contact the departmental adviser or the director of writing programs for further information.

Certificate Program in Technical Writing
A certificate in technical writing is available for students with a strong scientific or technical background who wish to learn and practice the writing skills that business and science demand today. Students must complete five courses and an internship, and may take the program as a supplement to any major. Please contact the departmental adviser or the director of writing programs for further information.

Certificate Program in TESOL
A certificate program in Teaching English to Speakers of Other Languages is offered by the English department in cooperation with the College of Education and Human Services. Five courses and a practicum provide the requisite knowledge of linguistics and TESOL theory and methods. Please contact the departmental adviser or the director of TESOL/ESL for further information.

Validation in TESOL K–12
A validation in TESOL K–12, in conjunction with an Ohio teaching certificate, enables the recipient to teach English as a second language in the Ohio public schools. Undergraduates may take courses for the validation while they are completing their courses for certification. Students who have completed requirements for certification may add the validation on at a later time.

Validation in TESOL K–12 31–32

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 478</td>
<td>4</td>
</tr>
<tr>
<td>ENG 480 (three courses under this number)</td>
<td>12</td>
</tr>
<tr>
<td>ED 420 (two courses under this number)</td>
<td>8</td>
</tr>
<tr>
<td>ED 458</td>
<td>4</td>
</tr>
<tr>
<td>One of the following courses: CST 230, ENG 490, ATH 240</td>
<td>3–4</td>
</tr>
</tbody>
</table>

English with Certification
Candidates for certification in high school and junior high school English may earn a Bachelor of Arts degree by completing the language or research methods requirement and by distributing their English courses as outlined below in the program of study for English with certification. In addition, B.A. with certification students must take the professional education courses prescribed by the College of Education and Human Services. Early in their program, all English majors seeking certification should review their programs with a teacher certification adviser in the College of Education and Human Services to ensure fulfillment of the necessary requirements for certification.

Degree Requirements—English with Certification
Bachelor of Arts Degree

| General Education Requirements | 57 |
| English Major Requirements | 55–56 |
| ENG 203, 204, or 490, or CST 230 | 3–4 |
| ENG 255 | 4 |
| ENG 341 | 4 |
| ENG 478 or 479 | 4 |
| ENG 351 or 352; 353 or 354; 355, 356, or 357, and one other course from 351 through 357 | 16 |
| Four of the following courses, each from a different category: ENG 410, 420, 430, 440, 450, 460, 470, 490 | 16 |
| An elective in literature at the 300 or 400 level | 4 |
| An elective in composition or linguistics | 4 |
| Professional Education Requirements | 49–51 |
| Phase I | 12 |
| ED 214, 216, 218, 220, 221, 222, 223 | 12 |
| Phase II | 15 |
| ED 302, 321, 322, 323, 327, 423, 432, 464 | 15 |
| LCS 280 | 3 |
| COM 101 | 3 |
| Phase III | 16–18 |
| ED 429, 422, 440 | 16–18 |
| Foreign Language or Research Methods Requirement | 20–24 |
| Electives | 4–11 |
| Recommended: HST 321, 322; or HST 475, 480 |

Total (minimum requirement) 192
Minor in English

The minor in English is designed for students who wish to take a coherent body of courses in English and American literature. The minor combines core courses in literary history and methodology with a selection of advanced studies. Students interested in the minor should consult with the departmental adviser to determine the best courses for their needs.

Requirements 36

ENG 255, 256 8
ENG 351, 352, 353, or 354 (one course) 8
ENG 355, 356, or 357 (one course) and one other course from the ENG 351 through 357 group 12
Two of the following courses: 8
ENG 410, 420, 430, 440, 450, 460, 470, 490
Two additional 300- and/or 400-level courses
Depending on their interests or plans, geography majors must select a program of courses leading to a Bachelor of Arts degree or Bachelor of Science degree.

The Bachelor of Arts degree in geography fosters an understanding of the processes of formation and the characteristics of a landscape. A broad spectrum of courses in geography and related fields helps students delineate, by data collection and analysis, the processes which create a landscape. Students select an area of study from physical geography, resource analysis and management, or economic geography. Study of a foreign language is part of this degree program.

The objective of the program of courses leading to a Bachelor of Science degree in geography is to develop competence in the area of technical skills and logic in accordance with the change in emphasis to a more spatial-behavioral orientation. Competence in technical skills and logic is critical as more geography majors seek employment in government and business. However, an understanding of the traditional geographic perspective is an important part of the education of a geographer. To achieve these goals, courses in physical, economic, and social geography; and cartography, photogrammetry, and remote sensing are emphasized in the program. These courses are complemented by courses in mathematics, philosophy, and computer science.

Geography may be selected as an academic major or as a secondary teaching major in social science, as part of an earth science program, or as part of an elementary teaching major. Geography courses may satisfy both General Education requirements and advanced course electives in many programs. Students majoring in geography may qualify for certification at the secondary level by meeting the minimum requirements in professional education courses essential to certification by the state of Ohio. Students interested in this option should consult a records analyst in the College of Education and Human Services for information concerning minimum requirements.

Because sequential requirements and prerequisites exist in both the professional and academic components of each program from which courses are selected, students are strongly urged to consult an adviser before registering.

The department participates in the university’s dual major program. For further details, see the department chair.

Geography majors may participate in the department’s internship program. The internship is designed to provide practical experience for majors in geography as they pursue the baccalaureate. Such experience is considered beneficial for students to complement their class work and to obtain experience in the actual work environment. Students interested in the internship should contact the departmental coordinator of the program, and/or adviser.

Geography

Professors Oshiro (chair), Ray (Emeritus)
Associate Professor Clemens
Assistant Professor Wetter (WSU Lake Campus)

The Department of Geography seeks to provide students with an awareness and understanding of the spatial organization and distribution of phenomena in the physical and human world. Because of its emphasis on spatial organization and distribution, geography is an integrative discipline that has a broad interdisciplinary base ranging from the natural to behavioral science. Such topics as cartography, climatology, landform analysis, settlement theory, spatial interaction, and urban morphology indicate the breadth of contemporary geography.

The geographer must take account of historical and cultural processes including people’s diverse attitudes toward the earth and how these have changed through time. In addition, the geographer must consider economic and social processes that influence such geographical conditions as industrial location, population distribution, urban spatial structure, settlement patterns, and the use of resources. Also, the geographer must be able to employ the data of natural science, or be intimately concerned with the data of social science and the complexities of philosophy.

The undergraduate major in geography thus includes the study of cultural, economic, physical, and regional geography, as well as cartography, quantitative methods, and field work. Backgrounds in the natural and social sciences, humanities, statistical methods, and computer programming are useful to the geography major.

The geography program provides options which allow students to select a curriculum best suited to their particular interests or future plans.
Geography Honors Program

The Department of Geography encourages outstanding academic work through the honors program established for superior students who wish to work on a geographic problem of their own definition. Applicants must be majors in geography, have senior standing with 36 hours of courses in geography to their credit, and meet certain minimum grade point averages. Candidates are required to complete an honors project under the direction of a member of the geography faculty. Successful completion of the project, including written and oral project reports, carries four academic credits and entitles students to graduate with formal recognition of honors in geography. Geography honors students are encouraged to participate in the University Honors Program. Interested students should contact the departmental coordinator of the program.

Cooperative Education Program

Cooperative education experience is also available to qualified geography majors beginning in their sophomore year in both the public and private sectors. Cooperative job opportunities exist in the areas of cartography, meteorology, remote sensing, and geographic information systems. Cooperative education offers students a means of partially financing their education while gaining career-oriented experiences.

Students interested in cooperative education opportunities should contact the departmental coordinator of the program, and/or adviser.

Certificate Program

A certificate program in cartography, photogrammetry, and remote sensing is offered by the Department of Geography, providing extended training for those desiring to complement a major field of study with such skills. Included is a group of five courses allowing participants to become aware of the latest developments in data collection and analysis techniques, aerial and space cameras and sensors, photographic materials and reproduction processes, and mapping procedures, including computer mapping. Upon completion of these courses, each participant must present a portfolio of materials for faculty review and complete an oral review of his or her work with the faculty.

Students interested in the certificate program should contact the department chair.

Degree Requirements—Geography

Bachelor of Arts Degree

General Education Requirements 57

Departmental Core Requirements 26

GEO 201, 202, 203 9
GEO 365, 385 10
GEO 486 Foundations of Geography 3
One course in regional geography 4

Departmental Major Requirements 32–33

GEO 322, 330, 361 12
GEO 340, 353, 375 12
Additional appropriate geography courses numbered 300 or above to suit particular interests or future plans of the student 8–9

Related Course Requirements 24

Approved courses numbered 200 and above (not to exceed four courses in one department) in biological sciences, computer science, economics, engineering, geological sciences, history, mathematics, philosophy, physics, and political science

Foreign Language or Research Methods Requirement 20–23

Electives 29–33

Should be selected in consultation with the departmental adviser to complement and support the student’s area of interest.

Total 192

Degree Requirements—Geography

Bachelor of Science Degree

General Education Requirements 57

Departmental Core Requirements 26

GEO 201, 202, 203 9
GEO 365, 385 10
GEO 486 3
One course in regional geography 4

Departmental Major Requirements 36–37

Physical Component

Three of the following:
GEO 322, 330, 331, 432 12

Economic-Social Component

Three of the following:
GEO 302, 340, 353, 375, 455 12

Skills Component

Three of the following:
GEO 361, 362, 445, 446, 447, 463 12–13

Related Course Requirements 28–29

Mathematics and Statistics

STT 164/165, 265/266 13
MTH 228

Philosophy

Two of the following:
PHL 215, 471, 472 8
## Computer Science

Two of the following:
- CS 141, 142, 205, 300

## Liberal Arts

Electorives: 42-43

Should be selected in consultation with the departmental adviser to complement and support the area of concentration.

**Total:** 192

---

### Sample

#### Geography

(Bachelor of Science)

**Freshman Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>SOC 200</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>HST 101</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Science I*</td>
<td>4</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PLS 200</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COM 101</td>
<td>3</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>MTH 126</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>EC 200</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MTH 105</td>
<td>3</td>
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**Sophomore Year**

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<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
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</thead>
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<tr>
<td></td>
<td>CST 220</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEO 201</td>
<td>3</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>ART 214</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CRS 150</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEO 202</td>
<td>3</td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>PSY 105</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>GEO 203</td>
<td>3</td>
</tr>
</tbody>
</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td>Seventh Quarter</td>
<td>GEO 365</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>GEO 330</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>STT 265/266</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MTH 131</td>
<td>3</td>
</tr>
<tr>
<td>Eighth Quarter</td>
<td>GEO 445</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>GEO 353</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>GEO 331</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CS 141</td>
<td>4</td>
</tr>
<tr>
<td>Ninth Quarter</td>
<td>GEO 322</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>GEO 370</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>BIO 206</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>PHL 211</td>
<td>3</td>
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</table>

**Senior Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenth Quarter</td>
<td>GEO 361</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>GEO 468</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ENG 333</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td>Eleventh Quarter</td>
<td>GEO 362</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PHL 471</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ME 201</td>
<td>2</td>
</tr>
<tr>
<td>Twelfth Quarter</td>
<td>GEO 463</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>GEO 365</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>GEO 340</td>
<td>4</td>
</tr>
</tbody>
</table>

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, and Natural Sciences (however, for this program the geology sequence is preferred). The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

## History

**Professors** Berry, Dorn, Haas (chair), Mulhollan, Sealander, Spiegel

**Associate Professors** Arbagi, Carlson (WSU Lake Campus), Spetter, Yuan

**Assistant Professors** Green, Lockhart, Melton, Sumter, Swann, Wachtell, Workman

The undergraduate major in history enables students to gain a broad liberal arts education. In meeting the specific requirements of the major, students are encouraged to further their knowledge of the principal developments and problems of history and to enrich their understanding of historical evolution through research and writing. Through complementary elective courses in other departments, which add depth and variety, students enlarge their historical perspective. Through exposure to a broad spectrum of human experience in the past and present, students should come to an understanding of the self and of their relationship to other human beings and to the structure of society. The history major can thus be used generally by students who wish to be useful members of the community, and specifically by students who seek a career in such fields as teaching, journalism, library and archival work, government, politics, law, and business. The departmental program also provides a sound basis for students planning to pursue study at the graduate level.
Students who declare history as a major are assigned an academic adviser who will assist with academic routines, the selection of individual courses, and the development of undergraduate and postgraduate goals. Students interested in careers in law, public service, journalism, or business should consult with the adviser about departmental programs particularly geared to these fields.

Majors are expected to maintain at least a 2.0 grade point average in history for graduation.

History Honors Program

The honors program enables qualified students to carry out independent research under the guidance of a faculty sponsor. Departmental honors at graduation are awarded on the basis of students' completion of the following: at least one interdisciplinary honors seminar; History 400 (with a grade of A or B); a 3.5 average in history and a 3.0 average in overall course work; and a Bachelor of Arts degree in history. In exceptional cases, certain requirements may be waived by a vote of the departmental curriculum committee. Interested students should consult with the departmental adviser.

Cooperative Education Program

A cooperative education program is available to qualified history majors in both the private and public sectors. Cooperative education job opportunities may be arranged in government, business, industry, and a variety of private service organizations. Cooperative education offers students a means of partially financing their education while gaining a career-related experience. A limited number of elective course credits will be granted to students who satisfactorily complete their programs. Contact the department chair or undergraduate adviser for further information.

Degree Requirements—History

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements* 50

Professional courses:
- HST 300, 498 8

United States History:
- HST 211, 212 (6 hours) 22

Upper division courses (16 hours) 20

Non-American history (upper division):
- Two courses in European history (8 hours) 16
- Two courses in Third World history (8 hours) 16
- One course in area of student's choice (4 hours) 4

Related Requirements** 24

Electives 37-41

Total 192

*General Education history courses, HIST 101, 102, and 103, are not counted toward departmental requirements.

**A minimum of 12 hours must be taken in one field and all related course work must be taken in consultation with the history department's adviser. Courses taken to meet General Education requirements cannot be counted toward Related Requirements. A minor field in another department can be taken in lieu of the Related Requirements with the approval of the department's adviser.

Sample

History

Freshman Year

First Quarter
- ENG 101 4
- HST 101 3
- Language/RMO 4

Second Quarter
- ENG 102 4
- HST 102 3
- Language/RMO 4

Third Quarter
- PSY 105 4
- HST 103 3
- Language/RMO 4

Sophomore Year

Fourth Quarter
- HST 211 3
- Great Books* 3
- Language/RMO 4

Fifth Quarter
- HST 212 3
- Fine Arts* 3
- Language/RMO 4

Sixth Quarter
- HST 211, 212 (6 hours)
- Language/RMO 4

Elective 4

Junior Year

Seventh Quarter
- HST 498 4
- American History 4

Eighth Quarter
- Related Course 4
- Elective 4

Ninth Quarter
- European History 4
- American History 4

Senior Year

Tenth Quarter
- Related Course 4
- Elective 4

Eleventh Quarter
- Related Course 4

Twelfth Quarter
- Elective 4

[Sample continued on next page]
International Studies

Director Schlagheck

The international studies major is intended to offer students the opportunity to undertake serious study in international politics, culture, and society. The major combines intensive study of a foreign language with an interdisciplinary curriculum of study chosen by a student in consultation with a faculty adviser.

The Bachelor of Arts degree program in international studies consists of three parts: three years of study of one foreign language; the major core courses, which include introductory work in art history, economics, geography, political science, and religion; and work in a specialized track.

The specialized tracks in the international studies major provide five options: international diplomacy; area studies; comparative cultures; international economics; and selected studies. The international diplomacy and peace studies track includes courses in political science, communication, and history. The area studies track enables majors to focus on a global region, e.g., Africa or Latin America, and includes classes in anthropology, history, humanities, and political science. The comparative cultures track includes courses from anthropology, classics, English, history, humanities, philosophy, political science, and religion. The international economics track focuses on global economic concerns, with supporting course work in history, political science, and sociology. The selected studies track allows students to design a more specialized major (e.g., Soviet studies), subject to approval by the International Studies Committee.

Study abroad in an accredited program at a foreign university for an optional term or academic year can be arranged through the international studies director. Although this is not a requirement for an international studies degree, students will find that studying abroad in a foreign language and the exposure to a foreign culture and peoples will greatly enrich their educational experience. In order to have adequate language preparation, students interested in studying abroad should design their course of study well in advance of their trip.

Students interested in careers in government, international business, teaching, or journalism should contact the director of the international American studies major. The major program also provides sound preparation for students interested in graduate work in law, the humanities, or the social sciences.

Degree Requirements—International Studies

Bachelor of Arts Degree

General Education Requirements 57

Foreign Language 32

Twelve hour minimum at the 300 level, or demonstrated proficiency at the level of 322 or 342

Major Core Requirements 18

Art History, 1850-
Comparative Economics
World Geography
International Politics
World Religions

Major Specialized Track 28-58

Total course work in the core and specialized tracks may not exceed 76 hours. Course work numbered 300 or above should be emphasized. Close consultation with and approval of the major adviser is required.

Choose one:

International Diplomacy and Peace Studies
Area Studies
Comparative Cultures
International Economics
Selected Studies

Minor in History

The minor in history will serve the needs of students majoring in a variety of disciplines including religion, classics, political science, and literature, to name just a few. Students minoring in history will acquire the historical background and learn the critical methodology and analytical techniques employed by historians.

The history minor will consist of 30 hours of course work, excluding courses taken for General Education.

Departmental Requirements 34

American history: HST 211, 212
Three upper division courses, one each in the following:
  - American history
  - European history
  - Third world history

Sixteen hours of upper division course work in an area of the student’s choice to be selected in consultation with an adviser.
**Total (core and specialized track)** 46–76

**Electives** 27–57

**Total (minimum)** 192

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**Sample International Studies**

**Freshman Year**

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER 101**</td>
<td>4</td>
</tr>
<tr>
<td>HST 101</td>
<td>3</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>14</td>
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<tr>
<td>GER 102**</td>
<td>4</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
<tr>
<td>Third Quarter</td>
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<tr>
<td>GER 103**</td>
<td>4</td>
</tr>
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<td>HST 103</td>
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**Sophomore Year**

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER 201**</td>
<td>4</td>
</tr>
<tr>
<td>World Religion</td>
<td>4</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>15</td>
</tr>
<tr>
<td>GER 202**</td>
<td>4</td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>18</td>
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<tr>
<td>GER 203**</td>
<td>4</td>
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<td>HST 318</td>
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**Junior Year**

<table>
<thead>
<tr>
<th>Seventh Quarter</th>
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</tr>
</thead>
<tbody>
<tr>
<td>GER (300+)**</td>
<td>4</td>
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<tr>
<td>Sowed Foreign</td>
<td>4</td>
</tr>
<tr>
<td>Eighth Quarter</td>
<td>18</td>
</tr>
<tr>
<td>German (300+)**</td>
<td>4</td>
</tr>
<tr>
<td>American Foreign Policy</td>
<td>4</td>
</tr>
<tr>
<td>Ninth Quarter</td>
<td>15</td>
</tr>
<tr>
<td>German (300+)**</td>
<td>4</td>
</tr>
<tr>
<td>PLS 366</td>
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**Senior Year**

<table>
<thead>
<tr>
<th>Tenth Quarter</th>
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</tr>
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<tbody>
<tr>
<td>Philosophy</td>
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<td>World Geography</td>
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</tr>
<tr>
<td>Eleventh Quarter</td>
<td>16</td>
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<tr>
<td>PLS 472</td>
<td>4</td>
</tr>
<tr>
<td>World History</td>
<td>4</td>
</tr>
<tr>
<td>Twelfth Quarter</td>
<td>15</td>
</tr>
<tr>
<td>War in the Western World</td>
<td>4</td>
</tr>
<tr>
<td>America in Vietnam</td>
<td>4</td>
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**Modern Languages**

**Professors** Horn, Matual

**Associate Professors** Garrison, Hye, Petreman, Whissen (chair)

**Assistant Professor** Cannon

**Instructor** Douglas

**Adjunct Assistant Professor** Pitman (WSU Lake Campus)

The contributions of foreign language study to international understanding and world peace and the value of language literacy within the framework of liberal education have long been recognized. The foreign language program seeks to combine oral and written proficiency with knowledge of the culture and literary heritage of societies other than our own. The department provides excellent preparation for entrance into many crucial and challenging fields, including the diplomatic corps, foreign trade, government, business, industry, and teaching.

Students should be aware that knowledge of a foreign language alone is often insufficient for many careers. Therefore, the goal of the language major should be to combine knowledge of a language with another discipline or skill. While a second foreign language is not required, the department strongly recommends it.

The Department of Modern Languages offers majors leading to the Bachelor of Arts degree in French, German, Spanish, and modern languages. Students who seek teacher certification in these languages may work toward the Bachelor of Science in Education degree, available through the College of Education and Human Services, or may earn a Bachelor of Arts degree with certification, fulfilling both the requirements of the language major and the professional education requirements of the College of Education and Human Services.

In addition to major and minor programs in French, German, and Spanish, the department offers basic courses in Chinese, Danish, Italian, Japanese, Polish, Portuguese, Russian, comparative literature, foreign cultures, literature in translation, and linguistics.
Modern Languages Honors Program

Outstanding language majors are encouraged to participate in the departmental honors program. For details, please consult with the chair.

Placement and Proficiency

Students are responsible for placing themselves on the language level at which they can perform satisfactorily.

For students who have had no foreign language or one year of study in high school, the 101 course level is recommended. Students who have had two or three years of foreign language in high school should take the 201 level. For students with four years of foreign language study, the 311 and/or 321 courses are suggested.

Students are not obligated to follow this placement scale. However, if they are uncertain about the appropriate placement level, they may make arrangements with the modern language department to take a test to determine their level of capability.

Proficiency credit may be earned in two areas: 300-level conversation courses (4 credit hours), and 300-level composition courses (8 credit hours).

Degree Requirements—French

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 54

FR 201, 202, 203; 311, 312 20
FR 321, 322; 331, 332 16
FR 361 2
French electives (300- and 400-level courses) 16

Related Requirements 24

CPL 310 4
LI 371 4
ML 211, 212, 213, 214, 215, 216 8
(Students should choose the culture course related to their field plus at least one other culture course.)
ML 311, 312, 313, 314, 315, 316 8
(Students should choose at least two literature courses in translation outside their own field.)

Electives 57

Total 192

Degree Requirements—German

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 54

GER 201, 202, 203; 311, 312 20
GER 321, 322; 331, 332 16
German electives (300- and 400-level courses) 16

Related Requirements 24

CPL 310 4
LI 371 4
ML 211, 212, 213, 214, 215, 216 8
(Students should choose the culture course related to their field plus at least one other culture course.)
ML 311, 312, 313, 314, 315, 316 8
(Students should choose at least two literature courses in translation outside their own field.)

Electives 59

Total 192

Degree Requirements—Spanish

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 54

SPN 201, 202, 203; 311, 312 20
SPN 321, 322; 331, 332 16
SPN 333, 334, 361 10
Spanish electives (400-level courses) 8

Related Requirements 24

CPL 310 4
LI 371 4
ML 211, 212, 213, 214, 215, 216 8
(Students should choose the culture course related to their field plus at least one other culture course.)
ML 311, 312, 313, 314, 315, 316 8
(Students should choose at least two literature courses in translation outside their own field.)

Electives 57

Total 192

Degree Requirements—Modern Languages

Bachelor of Arts Degree

The degree in modern languages is a combination of at least three languages, 36 credit hours in a primary field, and 36 credit hours in a secondary field. A primary field is a concentration in French, German, or Spanish; a secondary field is any combination of languages the department offers other than the one selected for the primary field, but
at least one of the second languages must be pursued through the 203 level. First-year courses will not be counted toward the primary field but may be used to fulfill the requirements for the secondary field. The primary field must include at least two courses at the 400 level.

**General Education Requirements** 57

**Departmental Requirements**
(at least three languages) 72

**Primary language (example)**
FR 201, 202, 203; 311, 312; 321, 322; 403, 452.

**Secondary language (example)**
SPN 101, 102, 103; 201, 202, 203
GER 101, 102, 103

**Related Requirements** 24

**Electives** 39

**Total** 192

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**Modern Languages**

**Freshman Year**

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>15</th>
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<tbody>
<tr>
<td>SPN 201</td>
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<tr>
<td>SPN 202</td>
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<td>Literature</td>
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<td>in Translation</td>
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<table>
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<th>Third Quarter</th>
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<tr>
<td>SPN 203</td>
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<tr>
<td>Spanish Culture</td>
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<td>Portuguese</td>
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**Sophomore Year**

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<td>Spanish</td>
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<tr>
<td>Conversation</td>
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<td>Conversation</td>
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<table>
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<th>Sixth Quarter</th>
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<td>FR 103</td>
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<tr>
<td>CSE 230</td>
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**Junior Year**

**Seventh Quarter** 17

| Great Books*   | 3  |
| SOC 200        | 3  |
| RST*           | 3  |
| FR 201         | 4  |

**Eighth Quarter** 18

| Fine Arts*     | 3  |
| PLS 200        | 3  |
| FR 202         | 4  |

**Ninth Quarter** 16

| CST*          | 3  |
| EC 200        | 4  |

**Senior Year**

**Tenth Quarter** 16

| Latin American | 4  |
| Advanced Spanish|    |
| History        |    |
| French         |    |
| Conversation   |    |
| Culture        |    |

**Eleventh Quarter** 16

| Survey of Latin| 4  |
| Am. Literature |    |
| French         |    |
| Conversation   |    |
| Composition    |    |

**Twelfth Quarter** 16

| Survey of Latin| 4  |
| Am. Literature |    |
| CPL 310        | 4  |

**Total** 39

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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

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**Cultural Proficiency Requirement**

Each student wishing to graduate with a major in the Department of Modern Languages will be required to pass a test based on the department's cultural handbook. This booklet of basic facts about French, German, Russian, Spanish, and Latin American culture will be presented to all students at the time they declare a major in the department. The proficiency test may be taken whenever students feel able to pass it and as often as is necessary to do so.

**Modern Language Minors**

**French, German, Spanish**

A minor in a foreign language greatly enhances students' career prospects. Minors are offered in French, German, and Spanish and require a minimum of 32 credit hours selected from courses at the 200 level or above (excluding LI 371, FR 361, and SPN 361). A minor in Spanish, for example, might consist of the following courses:

| SPN 201, 202, 203 | 12 |
| SPN 311, 312      | 8  |
| SPN 321, 322      | 8  |
| SPN 331           | 4  |

**Total** 32
Because of the cost of individual instruction, special fees are charged for applied music. Fees for applied music are $55 for one half-hour lesson per week or $110 for a one hour lesson per week payable quarterly. A rental fee of $10 per quarter is charged for use of university-owned instruments in class instruction.

Students enrolled in academic music courses are required to attend recitals, concerts, and other approved performances. A schedule of acceptable performances is published quarterly. Bachelor of Music students are required to attend a minimum of eight performances each quarter of residence. At least four performances per year must be faculty recitals. Bachelor of Arts students are required to attend a minimum of four performances each quarter of residence. At least two performances per year must be faculty recitals.

A progressive course of study based on four levels of technical proficiency, musicianship, and repertoire has been developed in all areas of applied music. Students should consult regularly with their applied music instructors and advisers to ensure proper progress through the various requirements. Solo recital performances are also required of music majors. For information regarding applied music requirements, students should refer to the Applied Music Policy Statement, which includes details of formal recital requirements.

All music majors must pass a keyboard proficiency examination, details of which are set out in the document General Keyboard Requirements.

All music degree programs require a minimum of 192 credit hours for graduation. A detailed, four-year curriculum outline for each major program is available in the Department of Music office.

Degree Requirements—Performance

Bachelor of Music Degree

The department offers majors in the following areas of performance: piano, voice, organ, violin, viola, violoncello, string bass, flute, oboe, clarinet, bassoon, saxophone, trumpet, horn, trombone, euphonium or baritone horn, tuba, percussion, classical guitar, and harp. With departmental permission, students may major in fields other than those listed. Students must study continuously in their chosen disciplines until all graduation requirements are met, including satisfactory public performance of specified recitals during the junior and senior years.

The department also offers a major in performance with an emphasis in piano pedagogy. This program, designed for piano performance majors who wish to prepare themselves as independent piano teachers, requires solo and ensemble performances during the junior and senior years as well as demonstration of functional keyboard skills and knowledge of teaching repertoire.
To be eligible for the Bachelor of Music degree, the performance major must have a minimum cumulative grade point average of 3.0 in the major performing medium and a 2.0 in all other required music courses.

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>60</th>
</tr>
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<tbody>
<tr>
<td>Required substitutions: MUS 121, 122</td>
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<tr>
<td>Departmental Requirements</td>
<td>33</td>
</tr>
<tr>
<td>MUS 101, 102, 103; 201, 202, 203</td>
<td>18</td>
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<tr>
<td>MUS 151, 152, 153; 251, 252, 253</td>
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<tr>
<td>MUS 311, 312, 313</td>
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<td>MUS 420</td>
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<td>MUS 105</td>
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<td>MUS 155, 156, 157; 255, 256, 257</td>
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<td>Spanish, French, or German</td>
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<td>Electives</td>
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<td>Piano</td>
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<td>MUS 401; 451, 452, 453</td>
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<td>MUS 301 or 302; 336; 316, 317</td>
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<td>Piano with Emphasis in Pedagogy</td>
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<td>MUS 316, 317, 318; 416, 417, 418</td>
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<td>Organ</td>
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<td>MUS 301; 336, 337</td>
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<td>MUS 105</td>
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<tr>
<td>Strings</td>
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<td>MUS 401; 421, 422; 441, 442</td>
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<td>MUS 180, 190, 200 or 210</td>
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<td>MUS 301</td>
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<td>MUS 336, 338</td>
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<td>MUS 205</td>
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<td>MUS 135</td>
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<td>MUS 155, 156, 157; 255, 256, 257</td>
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<td>Woodwinds</td>
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<td>MUS 301, 302</td>
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<td>MUS 336, 338</td>
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<td>Brass</td>
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<td>MUS 115</td>
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Degree Requirements—Music Education

Bachelor of Music Degree

Students who major in music education may elect either an instrumental or a vocal-general music curriculum. Upon completion of the requirements of the music education program, which include the requirements of the Ohio Board of Education, students receive the Ohio Special Certificate for teaching music. To be eligible for the Bachelor of Music degree, music education majors must have a minimum cumulative grade point average of 3.0 in required music education courses and a 2.5 grade point average in all other required music courses. An overall minimum cumulative grade point average of 2.5 is required.

Three hundred hours of observation/participation experiences are required prior to student teaching.

During the senior year all students will perform in student recitals two or three times for a total of twenty-five to thirty minutes. With the approval of the studio teacher and the applied music board, students may present a half recital or a full recital in lieu of this requirement.

General Education Requirements 60

Required substitutions:
MUS 121, 122 6

Departmental Requirements 33

MUS 101, 102, 103; 201, 202, 203 18
MUS 151, 152, 153; 251, 252, 253 6
MUS 311, 312, 313 9
Choral or instrumental laboratory ensemble 0

Major Requirements 43-45

MUS 155, 156, 157, 255, 256, 257 6
ED 214, 216, 218, 220, 221, 222, 223 12
ED 464, 432, 321, 322, 323 6
ED 422, 419, 440 16-18
COM 101 3

One of the following programs: 74-91

Band or Orchestral Instrument Concentration 74
Applied music concentration 22
MUS 105 2
MUS 115 or 135 11
MUS 145, 205 4
MUS 215, 216, 217; 224, 225, 226; 227, 228, 229, 231 10
MUS 223, 323, 324, 328, 329 15
MUS 336, 338 5
MUS 421 2
Music electives 3

Piano or Classical Guitar Concentration with Band or Orchestral Instrument Secondary 91
Applied music concentration 22
MUS 105 2
MUS 115 or 135 11
MUS 100 (if piano is concentration) 3
MUS 336, 338 7
MUS 421 2
Music electives 3

Jazz Concentration 94
Applied music concentration 22
MUS 105 2
MUS 115 or 135 11
MUS 100 (if piano is concentration) 3
MUS 336, 338 7
MUS 421 2
Music electives 3

Voice Concentration with Piano or Classical Guitar Secondary or Piano or Organ Concentration with Voice Secondary 78
Applied music concentration 22
Applied music secondary (if piano is concentration) 11
Applied music secondary (if voice is concentration) 5
MUS 105 3
MUS 105 or 195 8
MUS 215, 224 (special section), 227, 231 4
MUS 257 (if piano is concentration) 1
MUS 261, 262 4
MUS 328, 329, 332 9
MUS 336, 337 4
MUS 421 2
Music electives 3
ED 302 2

General Education Requirements 60

Required substitutions:
MUS 121, 122 6

Departmental Requirements 33

MUS 101, 102, 103; 201, 202, 203 18
MUS 151, 152, 153; 251, 252, 253 6
MUS 311, 312, 313 9
Choral or instrumental laboratory ensemble 0

Major Requirements 43-45

MUS 155, 156, 157, 255, 256, 257 6
ED 214, 216, 218, 220, 221, 222, 223 12
ED 464, 432, 321, 322, 323 6
ED 422, 419, 440 16-18
COM 101 3

One of the following programs: 74-91

Band or Orchestral Instrument Concentration 74
Applied music concentration 22
MUS 105 2
MUS 115 or 135 11
MUS 145, 205 4
MUS 215, 216, 217; 224, 225, 226; 227, 228, 229, 231 10
MUS 223, 323, 324, 328, 329 15
MUS 336, 338 5
MUS 421 2
Music electives 3

Piano or Classical Guitar Concentration with Band or Orchestral Instrument Secondary 91
Applied music concentration 22
MUS 105 2
MUS 115 or 135 11
MUS 100 (if piano is concentration) 3
MUS 336, 338 7
MUS 421 2
Music electives 3

Jazz Concentration 94
Applied music concentration 22
MUS 105 2
MUS 115 or 135 11
MUS 100 (if piano is concentration) 3
MUS 336, 338 7
MUS 421 2
Music electives 3

Voice Concentration with Piano or Classical Guitar Secondary or Piano or Organ Concentration with Voice Secondary 78
Applied music concentration 22
Applied music secondary (if piano is concentration) 11
Applied music secondary (if voice is concentration) 5
MUS 105 3
MUS 105 or 195 8
MUS 215, 224 (special section), 227, 231 4
MUS 257 (if piano is concentration) 1
MUS 261, 262 4
MUS 328, 329, 332 9
MUS 336, 337 4
MUS 421 2
Music electives 3
ED 302 2

For curricular requirements, see the previous listing with the addition of the following: Secondary (classical guitar) 11

Music Theory, Music Composition, and Music History and Literature

The majors in music theory, composition, and history and literature are not terminal degrees, and students pursuing these curricula should expect to continue at the graduate level. Therefore, students considering any of these programs should consult with the appropriate faculty adviser before entering.

Students intending to pursue one of these majors will be placed in the Music: Unspecified category until the following requirements have been met: for music theory or composition, a minimum cumulative grade point average of 3.0 in MUS 101, 102, 103 and MUS 151, 152, 153, and completion of MUS 122; for music history and literature, a minimum cumulative grade point average of 3.0 in MUS 121 and 122, and completion of MUS 103 and 153.

Students majoring in music theory, composition, or history and literature must complete level IIIA in the applied music concentration and pass all keyboard proficiency requirements. A minimum cumulative grade point average of 3.0 must be maintained in required major courses, and 2.0 in other required music courses. Senior students are required to complete a senior project. For the majors in music theory and music history and literature, the project may consist of an extensive written research paper or a scholarly lecture or
Degree Requirements—
Music Theory
Bachelor of Music Degree

General Education Requirements 60

Required substitutions:
MUS 121, 122 6

Departmental Requirements 33

MUS 101, 102, 103; 201, 202, 203 18
MUS 151, 152, 153; 251, 252, 253 6
MUS 311, 312, 313 9

Major Requirements 58

MUS 301, 302; 314 9
MUS 336; 371, 372; 381, 382 15
MUS 401, 402, 403; 421, 422 13
MUS 424, 481 9
Ensemble (at least one hour per quarter) 12

One of the following performance concentrations 41

Keyboard
Applied music 18
MUS 257 1
Secondary (selected from voice, woodwinds, strings, brass, percussion) 5
Electives 17

Nonkeyboard
Applied music 18
MUS 155, 156, 157; 255, 256, 257 6
MUS 100 3
Class or private instruction selected from voice, woodwinds, strings, brass, percussion 5
Elective (vocal concentrations must take MUS 261, 262) 9

Degree Requirements—
Music Composition
Bachelor of Music Degree

General Education Requirements 60

Required substitutions:
MUS 121, 122 6

Departmental Requirements 33

MUS 101, 102, 103; 201, 202, 203 18
MUS 151, 152, 153; 251, 252, 253 6
MUS 311, 312, 313 9

Major Requirements 64

MUS 301, 302; 336 9
MUS 371, 372, 373; 381, 382, 383 18
MUS 401, 402, 403; 421, 422 13
MUS 471, 472, 473; 481 (3) 12
Ensemble (at least one credit hour per quarter) 12

One of the following performance concentrations 35–38

Keyboard
Applied music 18
Secondary (selected from voice, woodwind, strings, brass, percussion) 5
MUS 257 1
Electives 11

Nonkeyboard
Applied music 38
MUS 155, 156, 157; 255, 256, 257 6
MUS 100 3
Secondary (selected from voice, woodwinds, strings, brass, percussion 5
Electives 6

Degree Requirements—
Music History and Literature
Bachelor of Music Degree

General Education Requirements 60

Required substitutions:
MUS 121, 122 6

Departmental Requirements 33

MUS 101, 102, 103; 201, 202, 203 18
MUS 151, 152, 153; 251, 252, 253 6
MUS 311, 312, 313 9

Major Requirements 73

MUS 301 or 302 3
MUS 314; 401, 402, 403 12
Music literature 12
Ensemble 12
French, German, or Latin (202 level) 20

MUS 481 (senior project) 6
Electives 8
One of the following performance concentrations 36

Keyboard
Applied music 18
MUS 257 1

Nonkeyboard
Applied music 18
MUS 155, 156, 157; 255, 256, 257 6
Music electives (vocal concentration must take MUS 261, 262) 12
Degree Requirements—Music

Bachelor of Arts Degree

The Bachelor of Arts degree in music is designed for students who want to study music but do not necessarily plan a professional career in music. Students will get a much broader, more general education than students seeking a Bachelor of Music degree. Required courses are kept to a minimum. Consequently, students must work closely with an adviser in selecting course electives. For graduation, students must reach level IIIA in the applied music concentration.

General Education

<table>
<thead>
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<th>60</th>
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<tbody>
<tr>
<td>MUS 121, 122</td>
<td>6</td>
</tr>
</tbody>
</table>

Departmental Requirements

| MUS 101, 102, 103; 201, 202, 203 | 18 |
| MUS 151, 152, 153; 251, 252, 253 | 6 |
| MUS 311, 312, 313 | 9 |
| Applied music concentration | 12 |
| MUS 314 | 3 |
| MUS 155, 156, 157 (nonkeyboard concentration only; keyboard concentration substitute music electives) | 3 |
| Music electives | 17 |

Related Courses

| Nine hours in one of these fields: anthropology, art, classics, economics, history, literature, mathematics, philosophy, religion, or sociology | 12 |

Foreign Language or Research Methods Requirement

| 20–22 |

Electives (nonmusic)

| 30–32 |

Music Honors Program

The Department of Music encourages students who have demonstrated superior academic ability to participate in the music honors program. Entrance to this program requires that students be juniors or seniors with a cumulative 3.0 grade point average and a 3.5 grade point average in music. For additional information, contact the department chair.

Minor in Music

Thirty-nine credit hours of study are required:

Music Theory

| MUS 101, 102, 103: Theory of Music | 9 |
| MUS 151, 152, 153: Sightsinging and Dictation | 3 |

Music History and Literature

| MUS 121: Foundations of Analytical Listening | 3 |
| MUS 122: Survey of Musical Styles | 3 |
| MUS 311, 312, 313: History of Music | 9 |

Performance

| Applied Music | 6–12 |
| Ensemble | 6 |

Completion of the minor also requires attendance at a minimum of eighteen approved recitals or concerts, and a minimum grade point average of 2.25 in music courses.

1Concurrent registration in Theory of Music and Sightsinging and Dictation is required. MUS 103, 153, and 122 are prerequisites for MUS 311.

2Audition required; six quarters of study, 1 or 2 credits per quarter.

3Minimum of 3 credits in University Chorus, Chamber Singers, Band, Orchestra, or Chamber Orchestra.

Philosophy

Associate Professors Hough (chair), Irvine, Taylor
Assistant Professors Beelick

The philosophy major is designed to encourage clear and logical thinking about problems which philosophers attempt to solve, to develop students' ability for critical evaluation through analysis and appreciation of such attempts, and to increase students' cultural experience through acquaintance with the more important philosophic writings.

The forty-four hour requirement in the major affords a considerable measure of flexibility; it enables students to utilize numerous options in other disciplines to prepare for different professional objectives, while also developing a relatively broad understanding of our society and culture. It is to the major's advantage to pursue courses in other fields since philosophy, by its very nature, is interrelated with all disciplines. Many academic departments include within their curricula courses in the philosophy of their disciplines. Furthermore, philosophical questions can arise during one's investigation of any specific field.

Because of differences among student interests and the ready availability of electives, each major will follow an individualized program in consultation with an adviser. Such a program permits concentration in cognate fields and encourages exploration and self-discovery.

Since the required courses in philosophy are designed to emphasize basic issues confronting our civilization, the philosophy major is excellent preparation for those who seek a well-rounded liberal education, for those who pursue further training in professional disciplines such as law, medicine, and theology, and for those who plan advanced study in philosophy.
Degree Requirements—Philosophy

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements

Minimum with foreign language 44
Minimum with research methods 52
Electives and Related Courses 67–71

Foreign Language or Research Methods Requirement 20–24

Total 192

Senior Year

Tenth Quarter 18
Related Courses/PHL Courses 8

Eleventh Quarter 18
Related Courses/PHL Courses 8

Twelfth Quarter 18
Related Courses/PHL Courses 8

*Students have a choice of courses that meet General Education requirements in the following areas: Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in those areas.

**Courses must be selected from Foreign Language or Research Methods Option Requirement. Total hours may vary depending on option selected.

***PHL 204 is recommended; however, ENG 204 or REL 204 will also meet the General Education requirement for Great Books of the Western World.

Sample

Philosophy

Freshman Year

First Quarter 14
ENG 101 4
MTH 105 3
HST 101 3

Second Quarter 15
ENG 102 4
PSY 105 4
HST 102 3

Third Quarter 16
Fine Arts* 3
CST* 3
PHL 204*** 3

Sophomore Year

Fourth Quarter 14
RST* 3
Language/RMO** 4
PHL Course 4

Fifth Quarter 15
Related Course/Elective 5
PLS 200 3

Sixth Quarter 16
Related Course/Elective 5
EC 200 3

Junior Year

Seventh Quarter 16
Related Courses/Electives 8

Eighth Quarter 16
Related Courses/Electives 8

Ninth Quarter 16
Related Courses/Electives 8

Philosophy Honors Program

Philosophy majors who have demonstrated excellent ability in philosophy courses may be eligible to undertake the rigorous departmental honors program. Further information may be obtained from the departmental office.

Political Science

Professors Funderburk, Moore, Smith (Emeritus), Thobaben (Emeritus)

Associate Professors Adams, Fitzgerald, Hutzel, Jacob (chair), Kotecha, Schlagheck, Walker

Assistant Professor Sirkin

Political science is both an ancient discipline and one of the most modern of the social sciences. The origins of political science date back to the Greeks and their attempt to answer fundamental questions about humanity and the human condition. Yet, the modern discipline of political science is a product of the intellectual ferment of the twentieth century, especially in the United States. During this period, scholars have attempted with increasing effectiveness to apply more rigorous scientific techniques of problem definition and information and data collection to their study of politics and government. Politics itself is not scientific and the study of it is not subject to the control of laboratory conditions. However, political scientists continue to seek greater objectivity, higher standards of proof, and a less ethnocentric perspective on national and international politics. Social scientific concepts and methods are used wherever appropriate, but political science continues to recognize the importance of philosophic, legal, historical, and other approaches.
to achieving greater understanding of political phenomena. Thus, political science reflects and supports a variety of scholarly perspectives.

What do students of political science study? In the broadest sense, they study governments: how they evolve, why they exist, the forms and social functions they assume, why they change, and who controls them. To understand governments, students of political science must also study politics—that is, how people behave in their relationship to government, what they do to influence government, how government attempts to influence people’s opinions, behavior, and beliefs in response to what it does. Students of politics also must appreciate the social environmental influences acting on governments—how cultural, historical, economic, and other social forces and conditions affect the evolution of governments and mass political behavior. Increasingly, they also need to understand the interaction between government and other powerful social institutions.

At Wright State, the study of politics and government occurs in five areas of instruction: 1) American government, including legislative and executive institutions, political parties and interest groups, public administration, public opinion and elections, and state and urban government; 2) public law, including constitutional law, criminal justice, civil liberties, and environmental law; 3) international relations and comparative politics, including American and Soviet foreign policy, Western European governments, the Middle East, East European and Soviet governments, international security policy, terrorism, peace studies, and developing political systems; 4) political philosophy, including political ideologies, the history of political thought, and Marxist theory; and 5) quantitative methods of political research for majors electing a college-approved option to the two-year foreign language requirement for the B.A. degree.

Student Internships and Applied Politics

Complementing classroom work for political science majors are numerous practical experiential opportunities to apply knowledge and develop valuable interpersonal and career-related skills. Internships may be arranged with area state legislators, congressional district offices, Dayton-area metropolitan governments, and governmental and policy advocacy agencies and organizations in Washington, D.C. The department sponsors student participation on our two nationally recognized, award-winning teams attending the annual National Model United Nations meeting in New York City and in the yearly American Mock Trial competition at Drake University.

Career Education

Career preparation for political science majors features an emphasis on basic skills and competencies valuable in many career areas. The ability to write and speak effectively, to think and make choices analytically, to manage and use information and substantive knowledge about governmental institutions and processes are valuable in many occupational settings. And, the U.S. Bureau of Labor Statistics now projects that employment for social scientists will grow over the next decade by about 33 percent. Openings for lawyers will increase by a third and for people in journalism the increase rate is expected to approach 40 percent.

Any political science major seeking employment in the next decade needs to keep the following four points in mind: 1) Students who can demonstrate problem-solving skills and technical knowledge about any important public policy area will be marketable and have a good capacity to move between the public and private sector. 2) In today’s job market, foreign language study and a solid grounding in mathematics and statistics and computer technology greatly increases students’ value to prospective employers. 3) In an “information explosion age” such skills are important in any career area. 4) Students in political science should take advantage of internships and other practical opportunities to gain as much “real world” experience as possible while in school. At Wright State, the Department of Political Science is especially strong in its provision of many practical applications programs on and off campus for its majors.

Cooperative Education

Cooperative education is available to qualified political science majors in both the private and public sectors. Cooperative education job opportunities may be arranged in government, business, industry, and a variety of private service organizations. Cooperative education offers students a means of partially financing their education while gaining career-related experience. A limited number of elective course credits will be granted to students who satisfactorily complete their programs. Contact the department chair for further information.

Degree Requirements—Political Science

Bachelor of Arts Degree

General Education Requirements 57

Foreign Language or Research Methods Requirement 20–24
Departmental Requirements 60

Core Requirements (two courses) 8
Prerequisite: PLS 200
PLS 212, 222

Area Requirements 20
Prerequisite: Core Requirements
1 American Government (two courses)
   PLS 321, 322, 331, 335, 337, 342, 343, 430, 433, 434, 435, 436, 437, 438, 439, 440,
   442, 443, 445, 446
2 International and Comparative Politics (two courses)
   PLS 351, 354, 360, 366, 370, 380, 381, 383, 453, 470, 471, 472
3 Political Philosophy (one course)
   PLS 301, 302, 303, 304, 305

Advanced Department Electives (eight courses) 32
Prerequisite: Core Requirements
Thirty-two quarter hours chosen in consultation with a departmental adviser among 300- and 400-level courses with no fewer than 4 hours at the 400 level.

Related Major Requirements from Outside the Department 22–23

There are two options. Option 1 must be completed in full by all political science majors who do not choose and complete in full a departmentally approved alternative of at least 22 credit hours.

Option 1
One English course from among the following:
   ENG 240, 330, 333, or 344 3–4
   HST 211 and 212 6
   EC 201, 202, and 203 9
   GEO 201 or 202 3

Option 2
Option 2 may be the international economics certificate program, the business minor for liberal arts majors, a minor or second major in another field, or a set of courses from two or more disciplines with a clear focus and coherence reflecting the individual’s career or other interests. Transfer students from Sinclair Community College may apply LAP credits toward “legal affairs” related requirements. Other transfer credits also may be applied toward completion of the requirement. In all cases, Option 2 must have adviser approval and require at least 22 credit hours.

Free Electives 28–33

Total (minimum requirement) 192

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Sample

Political Science

Freshman Year

First Quarter 16
- ENG 101 4
- HST 101 3
- Elective 2

Second Quarter 16
- ENG 102 3
- HST 102 3
- Elective 3

Third Quarter 15
- PLS 212 4
- HST 103 3
- Elective 4

Sophomore Year

Fourth Quarter 14
- PLS 222 4
- Great Books* 3
- Elective 1

Fifth Quarter 14
- PLS 360 4
- RST* 3

Sixth Quarter 14
- PHL 215** 4
- CS 206** 3
- GEO 202 3

Seventh Quarter 16
- PLS 351 4
- MIS 100** 3
- Elective 4

Eighth Quarter 16
- PLS 210** 4
- EC 2021 3
- Elective 3

Ninth Quarter 18
- PLS 211** 4
- EC 2031 4
- Elective 3

Senior Year

Tenth Quarter 18
- PLS 383 4
- Elective 4

Eleventh Quarter 16
- PLS 366 4

Twelfth Quarter 16
- PLS 381 4
- HST 212 3
- Elective 5

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

Continued on next page

Liberal Arts

Political Science
Minor in Political Science

Students majoring in other disciplines, particularly other social sciences, may find their career goals and personal interests complemented by a minor concentration in political science. This would be especially helpful to students in journalism, business majors interested in international business and finance, students in education, and anyone pursuing a career in the public or private sector where a basic understanding of political institutions and processes would strengthen other program interests. Completion of the approved minor would be certified on students' official transcript upon graduation. The minor may be fulfilled by completing the following requirements.

The Political Science Minor: 32

1. Core Requirements (8 hours) Prerequisite: Political Life—PLS 200
   PLS 212, 222

2. Field Requirements (12 hours) Prerequisite: Core Requirements
   Area A: American Government
   (one course, 4 hours)
   Area B: International and Comparative Politics (one course, 4 hours)
   PLS 351, 354, 360, 366, 370, 380, 381, 383, 453, 470, 471, 472
   Area C: Political Philosophy (one course, 4 hours)
   PLS 301, 302, 303, 304, 305

3. Advanced Political Science Electives: Twelve hours distributed among 300- and 400-level courses chosen in consultation with a departmental adviser

Departmental Honors

Effective September 1, 1986, majors in political science may earn departmental honors by completing the following requirements.

1. Compiling minimum grade point averages of 3.4 on both all political science course work and in overall course work
2. Attaining senior standing
3. Completing the Model United Nations Seminar or a comparable limited enrollment advanced course with a grade of A or B (see departmental chair for information)
4. Completing the annual senior honors research seminar with a grade of A or B

By completing these requirements and by qualifying for participation in the university honors program, majors may earn the designation University Honors Scholar upon graduation. See the director of the University Honors Program for information.

National Honor Society

Majors in political science at Wright State may become eligible for Membership in Theta Zeta Chapter of Pi Sigma Alpha, the national political science honor society. See the department chair for information.

Religion

Professors Barr, Friedland (Sanders Scholar), Reece
Associate Professors Neve, Stoesz (chair)
Assistant Professors Dvorak, Griffin

The Department of Religion studies religion and teaches about it in a comprehensive and nonsectarian way. Religion is one of the significant areas of human life and thought. We share with other humanities disciplines (history, English, philosophy, etc.) the goal of understanding ourselves and our world. In fact, the whole range of past and present human concerns can be investigated through the academic study of religion, for the religious factor in culture has been a powerful force. Religion is heavily involved in most of the world's history, its literary documents, its arts, and its social institutions.

The academic study of religion emphasizes the development of critical and responsible standards of judgment and a sympathetic imagination in order to achieve a clear understanding of the major themes that have arisen in the history of religions and the relation of these themes to the continuing problems of men and women. We do this by studying the various religious traditions, their history, thought, social context, and moral and ritual expression.

A major in religion requires fourteen courses within the department. Each student is assigned a departmental adviser who helps make the best selection of courses. Students need to complete the sequence REL 205, 206, and 207 early in their program and to take REL 497 near the end of their studies. In addition, a religion major requires one course from each of the following six areas: African-American religion, American religion, Biblical studies, ethics or philosophy of religion, Eastern religions, and Western religions. Four elective courses, drawn from these areas or elsewhere in the department, complete the requirement of fourteen courses. At least six courses must be at the00 level or above.
Religion majors must also complete 28 hours of related courses selected from a wide range of disciplines related to their special interests. These should be selected in consultation with the departmental adviser. Additionally, students will be required to demonstrate or develop proficiency in a foreign language related to their area of specialization or, with departmental approval, fulfill a research methods requirement of 21 hours. The aim is to allow students sufficient latitude to explore interests in the arts and sciences to the fullest so as to obtain a genuinely liberal education.

The department also provides a dual major (eleven courses) and a minor (eight courses). See the department chair for complete details.

Any vocation that might follow from a good arts and sciences education is possible for the major in religion. Human services professions such as teaching, administration of religious and other institutions, social work, counseling, law, ministry, and medicine; or business and industrial employment, positions in sales, and personnel work are examples of the careers religion majors have chosen in the past. Normally, the technical training required for these fields would come after finishing the baccalaureate program, but students are encouraged to choose electives leading to their career choices as soon as possible. Career planning information is available to religion majors.

Religion Honors Program

The Department of Religion encourages superior academic work through full participation in the university's honors program. Special seminars and discussion sections, departmental reading courses, and other opportunities are available to superior students. Relatively small classes also make possible a close working relationship between students and professor. Junior and senior students with a 3.0 cumulative average and a religion major or adequate background in religion may participate in the departmental honors program. Interested students should contact the chair of the department.

Degree Requirements—Religion

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 48-53

Fourteen courses to be chosen from:
REL 205, 206, 207 9
REL 497 4

Six additional courses, one from each area:
  - African-American Religion
  - American Religion
  - Biblical Studies
  - Ethics or Philosophy of Religion
  - Eastern Religions
  - Western Religions 23-24

Religion electives 12-16

At least 24 hours must be at the 300 level or above.

Foreign Language or Research Methods Requirement 20-24

Related Requirements 28

Approved courses related to area of specialization

Electives 26-31

Total (minimum requirement) 192

Sample

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<th>Religion</th>
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<td>Freshman Year</td>
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<tr>
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<td>Second Quarter</td>
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<tr>
<td>ENG 102 3</td>
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<tr>
<td>HST 102 3</td>
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<tr>
<td>Science II* 4</td>
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<td>Third Quarter</td>
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<td>PLS 301 4</td>
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Note: This sample combines a Biblical Studies emphasis within the Religion major with concentration in Sociology. Other emphases within the major are possible, and other choices of a related field may be desirable, depending on the student's interests and goals. Several departments such as Music, Anthropology, Political Science, and Business offer minors that suggest vocational directions you might wish to take. Also, you may prefer to take one of the modern languages, depending on your interests and goals. Please consult any member of the Department faculty, or the chair of the Department, for suggestions about particular courses or overall planning. We are glad to work with you to help you find your goal and reach it.

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

Selected Studies

Program Committee Coordinator Jerome M. Clemens

The program in selected studies allows students to pursue a self-designed course of study. It is planned for persons with a definite educational objective that diverges from the majors presently offered by the College of Liberal Arts. While the program is free from several traditional requirements, students must follow certain other requirements and procedures for obtaining the degree.

Students are eligible for admittance to the program after completing 45 credit hours of study. In consultation with program sponsors, students formulate a contract outlining study goals and stipulating at least 48 credit hours of core courses that help to accomplish those personal goals. The contract is forwarded to the Program Committee for evaluation and approval.

In addition to completing the core and meeting all university and college requirements for graduation, students must successfully complete at least 60 credit hours of study in courses numbered 300 or above. Finally, from 8 to 16 hours of credit must be earned in LA 490, Senior Project in Selected Studies. A proposal for the project must be submitted to the Program Committee for approval before the beginning of the student's senior year.

The prospective major in selected studies should see the committee coordinator for more detailed information about the program.

Selected Studies Honors Program

Selected Studies encourages participation of its students in the University Honors Program. A selected studies major may graduate with honors if he or she attains an overall grade point average of 3.4 and an evaluation of excellence on his or her senior project.

Degree Requirements—Selected Studies

Bachelor of Arts Degree

General Education Requirements 57
Core Courses 48
Senior Project (LA 490) 8-16
Foreign Language or Research Methods Requirement 20-24
Electives 47-59
Total (minimum requirement) 192

Ordinarily no more than 45 hours in one department may be counted toward the degree.

Bachelor of Fine Arts Degree

General Education Requirements 57
Core Courses 48
Senior Project (LA 490) 8-16
Electives 71-79
Total (minimum requirement) 192

Ordinarily no more than a combination of 100 hours of course work may be taken in the Departments of Art and Art History, Music, and Theatre, and no more than 68 hours in any one department may be counted toward the degree.
Social and Industrial Communication

Program Coordinator Robert E. Pruett

The dual major in social and industrial communication is offered by the Departments of Communication and Sociology and Anthropology. It is for students interested in organizational communication who want, in addition, an in-depth understanding of the sociological influences operating in organizations.

A graduate of this program will have a specific understanding of the organizational world, including a knowledge of how communication is used in the workplace, an understanding of one's role in an organization, and skill in coping with organizational change.

Dual Major Degree Requirements—Social and Industrial Communication

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 76

Required courses:
COM 101, 102, 141, 303, and three of the following: COM 441, 443, 445, 447; SOC 303, 306, and two of the following: SOC 350, 440, 441 40

Major electives chosen from:
ATH 240; COM 333, 343, 345, 347, 401, 429, 449, 451, 453, 455, 457, 489; SOC 201, 340, 341, 348, 380, 406, 433, 442, 444, 481; or other approved courses 32

Foreign Language or Research Methods Requirement 20–24

Electives 35–39

Total 192

Sample

Social and Industrial Communication

Freshman Year

First Quarter

<table>
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<td>Science I*</td>
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Second Quarter

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<td>Science II*</td>
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Third Quarter

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Sophomore Year

Fourth Quarter

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Fifth Quarter

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<td>PLS 200</td>
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Sixth Quarter

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<td>EC 200</td>
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Junior Year

Seventh Quarter

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Eighth Quarter

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<td>SOC 303</td>
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<td>Electives</td>
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Ninth Quarter

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<td>SOC 306</td>
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Senior Year

Tenth Quarter

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Eleventh Quarter

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<td>Major Electives</td>
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Twelfth Quarter

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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas.

**Courses must be selected from Foreign Language or Research Methods Option Requirement. Total hours may vary depending on option selected.
Social Work

Successful completion of the social work curriculum leads to a professional degree. The major in social work is designed to prepare students to enter social work employment at the beginning level of practice and to prepare students for admission to graduate study in social work. The program is fully accredited on the baccalaureate level by the Council on Social Work Education.

A career in social work requires that an individual possess self-discipline, emotional stability, and intellectual creativity. If you are considering social work as a career, you should be interested in people of widely varying ages, abilities, and backgrounds. You will need to be able to develop rapport with professional colleagues and with many kinds of clients.

Career opportunities for the college graduate with a major in social work have expanded rapidly in recent years. Since 1970, the National Association of Social Workers has admitted persons with bachelor's degrees who have completed undergraduate programs in social work.

There are many areas in which a social worker can function in public, voluntary, and for-profit agencies. The majority of social workers perform direct practice duties. Still others are employed as outreach workers, community organizers, and administrators. Typical agencies that may employ the beginning social worker include family services, children's services, public schools, hospitals, mental health centers, and probation and parole boards.

Newer, expanding fields for social work personnel are developing beyond these traditional services. In particular, recent graduates are finding employment in services to the aged. Although increasing numbers of graduates are entering social work each year, the demand is still much greater than the supply. This situation is expected to continue into the next century. Salaries vary according to experience, education, and geographic location, but a graduate with a bachelor's degree can expect to start at about $15,000 to $18,000 a year. Opportunities are equal for both men and women and are open to all racial and ethnic backgrounds.

Admission to the Major

Requirements for admission to the social work major include completion of SW 270 and 271 with a grade point average of 2.25 or higher; related social science courses; and a writing portion of the Pre-Professional Skills Test. See the department's academic adviser for details.

Social Work Honors Program

The Department of Social Work recognizes those majors who attain a superior achievement and has developed a program allowing students to be graduated with honors in social work. In this way, students can receive the maximum benefit from their undergraduate work as they have an opportunity to go beyond classroom expectations and realize goals in original research and analysis.

Junior and senior students with a 3.0 overall grade point average and a 3.5 average in social work may apply. Students must initiate and successfully complete an honors project. It is also suggested that they take at least one University Honors 400 interdisciplinary seminar prior to initiating their social work project.

Cooperative Education Program

Cooperative education is available to qualified social work majors in a wide variety of voluntary and public social service agencies. Cooperative education offers students a means of partially financing their education while gaining career-related experience. A limited number of elective course credits will be granted to students who satisfactorily complete their programs. Contact the department chair for further information.

Degree Requirements—Social Work

Bachelor of Arts Degree

General Education Requirements 57

Specific Courses:
Area Three—The Non-Western World:
CST 240—Comparative Non-Western Cultures
Area Four—Understanding the Contemporary World:
BIO 105, 106, 107

Departmental Requirements 56

SW 270, 271, 370, 380, 470, 481, 482, 483, 484, 490, 491; SW 487 (field practicum)

Related Requirements 7

COM 102
PSY 341

Foreign Language or Research Methods Requirement 20-23

Electives 49-52

Total (minimum requirement) 192
Sample

Social Work

Freshman Year

First Quarter 14

ENG 101 4 BIO 106 4
Great Books* 3 HST 101 3

Second Quarter 15

ENG 102 4 BIO 106 4
SOC 200 3 HST 102 4

Third Quarter 15

PSY 105 4 BIO 107 4
Fine Arts* 3 HST 103 4

Sophomore Year

Fourth Quarter 14

Language/RMO** 4 SW 270 4
CST 240 3 PL 200 3

Fifth Quarter 19

Language/RMO** 4 SW 271 4
COM 102 3 Electives 8

Sixth Quarter 15

Language/RMO** 4 RST* 3
Electives 4 PSY 341 4

Junior Year

Seventh Quarter 15

Language/RMO** 4 SW 270 4
Electives 6 EC 200 3

Eighth Quarter 18

Language/RMO** 4 MTH 105 4
Electives 10

Ninth Quarter 19

Social Work 12 Electives 7

Senior Year

Tenth Quarter 16

Social Work 12 SW Practicum 4

Eleventh Quarter 16

Social Work 12 SW Practicum 4

Twelfth Quarter 16

Electives 12 SW Practicum 4

*Sociologists work on problems of human interaction at all levels. They may focus their attention on interaction between two individuals as they study interactions between doctors and patients and learn that the doctor’s prescription may depend as much on that doctor-patient relationship as it does on the diagnosis. Or sociologists may focus on an intermediate problem, such as the relationship between the mix of businesses on a street and the safety of that street for its citizens. Or they may focus on a large-scale problem, such as the relationship between the involvement of a nation in a total war and the improvement in the collective mental health of its citizens.

Training in sociology provides students with new perspectives on social interaction and change. Students discover that what they had "always known" is not so, that apparently irrational behavior of friends and family has social significance, and that nothing is simple. Such perspectives are extremely valuable in seeing oneself in social perspective, in resolving interpersonal problems, in developing effective interpersonal relations in organizational structures, and in understanding transactions between bosses and employees. Thus sociology is a useful major for students who hope for careers that involve dealing with people, or who

Sociology and Anthropology

Professors Ballantine (chair), Cargan (Emeritus), Cross (Emeritus), Islam, Melko, Savells, Siegal, Welty

Associate Professors Koebernick, Orenstein, Riordan, Shepelak

Assistant Professors Bellisari, Murray, Rome, Son, Steinberg (WSU Lake Campus)

Departmental programs in sociology and anthropology each provide majors leading to the Bachelor of Arts degree.

Sociology

Sociology is concerned with social relations: how people relate to each other as individuals; how they interact in families; how they communicate in business and governmental situations; how they behave collectively in large groups under conditions of stress (as in a football stadium or during a tornado); how their behavior is affected by city or rural living; and how their behavior comes to be perceived as socially acceptable, deviant, illegal, or immoral.

Obviously, human interaction plays a large part in the work and life of all of us. Sociology attempts to observe and measure these interactions, so that we have a better idea of why our social behavior is as it is, so that we can develop programs to change behavior in ways that are likely to be beneficial to individuals and to society, so that we can predict likely outcomes from certain situations, and so that we can better understand what happens, even if we cannot affect it.

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Sociology and Anthropology

Liberal Arts

Writing-Intensive Courses
In fulfilling departmental requirements, sociology majors will encounter five or more upper-level courses in which they will have the opportunity to develop their writing skills and thinking capacity.

Sociology Honors Program
Qualified students are encouraged to conduct independent research in sociology by enrolling in the department's honors program. Students are eligible for the program if they have a grade point average of 3.0 overall and 3.5 in sociology. Departmental honors are awarded at graduation upon completion of an honors project under the guidance of a faculty member who serves as an individual's honors adviser. Credit for the project is obtained under SOC 490. The program provides an opportunity for superior students to focus attention on topics that they find significant. Additional information is available from the departmental office.

Degree Requirements—Sociology

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 59
SOC 201, 204, 301, 303, 306, 406
Any three of the following:
SOC 320, 340, 345, 360, 380, 442
300- to 400-level SOC electives (minimum)
Other SOC electives
Related Electives

Twelve hours in any single social science discipline at the 300-400 level (anthropology, economics, psychology, geography, social work, political science, communication, history, and urban affairs)

Foreign Language or Research Methods Requirement 20-24
Electives 40-44

Total 192

Minor in Sociology
The minor in sociology provides concentrations to augment the education of students in many fields. Students take SOC 306 (Sociological Methods) and five courses at the 300–400 level, four of them from one of the following concentrations: social organizations; deviance/criminology; social change; family/socialization. The total credit hours required in sociology is 28 for the minor.

Anthropology
Anthropology attempts to study the behavior and biology of the human species in all places and at all times. In order to accomplish this rather far-reaching goal, anthropologists draw on the social and biological sciences to utilize all available information and integrate it into a unique perspective.

Cultural anthropology exposes students to ways of life, belief systems, and value systems that differ from their own and thus gives them a better understanding of their own culture. It shows them the great diversity of ways in which cultures deal with universal human problems, from the basic needs of food and shelter to the metaphysical questions of existence that each of the world’s religions attempts to answer. Typical subjects for anthropological study include relationships between language and culture, ecology and subsistence.
techniques, kinship systems, economics, political systems, religion, and cultural change.

Archaeology also deals with cultures, but those of the past rather than the present. Archaeologists search for and study the material remains of past cultural activity, and attempt to reconstruct the behavior patterns, technology, and social customs of people that no longer exist. This provides students with an historical view of human behavior that complements the studies of cultural anthropologists.

Physical anthropology focuses on the biological aspects of the human species. Human behavior and biology are the result of a long evolutionary history, and physical anthropologists study the fossil evidence for human evolution. Studies of biological variability in modern populations are also part of this discipline, since many differences in physical characteristics among populations represent adaptations to different environments.

Students should emerge from an anthropology major with increased insight into their own behavior and its cultural context. They should also have an increased understanding of the source of behavioral and biological differences between themselves and people of other cultures and subcultures. The concept that our way of doing things is simply one way of solving a particular problem, not the only way or the proper way, should lead to improved relations among people of all backgrounds.

Anthropology majors should normally complete the 200-level introductory courses before taking 300- or 400-level courses.

Anthropology Honors Program

Qualified students are encouraged to conduct independent research in one of the subfields of anthropology by enrolling in the department's honors program. Students are eligible for the program if they have an overall grade point average of 3.0 and an anthropology average of 3.5 by the end of their junior year. Departmental honors are awarded at graduation upon completion of an honors project under the guidance of a faculty member who serves as an individual's honors adviser. Credit for the project is obtained under ATH 492. Additional information is available from the departmental adviser.

Degree Requirements—Anthropology

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 53

ATH 250, 241, 242, 448 13
Cultural electives 16
Archaeology electives 12
Physical electives 4
Open elective 8

Within the archaeology electives, students must choose at least one methods/theory course and one area course. ATH 369, Field School in Archeology, may count for no more than 6 hours toward major requirements.

Within the cultural electives, students must choose at least one of the following:

ATH 340, 346, 349, 450

Related Requirements 24

Selected from economics, geography, history, political science, psychology, sociology, and certain courses from biological sciences, geological sciences, and communication

Foreign Language or Research Methods Requirement 20–24

Electives 34–38

Total 192

Minor in Anthropology

The minor in anthropology provides a cluster of courses that constitutes a coherent introduction to the subfields of the discipline. It is intended for students in other major fields of study who wish to supplement those areas with anthropological perspectives.

The minor in anthropology contains 29 credit hours. This includes 12 hours in three introductory courses (ATH 250, 241, 242) which expose students to the subfields of cultural and physical anthropology and archaeology. Upper-level courses are structured to ensure that students have an opportunity to examine the content of each subfield in greater depth. The required course in theory can be taken in either archaeology (ATH 468) or cultural anthropology (ATH 448).

Requirements

ATH 250, 241, 242 9
Two courses from cultural anthropology: 8
One course from: ATH 340, 346, 349, 450
One course from: ATH 341, 343, 344, 399, 446, 447
One course from archaeology 4
One course from physical anthropology 4
One theory course (ATH 448 or 468) 4

Total 29

Students are expected to maintain a 2.0 overall grade point average.
Theatre Arts

Professors Britton, Derry
Associate Professors Blair, Broglio, Hetherington, Lafferty (chair)
Assistant Professors David, Dugan, Klein, Langsner-Crews, Olsen, Reichert, Rodriguez, Walker, White

The Department of Theatre Arts is devoted exclusively to the training and education of undergraduate students in the areas of dance, motion pictures, and theatre, and offers curricula leading to the Bachelor of Arts and the Bachelor of Fine Arts degrees.

The Department of Theatre Arts is empowered by the Ohio Revised Code to "require particular preliminary training or talent" for admission to specific programs, and each of the six B.F.A. degree programs has specific criteria for admission to each level of training. Students in all areas must achieve a minimum grade point average of 2.0 by the end of the freshman year to be eligible to continue as a major. Students who wish to be admitted as majors in acting, dance, design/technology, or directing/stage management must successfully pass an audition or interview or portfolio presentation. Transfer students are admitted into B.F.A. programs on the basis of a successful audition, interview, or portfolio presentation. An open admissions policy remains in force for students wishing to major in the B.A. programs in theatre studies and motion picture history, theory, and criticism, and B.F.A. programs in arts management and motion picture production.

Cooperative Education Program

The Department of Theatre Arts offers its majors the opportunity to participate in Wright State University's Cooperative Education Program. Cooperative education is an optional program which joins participating theatre arts majors, employers, and motion pictures faculty in a formalized process of experience-based learning. Students who enroll in cooperative education supplement classroom study in theatre arts with related work experience for which they earn additional credit after submitting a written report of their cooperative education experience to the area coordinator. Through this program, theatre arts majors can improve their professional preparation by acquiring marketable job skills; gain practical experience related to their course of study under the guidance of professionals in the business; learn to apply their formal education to practical problems encountered in actual work situations; begin to make career choices; and earn income for college expenses.

Dance

The program in dance is designed to prepare students for a career in performance, teaching, or choreography in a variety of professional situations. This unique program fuses into the dance major curriculum theatrical and musical training that enables dance students to prepare for either specialized careers in modern or in ballet companies, or diversified careers in the professional theatre as a dancer who sings and acts.

The underpinning of the dance curriculum is the daily class in modern technique with additional training in modern and jazz-theatre dance. Classes in choreography, dance pedagogy, and dance history are required. Seniors must complete an individually choreographed senior dance project. Required courses outside of dance include studies in theatre, acting, music theory, music literature, and singing.

All students must successfully audition for admission into the dance program. All transfer students are required to audition for acceptance and placement. Retention in the dance program is predicated on the continual growth of students as judged by the faculty, the maintenance of a 2.5 gpa in all dance courses, and a 2.0 gpa overall. Formal evaluations are conducted at the end of each academic year and a positive recommendation by the dance faculty is required prior to enrollment for the next level of training.

Exceptional dance majors are selected to study and to perform as members of Dayton Ballet II or Dayton Contemporary II. These dancers are awarded scholarships from the Theatre Arts Department.

Dance majors are required to audition for the Wright State Dance Ensemble. Other auditions may be required as specified by the dance faculty for other performances, including lecture-demonstrations, choreographic presentations, dance tours, and dramatic and musical productions. Dance majors must maintain a minimum grade point average of 2.0 to be eligible for graduation.

Degree Requirements—Dance

Bachelor of Fine Arts Degree

General Education Requirements 57

Required substitutions:
TH 214

Departmental Requirements 102
DAN 101, 102, 103, 111, 112, 113, 201, 202, 203, 211, 212, 213, 251, 252, 253, 301, 302, 303, 311, 312, 313, 321, 322, 323, 341, 342, 343, 371, 372, 373, 399 (6 hours), 401, 402, 403, 411, 412, 413, 421, 422, 423, 491, 492, 493

Related Requirements 24
TH 147, 148, 149
MUS 141, 142, 143, 110 (3 hours)
MUS 114, 118, 121, 122

Electives 9

Total 192
Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**Motion Pictures**

The curriculum in motion pictures provides a comprehensive study of film as a fine art. Because of its ability to convey the entire spectrum of human experience and imagination, film can be used as a means of exploring those fundamental areas that have always been the preoccupation of the liberal arts. The study of film production can provide the individual with an effective and forceful means of artistic expression. To these ends, the curriculum offers two options: the Bachelor of Arts degree in theatre with a concentration in motion picture history, theory, and criticism, and the Bachelor of Fine Arts degree in theatre with a concentration in motion picture production.

Students are admitted to the motion picture production program (B.F.A. degree) after having completed 24 credit hours, if they achieve an overall grade point average of 2.25, and have completed TH 131 and TH 180 with grades of B or above. Before a major may begin the junior or senior year of the production sequence, he or she must have a 2.5 grade point average in all production classes, a 2.5 grade point average in all film history/theory classes, and a 2.25 overall grade point average. As well, students must have completed six film history/theory courses, not including TH 131, and have earned at least 85 credit hours. Finally, students must submit original media work to the faculty for evaluation.

To be accepted to the third year, majors must be trained, disciplined, and show promise of benefiting from continued training. In their third year, all production students are expected to demonstrate growth in film technique and to accumulate additional credits in film history, theory, and criticism as well as credits in general education and electives. Eight theory classes and 125 credit hours must be earned before the student may register for the senior film. All production incompletes must be finished before a major may sign up for subsequent production courses. Any student whose overall grade point average goes below 2.25 will be suspended from production classes and the use of facilities until the grade point average is raised. The faculty reserves the right to totally suspend from the program any student who does not fulfill these continuing requirements. Students may be reinstated if the requirements are subsequently fulfilled.

**Motion Picture Honors Program**

The honors program of motion pictures provides students of superior academic ability the opportunity to use, broaden, and demonstrate their knowledge and skills. To earn a degree with honors, students must complete the departmental major...
requirements, maintain a superior grade point average throughout their course of studies, and successfully complete a senior honors project, TH 499, sometime in the senior year. To apply for admittance to the honors program, students must have a cumulative grade point average of 3.5 in their major and an overall grade point average of 3.25. Both B.A. and B.F.A. students should contact the coordinator of the motion pictures area or the department chair.

Degree Requirements—Motion Picture History, Theory, and Criticism

Bachelor of Arts Degree

The Bachelor of Arts degree integrates a liberal arts education with an appreciation of the diverse aesthetic, social, and historical aspects that constitute the film medium. Since film is a highly eclectic medium of expression, a coordinated program of elective courses is designed for each student.

General Education Requirements

Required substitutions:
ART 214 or TH 214 for art requirements

Departmental Requirements

TH 131, 180, 231, 232, 233, 334
Additional courses in motion picture history, theory, and criticism, to be chosen from:
TH 331, 332, 333, 399, 435, 499
Additional production courses to be chosen from:
TH 281, 282, 283, 381, 382, 383, 436, 499

Related Requirements

ART 207
MUS 121 or 214
One of the following:
EDT 455, COM 152, COM 251; COM 399—video or appropriate substitute

Foreign Language Requirement

French or German recommended

Electives

Note: No more than 7 credits of electives may be from theatre. English, history, and art courses are highly recommended.

Total

Degree Requirements—Motion Picture Production

Bachelor of Fine Arts Degree

The Bachelor of Fine Arts degree is designed to give students preprofessional training for vocations closely related to film and video production while simultaneously providing them with the opportunity to develop their creative faculties.

General Education Requirements

Required substitutions:
ART 214 or TH 214 for art requirements

Departmental Requirements

Additional courses in motion picture history, theory, and criticism, to be chosen from:
TH 331, 332, 333, 399, 435, 499

Related Requirements

ART 207, 258, 259
MUS 114; 121 or 214
Two of the following:
EDT 455, 456; COM 152, 251, 399—video or appropriate substitute

Electives

Note: There is no limit on the number of electives which may be theatre courses.

Total

Sample

Theatre Arts (Film Production)

Freshman Year

First Quarter

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<td>TH 131</td>
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<td>ENG 101</td>
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<td>Great Books*</td>
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Second Quarter

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Third Quarter

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<td>TH 281</td>
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<td>TH 331</td>
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Sophomore Year

Fourth Quarter

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<tr>
<td>TH 232</td>
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<td>TH 282</td>
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<td>TH 332</td>
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Fifth Quarter

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<th>Course</th>
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<td>TH 233</td>
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<td>TH 333</td>
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<tr>
<td>TH 283</td>
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</table>

Note: Courses marked with an asterisk (*) are highly recommended.
### Degree Requirements—Acting

**Bachelor of Fine Arts Degree**

The acting program is an intensive four-year progression of studies in acting, voice, movement, dance, and singing. Because of the necessarily sequential nature of the acting program, students are generally admitted only in the fall quarter. The third and fourth years are devoted to a Professional Actor Training program which is necessarily limited to selected, superior students of serious intent capable of high achievement in acting. Admission to the Professional Actor Training program is by audition only at the end of the sophomore year. The first two years of the acting program are in preparation for this audition. Retention in the program is based on students' growth and development as judged by the acting faculty. All students in the program must receive a grade of C or better to continue in any of the acting sequences. A 2.5 overall grade point average is required for graduation.

**General Education Requirements**

- **Required option:** TH 214
- **Departmental Requirements**
- **Related Requirements**
  - MUS 141, 142, 143, 110 (9 hours)
  - DAN 111, 112, 113
  - Electives 17.5

**Total** 192

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### Sample

#### Theatre Arts (Acting)

**Freshman Year**

<table>
<thead>
<tr>
<th>Quarter</th>
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<tr>
<td><strong>First Quarter</strong></td>
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<td>TH 145</td>
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<td>DAN 112</td>
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<td>MUS 142</td>
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<td>HST 102</td>
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<td><strong>Third Quarter</strong></td>
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<td>TH 146</td>
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<td>TH 120</td>
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<td>DAN 113</td>
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<td>MUS 143</td>
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*Continued on next page*
Sophomore Year

Fourth Quarter 16
TH 240 1 TH 244 3
TH 254 2 MUS 110 1
DAN 214 2 ENG 204 3
BIO 105 4

Fifth Quarter 17.5
TH 241 1.5 TH 245 3
TH 256 2 MUS 110 1
DAN 216 2 TH 222 3
BIO 106 4

Sixth Quarter 16.5
TH 242 1.5 TH 246 3
TH 256 2 MUS 110 1
DAN 216 2 CST 3
BIO 107 4

Junior Year

Seventh Quarter 14
TH 340 2 TH 344 3
TH 354 2 TH 360 3
MUS 110 1 SOC 200 3

Eighth Quarter 14
TH 341 2 TH 345 3
TH 355 2 TH 361 3
MUS 110 1 PLS 200 3

Ninth Quarter 11
TH 342 2 TH 346 3
TH 356 2 MUS 110 1
EC 200 3

Senior Year

Tenth Quarter 14
TH 440 3 TH 444 2
TH 454 2 TH 366 3
MUS 110 1 MTH 105 3

Eleventh Quarter 17
TH 441 2 TH 445 3
TH 455 2 TH 367 3
TH 447 3 MUS 110 1
RST* 3

Twelfth Quarter 17
TH 442 2 TH 446 3
TH 456 2 TH 368 3
TH 448 3 MUS 110 1
Elective 3

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

Degree Requirements—Design/Technology

Bachelor of Fine Arts Degree

The program in design/technology will prepare students for careers in professional theatre as designers (costumes, lights, scenery) or as technicians (technical director, theatre craftspeople). Upon graduation students have three options: further study on the graduate level, apprenticeship to professional designers, or employment in professional theatre. All design/technology majors must undergo an evaluation by the faculty at the end of each year’s study. Retention in the program is based on the continual growth of students as determined by the faculty. Professional theatre internships are available for exceptional students.

General Education Requirements 57

Required option:
TH 214

Departmental Requirements 123
TH 124, 125, 126, 147, 148, 149, 210 (18 hours), 220, 224, 225, 226, 227, 228, 229, 320 (18 hours), 328, 329, 360, 361, 362, 366, 367, 368

One of the following concentrations:

Technology Concentration
TH 420 (18 hours), 429 (6 hours), and 6 hours chosen from TH 324, 325, and 326

Design Concentration
TH 324, 325, 326, 424, 425, 426, and 429

Electives 12

Total 192

Degree Requirements—Directing/Stage Management

Bachelor of Fine Arts Degree

The directing/stage management major completes the first two years of the acting program before specializing during the junior and senior years in courses related to directing. Most students in this major should plan on continuing their studies at the graduate level; students concentrating in stage management are encouraged to consider graduate level studies, but may find internships or apprenticeships more desirable.

The directing/stage management program requires a minimum overall grade point average of 2.5. Students who wish to enter the program must audition for the acting program and interview for the directing program. Acceptance is based on faculty judgment of the students’ potential as a professional stage managers or as graduate students in directing. Such qualities as self-discipline, academic record, motivation, and communication and interpersonal skills will be considered. Directing opportunities are reserved for students who have won the confidence of the faculty by having demonstrated theatrical knowledge and skills, responsibility and reliability, good judgment, and effective interpersonal relations.

General Education Requirements 57

Required option:
TH 214

Departmental Requirements 76.5-79.5
TH 120, 131, 144, 145, 146, 222, 240, 241, 242, 244, 245, 246, 254, 255, 256, 350, 352, 360, 361, 366, 367, 368, 375, 399 (3 hours), 410 (3 to 6 hours), 450, 451, 452
Related Requirements 12
DAN 111, 112, 113
MUS 141, 142, 143, or 110 (3 hours)
Electives 43.5-46.5
Total 192

Degree Requirements—Theatre Studies

Bachelor of Arts Degree

Students majoring in theatre who elect to work toward the Bachelor of Arts degree combine the advantages of a liberal arts education with preparation for a career in one or more areas of theatre or in areas related to theatre. Students are encouraged to maintain a balance between theory and practice and among the various arts of the theatre, gaining insight and perspective through studies in art, history, literature, music, philosophy, religion, and science.

General Education Requirements 57
Required option:
TH 214

Departmental Requirements 49-51
TH 131, 147, 148, 149, 222, 360, 361, 366, 367, 368
Additional electives chosen from:
TH 304, 328, 329, 350, 362, 370, 375, 399 12-14
Additional electives in theatre 9
Foreign Language 20
Electives 64-66
Total 192

Urban Affairs

Associate Professor Mazey (chair), Pammer
Assistant Professor Dustin

Urban Affairs is an undergraduate interdisciplinary program in the College of Liberal Arts. The program offers a Bachelor of Arts or Bachelor of Science degree. The objective of the program is to provide students with an appreciation of the urban environment as a complex system and to motivate students to approach urban processes from an interdisciplinary perspective. More specifically, the program is designed to prepare some students for junior- or entry-level positions in both local government and selected community agencies. The program may also serve the needs of students preparing for graduate work. To be admitted as majors, students must have at least a 2.3 grade point average.

Majors are required to complete a common core of courses and then are asked to select a specialization in one of three areas: urban planning, public management, or criminal justice.

Individuals may apply for admission any time. Students will be notified of acceptance by mail. For additional information about the program and admission criteria and procedures, contact the Department of Urban Affairs.

The Department of Urban Affairs administers two outreach centers—The Center for Urban and Public Affairs and the Center for Labor-Management Cooperation. The Center for Urban and Public Affairs is anchored upon the academic undergraduate degree program. Its primary mission, however, is outreach that provides applied research, technical assistance, and data base development to the metropolitan region. Through the applied research orientation, the center provides, primarily through contract research, professional services to a wide range of clients. To provide technical assistance, the center offers workshops, conferences, and seminars to facilitate the exchange of information, particularly in the area of public policy issues, among all sectors of the population. Finally, through data base development, the center provides a broad range of social, economic, political, and geographical data for the Dayton-Springfield metropolitan area, the state, and the nation. These include periodic publications for dissemination.

The Center for Labor-Management Cooperation was established by the Department of Development of the State of Ohio, in cooperation with Wright State University, to establish labor-management cooperation as a common practice, in order to maintain and attract new jobs to this area. Assistance is provided to labor and management in choosing and implementing joint initiatives for change or improvement through training programs, conferences, workshops, consultation, facilitation, books, research, and ongoing support for the continuing development of on-the-job cooperation.

Degree Requirements—Urban Affairs

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 68
URS 311, 411, 492 14
EC 330 3
GEO 311, 340 8
PLS 321, 345 8
SOC 444 4
HST 316 4
Urban Affairs specialization 27
Related Requirements 4
ENG 330 or 343 4

Liberal Arts

Urban Affairs
**Foreign Language or Research Methods Requirement**

<table>
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<td>Fine Arts*</td>
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<td>MIS 100**</td>
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**Sophomore Year**

**Fourth Quarter**

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<td>URS 311</td>
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**Fifth Quarter**

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<td>ENG 330 or 343</td>
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<td>PLS 210**</td>
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**Sixth Quarter**

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<td>HST 316</td>
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**Junior Year**

**Seventh Quarter**

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<tbody>
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**Eighth Quarter**

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**Ninth Quarter**

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**Senior Year**

**Tenth Quarter**

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**Eleventh Quarter**

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**Twelfth Quarter**

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</tr>
<tr>
<td>Elective</td>
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</table>

* Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

** or Language option.

***Courses are listed in the Degree Requirements above to meet the requirements for the specialization areas of criminal justice, urban planning, or public management.

†There are university-approved substitutions for MTH 105; refer to pages 62-67 in the General Education Requirements or consult with your academic adviser.
Nursing
Admission Criteria

New Students
All new students interested in nursing will be admitted to the university as prenursing students. All students will be advised in the University Division until they meet the following three criteria: They must complete 59 quarter credit hours; a cumulative grade point average of 2.5 or higher is required, as well as a C or better in all science courses and MTH 105; and students must successfully complete ENG 101 and 102, PSY 105 and 110, CHM 101 and 102, MTH 105, COM 102, ANT 201, and M&I 220. Students may then be admitted to the School of Nursing to complete their program.

Transfer Students
Transfer students must meet the same requirements as the new students. If students do not have the necessary prerequisites, they will be admitted as prenursing students and advised in the University Division until they meet the requirements as listed for new students, including a grade point average of 2.5 or above. Transfer students with 75 or more credits will be advised in the School of Nursing.

Transfer students with baccalaureate nursing credits from another accredited nursing program will have their nursing credits evaluated in the School of Nursing.

Other Requirements
All students must fulfill current health requirements, including immunizations, and certify they are in good health and capable of actively participating in clinical experience and fulfilling all program objectives. A physical examination confirming this must be completed by the students' health care provider and sent to the School of Nursing prior to the completion of NUR 217. The documentation of health requirements must be repeated each year thereafter.Faculty may request reexamination if evident limitations interfere with clinical practice or learning.

All students are required to purchase liability (malpractice) insurance in the amount specified by the School of Nursing. A form is available in the School of Nursing office. Students must also document evidence of personal health insurance. Students must submit proof of CPR certification prior to the completion of NUR 217. CPR certification must be renewed annually.

Students must provide their own transportation to all clinical agencies.
Nursing

Honors Program

Students with high academic ability may participate in the honors program, which emphasizes independence, self-direction, and in-depth study in an area of interest to the student. Application forms are available in the School of Nursing office. To be eligible, students must have a 3.2 or higher grade point average for the 45 credit hours immediately preceding the winter quarter of their junior year. The applications are reviewed by the School of Nursing Scholarship Committee. Final acceptance into the program is contingent on successful completion of NUR 308 or NUR 312.

Degree Requirements

Bachelor of Science in Nursing Degree

General Education Requirements 65

Required Substitutions
Natural Science:
CHM 121 or 101, 102
BCH 250
PHR 340
Behavioral Sciences:
PSY 105 and PSY 110

Support Courses 40

ANT 201, 202
M&I 220
P&B 301, 302, 303
PSY 311 and 341
SOC 360
COM 102

Nursing Requirements 74

NUR 209, 212, 217, 218, 304, 312, 313, 411, 412, 413, 414 or 415

Free Electives 13

Total 192

Major Requirements

Nursing

It is essential that students take designated courses in sequence, especially the upper division nursing courses. Following is the plan of study for students who choose to complete the program in four academic years plus one sophomore summer.

Freshman Year

First Quarter 14.5

ENG 101 4
HST 101 3
MTH 105 4
CHM 101 3

Second Quarter 15.5

ENG 102 4
HST 102 3
PSY 105 4
CHM 102 4.5

Third Quarter 13

COM 102 3
HST 103 3
PSY 110 4
SOC 200 3

Sophomore Year

Fourth Quarter 16

ANT 201 4
PSY 341 4
M&I 220 5
PLS 200 3

Fifth Quarter 15

ANT 202 4
PSY 311 4
Free Elective 4

Sixth Quarter 16

P&B 301 4
NUR 209 5
SOC 360 4
EC 200 3

Seventh Quarter 13

P&B 302 4
BCH 250 4

Eighth Quarter 14.5

P&B 303 4
NUR 218 5
PHR 340 3

Ninth Quarter 16

NUR 212 3
NUR 312 10
CST* 3

Tenth Quarter 16

NUR 313 10
NUR 304 3
RST* 3

Senior Year

Eleventh Quarter 17

NUR 411 10
NUR 414 3
Free Elective 4

Twelfth Quarter 13

NUR 412 10
Great Books* 3

Thirteenth Quarter 15

NUR 413 10
Free Elective 5

Total 192

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

There is also a plan of study for students who choose to complete the program in three calendar years plus fall quarter. Students who change from one plan to the other will be admitted to the alternate plan on a space-available basis only.

The School of Nursing faculty reserves the right to revise the nursing requirements or the sequence as deemed necessary at any time to prepare students for new and emerging roles in nursing. Course requirements or sequence scheduling may be changed.

A science course can be repeated one time only. A maximum of two science courses may be repeated. Students may repeat one nursing course. A subsequent failure of any nursing course will result in dismissal from the program.
Registered Nurses

Wright State University welcomes registered nurses to its program.

Two nursing courses (13 credit hours) assist registered nurses in the transition to baccalaureate nursing education. These transition courses, NUR 308 and 318, designed to build on the competencies of registered nurses, are taken in lieu of the six nursing courses (45 credit hours) taken by generic baccalaureate nursing students. Registered nurses will also complete the courses designed for all baccalaureate nursing students (NUR 212, 304, 412, 413, and 414 or 415).

Associate degree graduates with a major in nursing may complete all the requirements for the Bachelor of Science in Nursing degree at Wright State University in two calendar years of full-time study. Diploma graduates without university credits will require a longer period of study.

Philosophy

The School of Nursing supports Wright State University’s purposes relating to teaching, research, and service. The faculty believe in the acquisition of knowledge from the past and present, as well as exploration of new knowledge, in the advancement of lifelong learning, the search for basic truth, and in the commitment of the university to solution of problems affecting the larger community.

Human existence involves behavioral patterns, constant change, and interaction with biological, psychological, social, spiritual, and other forces in the environment. Although human existence contains elements of similarity, people are the unique products of their genetic heritage in continuous and dynamic interaction with life experiences. Humanity is viewed in terms of ability to act and react in relation to a continuous process of change resulting in increasing complexity. Each individual functions within a set of values with the potential to be a thinking, creative, dignified, rational being.

Society within the human environment is composed of individuals, families, groups, and communities sharing a variety of common goals and values that change as the interests and needs of the members change. Social change evolves through the mutuality of relationships and the interaction of political and social forces that affect the individual’s rights, responsibilities, and obligations. These dynamic forces determine the values and expectations placed on the health care system as an integral part of society. The individual’s interaction with the health care system is a reciprocal experience.

Health is the dynamic pattern of functioning whereby there is a continuous interaction with internal and external forces in an attempt to achieve the goal of maximum health potential. Health is influenced by inherent capabilities, growth and development, culture and perception. Human dignity and the quality of life are influenced by the degree of vulnerability to health impairments and depletions. The availability of a variety of resources will influence health and serve to decrease vulnerability.

The practice of professional nursing is humanitarian in nature and requires a knowledge base in nursing. The integration of scientific, humanistic, and nursing concepts and theories, attainable through research, gives direction to this practice. The nursing process is used with individuals and groups to maximize their potential for health. In its totality it includes assessment, diagnosis, planning, implementation, and evaluation, and is the essence of professional practice. The process of nursing is interpersonal and caring in nature.

The emerging role of the nurse involves a greater amount of independence in practice and an increasing accountability to the consumer of health and nursing care. This can be achieved through individualized care given on a continuous basis and over a period of time. The professional nurse will increasingly be viewed at the nucleus of the health care system, as well as an advocate for the consumer. Through leadership and interaction skills, the nurse will act in concert with the client as well as other health professionals for health promotion and maintenance.

The baccalaureate program in nursing prepares a self-directed graduate with a breadth of knowledge in nursing who functions as a generalist in a variety of health care settings. This graduate is capable of functioning as a leader and as an initiator of change in the care-giving situation; supporting change within the health care system; coordinating and collaborating with consumers and interdisciplinary health team members; and utilizing selected theories, concepts, and research findings. Experiences are provided to help students define their role and develop personal and professional values and beginning clinical competencies. This baccalaureate program provides the base for master’s preparation in nursing.

Graduate nursing education, based on the first professional degree, the Bachelor of Science in Nursing, prepares the graduate for the advanced application of theory to professional practice. As a practice profession, nursing is based on the utilization of theories to describe the unique relationships among persons and their health status. Advanced practitioners of nursing are prepared to use analytical skills in applying theories to practice for a variety of roles and functions in specialized settings. Inquiries emerge from professional nursing practice which in turn form the essence of nursing research. The master’s program provides the base for doctoral study in nursing and continued professional development.

Learning is a dynamic, lifetime growth process of behavioral changes that involves the development of maximum potential through a spirit of inquiry and self-motivation. Learning is a sequential process and combines cognitive, affective, and psychomotor components. The learner has responsibility for independence, self-direction, and reaching a level of self-realization. The educator has responsibility for
determining and implementing quality education, which is accomplished through sharing, counseling, guiding, and challenging. The educator and learner in nursing must continually evolve a greater understanding of the relationships among theory, research, and practice. This understanding facilitates the development of nursing theory and practice, provides a climate conducive to intellectual pursuits, contributes productively toward the highest standards of teaching, and encourages independent thought and creative endeavors.

Characteristics of the Graduate

The characteristics of the graduate are stated as broad, descriptive objectives that focus on the philosophy's concepts of humanity, society, health, professional nursing, and learning. These objectives are viewed by the faculty as representative of a commitment to quality nursing care, to the student, and to the consumer of health care. These objectives also serve as essential guidelines to the faculty and students, especially in matters relating to the curriculum such as the development of level and course objectives. The graduate will:

1. assess and diagnose the health status of individuals, families, groups, and communities; plan, implement, and evaluate nursing care in any setting.
2. synthesize knowledge from concepts and/or theories within the humanities, sciences, and nursing for the practice of professional nursing.
3. provide professional nursing care recognizing the uniqueness of clients in relation to their biological, psychological, social, and spiritual health status, life span development, and health potential.
4. incorporate the interpersonal process to assist individuals, groups, families, and communities to maximize their potential for health.
5. employ leadership theories to collaborate with the health care team for the coordination of client care.
6. integrate ethical and legal aspects of practice with professional values in the delivery of health care.
7. use nursing research to enhance the quality of nursing and health care within a practice setting.
8. use the change process to improve health and nursing practice in a rapidly changing society.
9. demonstrate responsibility for self-direction in lifelong learning by participating in activities that contribute to personal and professional growth.
Science and Mathematics
Admission and Advising

Admission to the College of Science and Mathematics is by application. The following requirements must be met: completion of at least 24 credit hours with a minimum grade point average of 2.0 overall; completion of at least two courses in the College of Science and Mathematics (or transfer equivalents) with minimum grades of C. Individual departments may specify requirements, such as specific courses or higher grade point averages overall or in the major only.

After review by the office of the dean, each student will be assigned an adviser in the appropriate department, who will assist the student in developing a program of study.

Master of Science Degree

Programs leading to a Master of Science degree are offered in biological sciences, chemistry, geological sciences, mathematics, and physics. There are also two graduate programs intended primarily for secondary school teachers. The Master of Science in Teaching with specialization in earth science is offered by the geological sciences department and the physics department offers the M.S.T. with a specialization in physics.

The College of Science and Mathematics and the College of Liberal Arts participate in a multidisciplinary program leading to the degree of Master of Arts in applied behavioral science. The program is jointly administered by a steering committee with representatives from the Departments of Psychology, Political Science and Urban Affairs, and Sociology and Anthropology.

Doctor of Philosophy Degree

A Ph.D. degree program in biomedical sciences is cooperatively administered by the College of Science and Mathematics and the School of Medicine. The biomedical sciences program is staffed by the largest program faculty on campus. This doctoral program requires approximately four years of study. The first year curriculum consists primarily of an interdisciplinary basic biological core. After successfully completing the core courses, students will pursue scholarly research,
present seminars, and gain teaching experience. Final degree requirements are met by satisfactorily defending an acceptable written dissertation.

Degrees and Areas of Study
Requirements for the Bachelor of Science Degree
To be eligible for the Bachelor of Science degree, students must:
1. fulfill the university General Education requirements.
2. complete the residency requirement of 45 credit hours at Wright State. At least fifteen of the last 45 hours for the degree must be taken in residence.
3. complete at least 183 credit hours of acceptable academic work with at least a 2.0 cumulative grade point average and at least a 2.0 grade point average in a major field. A student may find it necessary to earn more than 183 credit hours to meet the requirements of the curriculum chosen.
4. complete at least 75 credit hours in advanced courses (numbered 200 and above) applicable to the degree.
5. complete at least 54 credit hours in one department; by permission of the department chair, up to 18 hours of this requirement may be taken in a closely related field.
6. complete all the requirements in one of the approved programs of study established by the departments or within the college. A student must take at least 95 credit hours outside the major department.

Requirements for the Bachelor of Arts Degree
To be eligible for the Bachelor of Arts degree in the College of Science and Mathematics, students must complete the requirements listed for the Bachelor of Science and must also:
1. complete at least 27 credit hours in departments outside the College of Science and Mathematics and the College of Engineering and Computer Science. The level and type of courses to be taken are subject to the discretion and approval of the student’s major department. These courses are in addition to those needed to fulfill the General Education requirements.
2. complete at least three courses in a department in either the College of Science and Mathematics or the College of Engineering and Computer Science other than the major department. These courses are in addition to those needed to fulfill the General Education requirements.

Honors Program
Departmental honors programs are available in biological sciences, chemistry, computer science, geological sciences, mathematics and statistics, physics, and psychology. These honors programs give well-qualified students the opportunity to carry out an independent research project and pursue advanced course work. Students interested in pursuing an honors program should consult with the chair of the appropriate department. Honors are awarded at graduation, upon completion of requirements.

Cooperative Education Program
The cooperative education program permits students to integrate work experience into their academic programs. The nonacademic credit model is available in the departments of the College of Science and Mathematics.

Teacher Certification
Students seeking certification to teach in secondary schools should make application for admission to the teacher certification program at the beginning of their sophomore year. These students should contact a teacher certification adviser in the College of Education and Human Services.

Anatomy
Professor Zambemard (chair)
Associate Professors Jennes, Nagy, Nieder, Pearson, Ream, Scott
Voluntary Associate Professors Makkar, Phillips
Assistant Professor Kunizman

The Department of Anatomy encompasses the areas of gross anatomy, microanatomy (histology, cell biology, ultrastructure [TEM and SEM]), embryology, and neuroanatomy. The department provides limited course work at the undergraduate level for students planning to enter medicine, nursing, and other health-related professions. Our department also provides course work at the doctoral level under the auspices of the School of Medicine and the College of Science and Mathematics. In addition, the department also offers graduates for master’s degree candidates (two years) and a certificate in anatomy (one year).
Biochemistry

Professors Batra, Kmetec (Emeritus), Organisciak (chair), Weisman
Associate Professors Alter, Fritz, Leffak, Prochaska
Assistant Professors Boska, Cruz, Minth, Paietta, Reo

The Department of Biochemistry offers courses in the molecular aspects of gene expression and cellular processes, as well as in nutrition. Although the department does not offer a formal baccalaureate degree program, it can serve as an area of concentration for those interested in obtaining a background prior to pursuing a career in medicine and related biomedical sciences.

Honors Program

Under the biological sciences honors program, it is possible for students to do an undergraduate honors thesis with a faculty member from the Department of Biochemistry. Students interested in this area of study need background courses in biology, other life sciences, and chemistry.

Biological Sciences

Professors Arlian, Carmichael, Honda, Hubschman, Kantor, Moore (chair), Seiger
Associate Professors Amon, Barbour, Burton, Hull, Low, Mamrack, Rake, Rossmiller, Runkle, Wood
Assistant Professors Fink, Foley, Goldstein, Miller

The Department of Biological Sciences offers the following degree programs: Bachelor of Science and Bachelor of Arts in biological sciences, Bachelor of Science in medical technology, Bachelor of Science in environmental health sciences, and Master of Science in biological sciences. A dual major program with chemistry is available.

Note: There are minimum grade requirements for departmental courses in each of the undergraduate degree programs. See individual program degree requirements for specific details.

The teaching and research programs of the department are conducted in modern, well-equipped classrooms and laboratories. A 200-acre biology preserve on campus and nearby parks and preserves provide excellent opportunities for terrestrial and aquatic field studies.

Individual programs of study are planned with the assistance of a departmental adviser within the framework of university, college, and departmental requirements. Many undergraduate students include faculty-guided, independent-research projects in their academic programs.

Biological Sciences Honors Program

An honors program enables qualified students to carry out an independent project under the guidance of a faculty sponsor. Students who have maintained a cumulative grade point average of 3.4 during the preceding three quarters may apply to the Department of Biological Sciences to pursue an honors program. Application for admission to the program should be made during the junior year. Information concerning this program is available from the departmental office.

Biological Sciences

The Bachelor of Science curriculum offers a broad, integrated, in-depth approach to the life sciences. The departmental unit consists of a balanced core of courses selected from several subject areas combined with elective courses from the Departments of Biological Sciences, Anatomy, Physiology and Biophysics, Biochemistry, and Microbiology and Immunology.

Within this degree, several different options are open to students. Programs of study for students with such differing interests and objectives as graduate work in molecular biology, laboratory work in microbiology, field work in ecology, or preprofessional preparation for medical, dental, or veterinary sciences can be accommodated. The biobusiness option offers a business minor. Other curricular options within the Bachelor of Science degree in biology are general biology, genetics, microbiology, premedical, toxicology, and ecology.

All of the options for the Bachelor of Science degree in biological sciences have a similar pattern of course requirements which is outlined for the general biology option in the following section. The curriculum outlines for the other options are available from departmental faculty advisers and in the departmental office. Students will formulate a specific plan of study in consultation with their faculty advisers.

Degree Requirements—Biological Sciences

Bachelor of Science Degree

A grade of C or better must be achieved in each course used to fulfill the Departmental Requirements unit of the degree.

General Education Requirements

Required substitutions, which are also major program requirements:

BIO 112, 114, 115
MTH 228 or 229 and 230 or STT 164 and 265
Departmental Requirements 75-76

Area A (three courses)
BIO 112, 114, and 115 12

Area B (three courses)
BIO 202, 203, 204, 205, 206 15

Area C (three courses)
BIO 302/312, 303, 304, 305/308, 306, 403 15

Area D (one course)
BIO 307 or 402/405 6

Area E
BIO 492 2

Area F (life science electives)
A minimum of 25 hours selected from 300- and 400-level courses in the Department of Biological Sciences. Courses in physiology and biophysics, microbiology and immunology, anatomy, or biochemistry may also be used to satisfy Area F requirements. In certain specified programs, up to 10 hours of this requirement may be elected from 300- or 400-level courses in other departments in the College of Science and Mathematics. Students should consult their adviser regarding recommendations for specific programs.

Required Supporting Courses 65-70.5

CHM 121, 122, 123 15
CHM 211/215, 212/216, 213/217 18
PHY 111/101, 112/102, 113/103 or 250/255, 251/256, 252/257 15
MTH 229, 230, 231; or MTH 229 or 228, and STT 164/165, 265/266 13-15

Each student must also complete a laboratory course in analytical chemistry or a course in computer science (CS 205 recommended).

Electives 4-7.5

Electives 7.5-14

Total (minimum requirement) 196

**Sample**

Biological Sciences

Freshman Year

First Quarter 16-18

BIO 112 4
Mathematics** 3-5
ENG 101 4
CHM 121 5

Second Quarter 16-18

BIO 114 4
ENG 102 4
CHM 122 5
Mathematics 3-5

Third Quarter 16-18

BIO 115 4
Psychology 4
CHM 123 5
Mathematics 3-5

Sophomore Year

Fourth Quarter 17

BIO 206 5
CHM 211/215 6

Ancient History 3
Social Life 3

Fifth Quarter 17

BIO 206 5
CHM 211/215 6

History Transition 3
Political Life 3

Sixth Quarter 17

BIO 202 5
CHM 213/217 6

Modern History 3
Economic Life 3

Junior Year

Seventh Quarter 16

BIO 302/312 5
PHY 111/101 5

Great Books* 3
CST** 3

Eighth Quarter 17

BIO 305/308 5
PHY 112/102 5

Elective 0-3
CS 205 or CHM 312/314 4-7

Ninth Quarter 17

BIO 402/405 6
RST** 3

PHY 113/103 5
Elective 3

Senior Year

Tenth Quarter 14.5-17.5

BIO 402 3-5
BIO 402 1-2

Elective 6
BCH 421 4.5

Eleventh Quarter 13-17

BIO 499 1-3
Biology Elective 6

Electives 3
BIO 303 5

Twelfth Quarter 16

BIO 499 3
Biology Electives 10

Electives 3

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

**The mathematics placement examination is used to determine the initial mathematics course.

Degree Requirements—Biological Sciences

Bachelor of Arts Degree

The Bachelor of Arts curriculum is less structured than the Bachelor of Science curriculum. It provides a substantial foundation in the biological and physical sciences while the large number of elective credits allows students considerable flexibility in meeting their individual educational objectives. Students will formulate a specific plan of study in consultation with their faculty advisers.

A grade of C or better must be achieved in each course used to fulfill the Departmental Requirements and the Departmental Electives units of this degree.

General Education Requirements 57

Required substitutions, which are also major program requirements:
BIO 112, 114, 115
STT 164, 265
Departmental Requirements 50–51

Area A (three courses)
BIO 112, 114, 115 12

Area B (three courses)
BIO 202, 203, 204, 205, 206 15

Area C (three courses)
BIO 302/312, 303, 304, 305/308, 306, 403 15

Area D (one course)
BIO 307 or 402/405 6

Area E
BIO 492 2

Required Supporting Courses 47

CHM 121, 122, 123 15
CHM 211, 212, 213, 215 14
PHY 111/101, 112/102, 113/103 15
MTH 130; STT 164/165, 265/266 3

Electives 53–54

Must include 10 hours (300 level or above) in the Department of Biological Sciences, and 27 hours in academic courses in departments outside the College of Science and Mathematics and the College of Engineering and Computer Science. At least 23 of the elective hours must be in courses at the 200 level or above.

Total (minimum requirement) 196

Medical Technology

The medical technology program includes three years of prescribed study at Wright State University and a one-year clinical laboratory curriculum in a medical technology program accredited by the American Medical Association Council on Medical Education through the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS). Upon successful completion of the program, students receive the Bachelor of Science in Medical Technology degree and are eligible to take the national certification examination given by the Board of Registry for Medical Technologists (ASCP) and the CLS examination administered by the National Certification Agency for Laboratory Personnel. Through special arrangements, students may obtain their clinical education in other NAACLS accredited programs of medical technology after receiving approval from the chair of the Department of Biological Sciences.

In the fall quarter of their preclinical year, students apply, through the department, for admission into the clinical laboratory program. Criteria used to determine admission include the academic record, letters of recommendation, and results of a personal interview. The number of positions in each class for the clinical year program is limited.

Degree Requirements—Medical Technology

Bachelor of Science in Medical Technology Degree

A grade of C or better must be achieved in each course used to fulfill the Departmental Requirements and Clinical Program units of this degree.

General Education Requirements 57

Required substitutions, which are also major program requirements:
BIO 112, 208, 209
STT 164, 265

Departmental Requirements 38

BIO 112, 208, 209 13
BIO 202, 303, 421 14
BIO 402/405, 476/477 11

Required Supporting Courses 64.5

CHM 121, 122, 123 15
CHM 211/215, 212/216, 213/217 18
CHM 312/314 7.5
MTH 130; STT 164/165, 265/266 11
M&I 426, 427, 428 9
CS 205 4

Clinical Program 52

MT 434 through 449

Total 196.5

In a program such as this, the sequence in which courses are taken is of extreme importance. The required program should be followed and all individual course schedules should be planned with an adviser.

Medical Technology Clinical Year Program

The College of Science and Mathematics offers a comprehensive Medical Technology Clinical Year program that provides participating students with the competencies and skills needed to be a qualified practitioner. The curriculum begins in June and includes one quarter of basic lecture/laboratory courses on campus, followed by three quarters of supervised clinical rotations among seven cooperating affiliated clinical facilities: Veterans Administration Center, Greene Memorial Hospital, Community Hospital of Springfield and Clark County, Mercy Hospital in Hamilton, Miami Valley Hospital, McCullough-Hyde Memorial Hospital, Springfield Medical and Surgical Center, and the Frederick A. White Center at Wright State. Upon successful completion of the program, students are eligible to receive the Bachelor of Science in Medical Technology degree provided they meet the requirements for the degree stated in this catalog.
Prerequisites, Application, and Admission

Criteria for admission to the clinical year program are stipulated by the Committee on Allied Health Education and Accreditation of the American Medical Association, developed in cooperation with the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Prerequisite content areas shall include inorganic chemistry, organic and/or biochemistry, general biological sciences, microbiology, immunology, and mathematics. The applicant must also have a baccalaureate degree or be eligible for one upon completion of the clinical program.

Degree-eligible applicants from nonaffiliated universities will be considered. These applicants must also meet NAACLS requirements prior to entrance.

Applicants who possess a foreign baccalaureate degree must meet NAACLS criteria prior to entrance into the clinical year program.

Admission to Wright State University does not automatically ensure admission into the clinical year program.

Applicants should submit application materials and schedule an interview with the Medical Technology Program director during the fall quarter of the year preceding entry into the program. Applications from students enrolled at Wright State University are processed by the Department of Biological Sciences.

Curriculum Outline

Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT 434, 435</td>
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<tr>
<td>MT 436, 437</td>
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</tr>
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<td>MT 438, 439</td>
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<td>MT 440</td>
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<td>MT 442, 443</td>
<td>8</td>
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<td>MT 444, 445</td>
<td>6</td>
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<td>MT 446, 447</td>
<td>5</td>
</tr>
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<td>MT 448</td>
<td>2</td>
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<td>MT 449</td>
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<tr>
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<td>52</td>
</tr>
</tbody>
</table>

Environmental Health Sciences

The curriculum in environmental health sciences provides students with a sound academic background and the specialized training and experience needed to work effectively in several areas involving the environmental aspects of human health. Career opportunities include work in public health and environmental protection agencies, environmental consulting firms and analytical laboratories, health and safety programs in industries, or advanced study in graduate programs in public health and environmental sciences. A field internship program, operated in cooperation with participating environmental health agencies or industries, affords an opportunity for practical experience in a working situation. The program of study which meets the needs and interests of the students is planned in consultation with a departmental adviser.

Degree Requirements—
Environmental Health Sciences

Bachelor of Science Degree

A grade of C or better must be achieved in each course used to fulfill the Environmental Health Sciences Core, Required Supporting Courses in biological sciences, and Science Electives units of this degree.

General Education Requirements 57

Required substitutions, which are also major program requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 208, 209</td>
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<tr>
<td>STT 164/265</td>
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Environmental Health Sciences Core 37

<table>
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<th>Course</th>
<th>Units</th>
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<tr>
<td>EH 292, 360, 362, 364</td>
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<tr>
<td>EH 366 (field internship)</td>
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<td>EH 461, 462, 463, 466/467, 468/469</td>
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</table>

Required Supporting Courses 101

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 115, 202, 208, 209, 413, 415, 464/475, 476/477, 492</td>
<td>43</td>
</tr>
<tr>
<td>CHM 121, 122, 123, 211, 212</td>
<td>23</td>
</tr>
<tr>
<td>MTH 228; STT 164/165, 265/266</td>
<td>13</td>
</tr>
<tr>
<td>PHY 111/101, 112/102, 113/103</td>
<td>15</td>
</tr>
<tr>
<td>CS 141 or 205; MGT 200</td>
<td>7</td>
</tr>
</tbody>
</table>

Electives 18

Courses must be selected from an approved list in consultation with a faculty adviser.

Total 198

In a program such as this, the sequence in which courses are taken is of extreme importance. The required program should be followed and all individual course schedules should be planned with an adviser.

Dual Major Program

The Department of Biological Sciences participates in the university’s dual major program with the Department of Chemistry. Students are referred to the Biological Sciences departmental office for program requirements.
Chemistry

Professors Battino, Cummings (chair), Feld, Goldfarb, Servé, Seybold, Tiernan
Associate Professors Fortman, Hess, Kane, Katovic, Turnbull
Adjunct Associate Professor Spanier
Assistant Professors Bombick, Cook (Emerita), Dolson, Grossie, Ketcha

The Department of Chemistry offers programs leading to the Bachelor of Arts, Bachelor of Science, and Master of Science degrees in chemistry. The Bachelor of Science in Education degree is also available with a concentration in chemistry. The Bachelor of Arts and Bachelor of Science curricula are designed to prepare undergraduate students for careers as professional chemists, entrance into medical or dental schools, or graduate work in chemistry. Both programs are flexible and permit the options of a heavy concentration in chemistry courses or a combination of a chemistry major with extensive course work in allied (other sciences) or nonallied (e.g., business, arts) areas. In order to develop their academic programs to meet specific needs and individual interests, students should consult their academic advisers. The Bachelor of Science program is approved by the American Chemical Society.

Chemistry Honors Program

Qualified students may be admitted to the departmental honors program during their second or third year. The program involves work beyond the minimum course requirement for the B.S. degree with emphasis on independent studies.

Degree Requirements—Chemistry

Bachelor of Science Degree

The Bachelor of Science candidate is required to complete the chemistry, mathematics, and physics course sequences in the following program outline with these exceptions: CHM 499, Special Problems in Chemistry, is not required; however, it is expected that the serious chemistry major will complete at least 4 credit hours of this research course during the senior year. CHM 319, Chemical Literature, is strongly recommended but not required. Although there is no foreign language requirement, two years of study in German, French, or Russian, or one year each of two of these languages, is strongly recommended.

In the Bachelor of Science program with an orientation for premedical students, CHM 311, 420, and 421 are not required. Those students must take CHM 313 and 315. The physics requirement may be met with the PHY 111, 112, 113 sequence and PHY 101, 102, 103 laboratories. BIO 112, 114, and 115 are required. At least two courses must be selected from BIO 202, 206, 302, 303, 305, 307, 403. In addition, students must take at least 9 credit hours selected from BCH 421, 423; BIO 402; CHM 420, 421, 440, 441, 465/467, 466/468. Students serious about medical school should elect BCH 421 and 423. Students should also be careful to fulfill all university and college degree requirements.

Because the order in which science courses are taken is so important, students are advised to adhere closely to the sample schedules.

General Education Requirements

67 Required substitutions
MTH 229, 230
CHM 121, 122, 123

Departmental Requirements

59.5
CHM 211/215, 212/216, 213/217
CHM 311, 312/314, 313/315, 451, 452, 453
CHM 420, 421, 457, 458

Changes in the course requirements in the junior and senior year will be made to keep the program in compliance with the requirements for American Chemical Society certification. Majors should contact the chemistry department to get an updated program. The new requirements will be applied for all entering students beginning fall 1991.

Related Course Requirements

21
MTH 231
PHY 250/255, 251/256, 252/257

Electives

48.5
CHM 319, 425, and 499, and EGR 153 are recommended as well as at least one year of a foreign language.

Total

196

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Sample

Chemistry—ACS Certified

Freshman Year

First Quarter

CHM 121 5
MTH 128 or 129** 5
HST 101 3
ENG 101 4

Second Quarter

CHM 122 5
ENG 102 5
HST 102 3
MTH 134 or 131** 5-6

Third Quarter

CHM 123 5
PSY 105 3
HST 103 3
MTH 229 5

Fourth Quarter

CHM 211/215 6
PHY 250/255 6
MTH 230 5

Sophomore Year

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### Fifth Quarter 16
- CHM 212/216 6
- PHY 251/255 5

### Sixth Quarter 17
- CHM 213/217 6
- PHY 252/256 5

### Junior Year

#### Seventh Quarter 16.5
- CHM 311 7.5
- CHM 451 3

#### Eighth Quarter 18.5
- CHM 312/314 7.5
- CHM 452/457 5

#### Ninth Quarter 17.5
- CHM 313/315 7.5
- CHM 453/458 5

### Senior Year

#### Tenth Quarter 16
- CHM 420 3
- CHM 499*** 3

#### Eleventh Quarter 15
- CHM 421 3
- CHM 499*** 3

#### Twelfth Quarter 15
- CHM 499*** 3

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*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62–67, lists the specific courses that meet the requirements in these areas. **Students who qualify on the math placement exam to begin with MTH 130, 131, 134, or 229 should do so this quarter.

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### Degree Requirements—Chemistry

**Bachelor of Arts Degree**

The Bachelor of Arts degree candidate is required to complete the chemistry, mathematics, and physics course sequences in the following program outlines. Additional requirements include 12 hours of science electives and two years of foreign language study. The science elective requirement may be satisfied with any course sequence in the College of Science and Mathematics or the College of Engineering and Computer Science, including additional chemistry courses or individual research projects (CHM 499). The foreign language requirement may be satisfied with two years of study in any foreign language or one year each of two languages.

Chemistry majors who are Bachelor of Arts degree candidates are also required to earn 27 credit hours (18 of which must be 200 level or above) outside the Colleges of Science and Mathematics and Engineering and Computer Science. This requirement may not be satisfied with courses used
Geological Sciences

Professors Gregor, Kulander (chair), Pushkar, Richard, Schmidt, Toman, Unrug, Wolfe
Associate Professor Kramer
Assistant Professors Carney, Cheng, Dominic, Ritzi

The Department of Geological Sciences offers degree programs leading to the Bachelor of Science and Bachelor of Arts degrees with a major in geological sciences. Both programs are designed to include geology and related sciences and to prepare students for graduate study or professional employment. The Bachelor of Arts program is intended to be more flexible and to permit students with either broad or specialized interests to fulfill their program needs. The Bachelor of Science program is more highly structured and, through the various options offered, is intended to prepare students for rather specific professional or technical objectives. The Bachelor of Arts program’s flexibility readily permits interdisciplinary programs such as the dual major, in which students may major in two quite different fields simultaneously.

The department has modern equipment for use in teaching and individual investigations. Comparison and research collections in both paleontology and mineralogy are maintained.

The department seeks to offer a broad spectrum of educational options within a framework of sound academic guidelines, because personal objectives, interests, and aptitudes vary considerably with each individual. Students majoring in geological sciences have considerable choice in the basic program, options, and elective courses. Students should be aware of these choices as early as possible, and because course sequencing, particularly in Bachelor of Science options, is a critical factor, all students are strongly urged to consult their adviser to develop an individual program.

Supporting electives are courses in science, mathematics, and engineering (exclusive of geology and psychology) that are not normal preparation or prerequisites for required courses. Three quarters of GL 428 (colloquium) are required.

Students who have taken the general education geology sequence (100 level) are not required to take GL 251, 253, and 255. However, they are required to take GL 252, 254, and 256. Minor modifications in departmental programs will be made from time to time. It is the responsibility of the students to confer with their advisers periodically during the academic year, preferably once each quarter before the registration period.
Geological Sciences
Honors Program

Candidates for the B.A. or B.S. degree in geological sciences who have a cumulative grade point average of 3.0 or better may apply at the end of their junior year for admission to the departmental honors program. Requirements for graduation with honors in geological sciences are a cumulative grade point average of 3.0 or better and satisfactory completion of a senior thesis under the guidance of a member of the faculty.* Applications should be made in writing to the Undergraduate Studies Committee, Department of Geological Sciences, and should include the following:
1. Name of student
2. Expected date of graduation (which must be at least three full quarters, not including summer quarter, after the date of the application)
3. A summary proposal (of about a hundred words) for a senior thesis topic
4. The endorsement of the student’s departmental adviser, and that of the senior thesis adviser as well if not the same
5. Candidates will be encouraged to attend at least one interdisciplinary honors seminar

*The senior thesis is to be represented by a total of between 6 and 9 credits in GL 499 taken as a portion of the prescribed block of geological sciences and related electives in the case of the B.S. degree or of geological sciences electives in the case of the B.A. degree. It shall be judged only as satisfactory or unsatisfactory, without being awarded a letter grade. The topic may be chosen from any branch of geological sciences; current course listings in this catalog may be taken as a rough indication of the range available. Broad latitude will be allowed in the study methods adopted: field work, experiments, theoretical studies, and literature study are all considered viable, either singly or in combination. The candidate’s thesis adviser will normally judge the completed thesis, but may elect to co-opt other members of the faculty for assistance, either within the department or outside.

Degree Requirements—Geological Sciences/General Geology Option

Bachelor of Science Degree

The Department of Geological Sciences offers a Bachelor of Science degree in geological sciences with a general geology option. The course requirements and recommended course sequences follow.

General Education Requirements 65.5

Required substitutions, which are also major program requirements:
MTH 229, 230
GL 251, 252, 253, 254, 255, 256
Degree Requirements—Geological Sciences/Geophysics Option

Bachelor of Science Degree

The Department of Geological Sciences, in cooperation with the Department of Physics, offers a Bachelor of Science degree in geological sciences with a geophysics option. This program prepares the student to assume a career in this field or to pursue graduate study in geophysics.

General Education Requirements 65.5

Required substitutions, which are also major program requirements:

MTH 229, 230
GL 251, 252, 253, 254, 255, 256

Departmental Requirements 101.5–105.5

GL 301, 311, 333, 343, 410 30
GL 412, 422, 423, 424, 426, 428 21.5
EGR 153 or CS 240 and 241 4–8
PHY 250/255, 251/256, 252/257, 260 20
Geological sciences or physics electives 26

Related Course Requirements 30

CHM 121, 122, 123 15
MTH 231, 232, 233 15

Unrestricted Electives 11

Total 208–212

The recommended sequence is as follows:

Freshman Year

CHM 121, 122, 123; ENG 101, 102; GL 251, 252, 253, 254, 255, 256; MTH 229, 230, 231

Sophomore Year

GL 301, 410, 412; MTH 231, 257, 258; General Education courses

Junior Year

EGR 153; GL 311, 333, 434; PHY 260

Senior Year

GL 422, 423, 424, 426, 428; geological sciences electives; physics or mathematics electives; General Education courses

Degree Requirements—Geological Sciences

Bachelor of Arts Degree

The Bachelor of Arts curriculum is designed for students who desire scientific training, especially through interdisciplinary programs. Because of its broader and more flexible approach, students who elect to follow a Bachelor of Arts program should have specific educational objectives that can be reasonably attained through this program.

General Education Requirements 58.5

Required substitutions, which are also major program requirements:

GL 251, 252, 253, 254, 255, 256

Departmental Requirements 46.5

GL 311, 341, 333, 428, 434 24
Geological sciences electives 22.5

Related Course Requirements 47–50

BIO 112, 114, 115, or
PHY 111, 112, 113 or
CHM 121, 122, 123 12–15
Supporting electives 25
Mathematics 10

Unrestricted Electives 37

Total 189–192
Degree Requirements—
Geological Sciences/
Ground Water Technology
Option

Bachelor of Arts Degree

The ground water technology option prepares the graduate for a professional role in technical support and supervision and ultimately in management in the ground water resources area. The curriculum is drawn from accountancy, business administration, chemistry, computer science, economics, engineering, geology, and several other fields. The program emphasizes technical practice and provides specific experience in practice areas including internship. Students seeking a career as a professional hydrogeologist or admission into a hydrogeology graduate program are referred to the Bachelor of Science Degree general geology option.

General Education Requirements 60.5–65.5

Required substitutions, which are also major program requirements:
MTH 229, 230, or MTH 228
GL 251, 252, 253, 254, 255, 256

Departmental Requirements 52.5

GL 309, 311, 333, 365, 428, 429, 434, 450, 451, 458, 499
Geological sciences electives 8

Related Course Requirements 58–62

ACC 201, 202, 203 9
CHM 101, 102, 107 13
CS 240, or CS 205, or EGR 153 4
EC 201, 202 6
ME 202 4
MGT 200 3
STT 164, 165 4
STT 265, 266 4

Skills requirement* 15

Unrestricted Electives 17

Total 192–193

*This requirement is intended either to broaden or deepen existing or newly gained skills; e.g., data processing in addition to CS 240, technical writing in addition to ENG 101 and 102, or more engineering drafting and/or welding or equipment repair. This area also includes a minimum of ten weeks of internship practice with an industry contractor or government agency in an approved, supervised practical activity.

Mathematics and Statistics

Professors Benner, Dombrowski, Fricke, Gorowara, Mazundar, McKee, Millman, Park, Ratnaparkhi, Rutter (chair), Sachs (Emeritus), Schaefer (Emeritus), Silverman (Emeritus)

Associate Professors Arasu, Coppage (Emeritus), Evans, Guo, Haber (Emeritus), Ho, Khamis, Lewkowicz (Emeritus), L. Low (Emeritus), M. Low, Maneri, Mann, Meike, Mercer, Miller, Perkel, Seoh, Turyn, Vance, Voss

Assistant Professors Bradford, Farrell, Fu, Hawley (WSU Lake Campus), Hofmann, Hou, Kaplan, Pedersen, Pickering, Rife (WSU Lake Campus), Smith, Svobodny, Westwood, Yamashita

Instructors Beal, Ciao (WSU Lake Campus), Harris, Muthard, Sprowls, Tanner

The Department of Mathematics and Statistics offers several curricula leading to a bachelor’s degree with a major in mathematics, and also minor programs in mathematics and in statistics. Master of Science programs are available too; please consult the graduate catalog.

Major Programs

The Bachelor of Science candidate may select one of four concentrations: pure mathematics, applied mathematics, computing, or statistics. These four programs are adaptable to many post-graduation goals, ranging from various scientific or professional careers to graduate school. The Bachelor of Arts program provides a broad background in mathematics with a liberal arts orientation.

The Department of Mathematics and Statistics participates in the dual major program, leading to either the B.A. or the B.S. degree. For example, dual majors are available with computer science, engineering, and physics. The College of Education and Human Services offers a Bachelor of Science in Education with a major in mathematics education.

A cooperative education program is available that allows students to alternate quarters of work and study during their junior and senior years. Interested students should contact the department chair for further information.

A mathematics major must complete one of the major programs described below. Each program includes General Education requirements (described more fully in the General Education Requirements chapter of this catalog), departmental requirements, related course requirements, and general electives. The departmental component consists of required courses and electives in mathematics and statistics. Students must achieve at least a 2.0 grade point average in mathematics and statistics courses numbered 300 or higher. The general electives may be taken outside the Department of Mathematics and Statistics.
Each mathematics major is assigned an adviser from the department faculty. As early as possible in the student’s college career, the adviser should be consulted regarding the important choice of which mathematics major program to follow. Likewise, the selection of which courses to take and when to take them should be discussed with the adviser. Written advisory materials to assist mathematics majors are available in the department office. However, there is no substitute for regular, in-person consultation with the faculty adviser. Moreover, the adviser must approve all courses intended to satisfy program requirements.

Mathematics and Statistics

Honors Program

Mathematics majors who have demonstrated superior ability in upper-level mathematics and statistics courses may undertake an honors program with the approval of the department. Further information is available from the departmental office.

Degree Requirements—Mathematics/Pure Mathematics Concentration

Bachelor of Science Degree

General Education Requirements 68

Required substitutions:
- MTH 229, 230
- PHY 250/255, 251/256, 252/257

Departmental Requirements 59

Required Courses
- MTH 231, 232, 233, 280, 355, 431, 432, 433 (or 434), 451, 452

Recommended Courses
- MTH 433, 332 or 434

Elective Courses
- STT 360, 361, 461, 462

Related Course Requirements 8

CS 141 and 142 or equivalent

Electives 48

Foreign language study recommended

Total 183

Sample

Mathematics

(Pure Mathematics Concentration)

This sample program indicates one way among many to satisfy the degree requirements for the Bachelor of Science degree in mathematics, pure mathematics concentration. Sample programs for the computing concentration, the statistics concentration, and applied mathematics concentration, and also for the Bachelor of Arts degree in mathematics, are available from the department office. This sample program assumes the availability of courses during the quarters indicated; actual courses may differ and schedule adjustments may therefore be necessary.

Freshman Year

First Quarter 16
- MTH 229 5
- ENG 101 4
- HST 101 3

Second Quarter 16
- MTH 230 5
- ENG 102 4
- HST 102 3

Third Quarter 15
- MTH 231 5
- PSY 105 4

Sophomore Year

Fourth Quarter 17
- MTH 232 5
- PHY 250/255 6
- SOC 200 3

Fifth Quarter 16
- MTH 233 5
- PHY 251/256 5
- PLS 200 3

Sixth Quarter 14
- MTH 280 3
- RST 3

Junior Year

Seventh Quarter 15
- MTH 455 5
- MTH Elective 3

Eighth Quarter 15
- MTH 451 3
- MTH Elective 3

Ninth Quarter 15
- MTH 452 3
- MTH Elective 3

Senior Year

Tenth Quarter 15
- MTH 431 3
- MTH Elective 3

Eleventh Quarter 15
- MTH 432 3
- MTH Elective 3

Twelfth Quarter 15
- MTH 433 3
- MTH Electives 6

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, and Regional Studies. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.
Degree Requirements—
Mathematics/Computing
Concentration

Bachelor of Science Degree

General Education Requirements 64

Required substitutions:
MTH 229, 230
In Area Four, physics is recommended for the natural sciences requirement. If physics is chosen, then either PHY 250/255, 251/256, 252/257, or PHY 111/101, 112/102, 113/103, 210 is a required substitution.

Departmental Requirements 54

MTH 231, 232, 233, 257, 280, 316, 317, 355
STT 360, 361
MTH 431 or 451
Two courses selected from MTH 407, 410, 416, 419, 450, 457, 458, 459
One additional course selected from MTH 306, 407, 410, 416, 419, 431, 432, 450, 451, 452, 457, 458, 459; STT 428

Related Course Requirements 28

CS 240, 241, 242, 400
At least three from:
CEG 520, 433, 434; CS 405, 466, 470, 480;
MTH 476, 477

Electives 37

Total 183

Degree Requirements—
Mathematics/Statistics
Concentration

Bachelor of Science Degree

General Education Requirements 64

Required substitutions:
MTH 229, 230
In Area Four, if physics is chosen for the natural sciences requirement, then either PHY 250/255, 251/256, 252/257, or PHY 111/101, 112/102, 113/103, 210 is a required substitution.

Departmental Requirements 56

MTH 231, 232, 233, 280, 316, 317, 355
STT 360, 361
MTH 316, 317, 332, 333
SIT 360, 361
Two courses chosen from:
MTH 407, 416, 419, 450, 457, 458, 480, 481, 482
Two additional 400-level elective courses

Elective Courses
Those listed above plus:
MTH 303, 306, 433, 434, 451, 452, 457, 459
STT 428, 461, 462

Related Course Requirements 26

Either PHY 371, 372 or ME 212, 213
CS 141 and 142 or equivalent
At least 12 hours of advanced technical electives, which must be approved by the department.

Electives 31

Total 183

Degree Requirements—
Mathematics/Applied
Mathematics Concentration

Bachelor of Science Degree

General Education Requirements 68

Required substitutions:
MTH 229, 230
PHY 250/255, 251/256, 252/257

Departmental Requirements 58

Required Courses
MTH 231, 232, 233, 280, 355, 431, 432
At least four courses chosen from:
MTH 316, 317, 332, 333
STT 360, 361
Two courses chosen from:
MTH 407, 416, 419, 450, 457, 458, 480, 481, 482
Two additional 400-level elective courses

Elective Courses
Those listed above plus:
MTH 303, 306, 433, 434, 451, 452, 457, 459
STT 428, 461, 462

Related Course Requirements 26

Either PHY 371, 372 or ME 212, 213
CS 141 and 142 or equivalent
At least 12 hours of advanced technical electives, which must be approved by the department.

Electives 31

Total 183
Degree Requirements—Mathematics

Bachelor of Arts Degree

General Education Requirements 64

Required substitutions:
MTH 229, 230

Departmental Requirements 50

Required Courses
MTH 231, 232, 280, 355, 431, 440, 451, 471
STT 360, 361
MTH 432 or 452

Elective Courses
STT 401, 461, 462, 466, 467

Related Course Requirements 38

CS 141 and 142 or equivalent
Twenty-seven hours (at least 8 hours in one department) in departments belonging to neither the College of Science and Mathematics nor the College of Engineering and Computer Science. One additional course within the College of Science and Mathematics or the College of Engineering and Computer Science, but outside the Department of Mathematics and Statistics. These courses are in addition to those needed to fulfill General Education requirements.

Electives 31

Foreign language study is recommended

Total 183

Dual Major

Special programs of study are available for students interested in a dual major in mathematics and either computer science, engineering, or physics. Requirements can be obtained in the Department of Mathematics and Statistics office. Dual major programs may be arranged for students with other interdisciplinary interests. Basic requirements follow and must be integrated with a corresponding program from another participating department. All programs require a minimum of 183 credit hours.

Dual Major Degree Requirements—Mathematics

Bachelor of Science Degree

General Education Requirements 64

Required substitutions:
MTH 229, 230

In Area Four, if physics is chosen for the natural sciences requirement, then either PHY 250/255, 251/256, 252/257 or PHY 111/101, 112/102, 113/103, 210 is a required substitution.

Departmental Requirements 35

Required Courses
MTH 231, 232, 355

At least two of the following:
MTH 431, 432, 434, 451, 452, 457, 458, 459, 480, 481, 482
STT 461, 462

Elective Courses
STT 360, 361, 461, 462, 466, 467

Related Course Requirements 8

CS 141 and 142 or equivalent

Dual Major Degree Requirements—Mathematics

Bachelor of Arts Degree

General Education Requirements 64

Required substitutions:
MTH 229, 230

Departmental Requirements 35

Required Courses
MTH 231, 355

At least two of the following:
MTH 431, 432, 434, 451, 452, 457, 458, 459
STT 461, 462

Elective Courses
(maximum of two at the 200 level)
STT 360, 361, 461, 462, 466, 467

Related Course Requirements 8

CS 141 and 142 or equivalent
Minor Programs
Students majoring in another department may earn a minor in mathematics or a minor in statistics. Either minor can serve as an attractive credential for employment or improved preparation for graduate study. Each minor requires a minimum of 30 credit hours of approved courses; specific requirements follow.

Minor Requirements—Mathematics
Departmental Requirements

Required Courses
MTH 229, 230, 231, and either MTH 253 or 355

Elective Courses
STT 360, 461
Only one of MTH 253 and 355 can count toward the minor. Courses cross-listed with the student's major department cannot be included in the minor. A grade point average of at least 2.0 must be attained in all minor courses. The minor must include at least three 300- or 400-level courses. A grade point average of at least 2.0 must be attained in all minor courses at this level.

Minor Requirements—Statistics
Departmental Requirements

Required Courses
MTH 229, 230, and either MTH 253 or 355
STT 360, 361, or equivalent

Elective Courses
STT courses numbered above 367
Elective courses must be approved in advance by the Department of Mathematics and Statistics. A grade point average of at least 2.0 must be attained in all minor courses, and a grade point average of at least 2.0 must be attained in all minor courses at the 300 or 400 level.

Microbiology and Immunology

Professors Bigley, Giron, Rote (chair)
Associate Professor Thomas

The Department of Microbiology and Immunology offers introductory courses in microbiology and immunology as well as a number of advanced courses. The introductory microbiology course is intended for health science majors, except for medical technologists. The advanced courses provide an area of concentration for life science majors. The course offerings encompass concepts of diagnostic microbiology, virology, and immunology as well as the principles of immunology, immunobiology, virology, and bacteriology. The biology of host-parasite interactions and the structure-function relationship unique to microorganisms are emphasized. A major in biological sciences with concentration in the area of microbiology and immunology prepares the student for graduate study in these areas or for further training as a diagnostic or research laboratory technologist.

Individual prerequisites are listed for each course, although students who enroll in courses at the 400 level should have completed the biological sciences sequence through BIO 402 as well as CHM 211, 212, 213, and 312. BCH 421, 423 or equivalent are recommended as preparation.

Physics

Professors Bambakidis, Hanson, Martin, Wolfe
Associate Professors Andrews (chair), Clark, Farlow, Hemsky, Jaworowski, Listerman, Wood

The Department of Physics offers a program leading to a Bachelor of Science degree with a major in physics. The Department of Physics and the Department of Electrical Systems Engineering jointly offer a program leading to the Bachelor of Science in Engineering degree in engineering physics; see the Electrical Systems Engineering section of the College of Engineering and Computer Science chapter. Students in secondary education may major in physics and earn the Bachelor of Science in Education degree awarded by the College of Education and Human Services; see Physics Education.

Minimum requirements for a Bachelor of Science degree with a major in physics include successful completion of the required courses, as well as the completion of university and college degree requirements.

In addition to the required courses, it is recommended that every physics major take the following courses: PHY 421, 494; BIO 112, 114, 115. The physics major planning graduate study is also strongly urged to take the following courses: PHY 480, 481, 482; one to two years of a foreign language, either French, German, or Russian; and additional mathematics courses.

Physics Honors Program

The Department of Physics has an honors program designed to provide superior students with a program of greater creativity and intellectual challenge. Students wishing to participate in this program must apply to the department during the spring quarter preceding their participation in the
honors program. To participate, students should have at least a 3.0 grade point average overall and at least a 3.0 in physics courses numbered 300 and above. To graduate with honors in physics, completion of PHY 480, 481, 482 and 9 hours of honors research (499), with grades of B or better, is required.

**Degree Requirements—Physics**

**Bachelor of Science Degree**

**General Education Requirements** (Total hours: 57)

Areas One through Four (not counting substitutions listed below) 42

Required substitutions, which are also major program requirements:

- MTH 229, 230
- PHY 250/255, 251/256, 252/257

**Departmental Requirements** 61

- PHY 250/255, 251/256, 252/257; or equivalent 16
- PHY 260, 371, 372 10
- PHY 315, 316, 322 10
- PHY 420, 450, 451, 452, 460, 461, 462 25

**Related Course Requirements** 53

- MTH 229, 230, 231, 232, 233, 253 28
- MTH 332, 333 6
- CHM 121, 122, 123 (or 361) 15
- EGR 153 or equivalent 4
- Electives 39

**Total** 195

Since the order in which courses are taken is important, students should adhere closely to the following suggested programs for the required courses.

### Sample

#### Physics

**Freshman Year**

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121</td>
<td>5</td>
</tr>
<tr>
<td>ENG 101</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>CHM 122</td>
<td>5</td>
</tr>
<tr>
<td>ENG 102</td>
<td>4</td>
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</table>

<table>
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<tr>
<th>Third Quarter</th>
<th>16</th>
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</thead>
<tbody>
<tr>
<td>CHM 123</td>
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<tr>
<td>PHY 250</td>
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</table>

<table>
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<tbody>
<tr>
<td>HST 103</td>
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<tr>
<td>PHY 251</td>
<td>4</td>
</tr>
<tr>
<td>MTH 232</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Sophomore Year

<table>
<thead>
<tr>
<th>First Quarter</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PHY 250</td>
<td>5</td>
</tr>
<tr>
<td>MTH 230</td>
<td>5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>17</th>
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<tbody>
<tr>
<td>PHY 255</td>
<td>1</td>
</tr>
<tr>
<td>ENG 101</td>
<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 251</td>
<td>4</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
</tbody>
</table>

### Sample

#### Physics—For Students Entering with A-P Calculus or Equivalent

**Freshman Year**

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 250</td>
<td>5</td>
</tr>
<tr>
<td>MTH 230</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 255</td>
<td>1</td>
</tr>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 251</td>
<td>4</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 315</td>
<td>3</td>
</tr>
<tr>
<td>MTH 233</td>
<td>5</td>
</tr>
<tr>
<td>PHY 371</td>
<td>3</td>
</tr>
<tr>
<td>CHM 121</td>
<td>5</td>
</tr>
</tbody>
</table>
### Degree Requirements—Physics/Geophysics Option

#### Bachelor of Science Degree

The Department of Physics in cooperation with the Department of Geological Sciences offers a program leading to a Bachelor of Science in physics with a geophysics option. This option is designed for students who plan a career in physics in a geology-related setting or who plan to pursue graduate study in geophysics.

Students following the physics program with the geophysics option must meet the requirements of the basic physics degree program. In addition, the following courses are required.

<table>
<thead>
<tr>
<th>Geophysics Option Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GL 251, 253</td>
<td>6</td>
</tr>
<tr>
<td>GL 252, 254</td>
<td>3</td>
</tr>
<tr>
<td>PHY 422, 423, 424</td>
<td>13</td>
</tr>
<tr>
<td>Electives chosen from:</td>
<td></td>
</tr>
<tr>
<td>GL 255, 311, 333, 420, 450, 463</td>
<td>12</td>
</tr>
</tbody>
</table>

In addition to these required courses, it is recommended that students pursuing the geophysics option also take GL 434 and participate in the geophysics seminars.

### Degree Requirements—Physics/Computing Option

#### Bachelor of Science Degree

The Department of Physics offers a program leading to a Bachelor of Science degree in physics with a computing option. This option is designed for students who plan a career in any of the many areas of theoretical or experimental physics which involve extensive use of digital computers.

Students following the physics program with the computing option must meet the requirements of the basic physics degree program. In addition, the following courses are required.

<table>
<thead>
<tr>
<th>Computing Option Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 240, 241, 242</td>
<td>12</td>
</tr>
<tr>
<td>MTH 257</td>
<td>3</td>
</tr>
<tr>
<td>CS 400</td>
<td>4</td>
</tr>
<tr>
<td>CS 316, 317</td>
<td>8</td>
</tr>
</tbody>
</table>

Students wishing to learn about microprocessors may wish to take further courses in computer engineering, such as CEG 260, 320, and 360. For such students, CEG 430 and 431 may be taken in place of CS 316 and 317.

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The results of the mathematics placement examination will be used to determine the proper initial mathematics course; see mathematics course descriptions. Students who do not have a strong science and mathematics background might choose the first curriculum above delaying PHY 250, 251, 252. If these students are in the honors program, their schedule would require some adjustment of the junior and senior year curricula. An adviser should be consulted as soon as possible to arrange a suitable program.

The Department of Physics encourages students with interdisciplinary interests to pursue a double major in physics and a related discipline. A departmental adviser will help students arrange a suitable program of study. In addition, there are three formal physics degree option programs that follow.
Degree Requirements—

Physics/Biology Option

Bachelor of Science Degree

The Department of Physics in cooperation with
the Department of Biological Sciences offers a
program leading to a Bachelor of Science degree in

Physics with a biology option. This option is
designed for students who plan a physics career in a
biology-related setting or who want to pursue

graduate study in biophysics or medical physics.

Students following the physics program with

the biology option must meet the requirements of

the basic physics degree program. In addition, the

following courses are required.

Biology Option Requirements 35
BIO 112, 114, 115 12
BIO 492 (biophysics emphasis) 2
CHM 211, 212 12
Electives chosen from:

Minor Programs

Students majoring in another department may
earn a minor in physics. A minor can serve as an
entrance to an interdisciplinary graduate program or

a supportive credential for employment. The minor
requires a minimum of 35 credit hours as specified
in the following:

Minor Requirements—Physics

Departmental Requirements 35

Required Courses

PHY 250/255, 251/256, 252/257 16
(or PHY 111/101, 112/102, 113/103, 210, 211)
PHY 260, 315, 371 10

Elective Courses

(Nine hours chosen from the following
courses as approved in advance by the

Department of Physics)
PHY 300, 301, 316, 322, 332, 372, 420, 450,
451, 452, 460, 461, 462, 494 (maximum
3 hours) 9

Physiology/ Biophysics

Professors Glaseer, Gotshall, Lauf (chair)

Associate Professors Goldfinger, Putnam, Nussbaum, Walter

Assistant Professors Corbett, Lu, Mechlin

The Department of Physiology and Biophysics
provides a curriculum serving the needs of students
who are planning to enter into medicine, nursing, or

other health-related professions. Although the
department does not offer an undergraduate degree

in physiology and biophysics, students may take

physiology and biophysics as part of the Bachelor of

Science degree in biological sciences, or other

science disciplines.

Psychology

Professors Crampton (Emeritus), H. Klein, S. J. Klein
(Emeritus), Kurdek, Wilson

Associate Professors Campbell, Colle (chair), Davis,
Hennessy, Kruger, Moss, Nagy, Page, Weber

Assistant Professors Backs, Bennett, Citara, Edwards,
Flach, Gilkey, Hayes, Rentsch, Tsang

The Department of Psychology offers programs
leading to the Bachelor of Science and the Bachelor
of Arts degrees. Both degree programs are designed
to give students a broad introduction to

contemporary psychology. The Bachelor of Arts

curriculum permits the greatest flexibility in

selecting electives within and outside of psychology.

The Bachelor of Science program is
recommended for students planning careers in

academic, research, or professional fields. The
Bachelor of Arts program may also be suitable for

these goals; requirements for graduate schools vary

considerably. Programs should be supplemented
with additional courses which are selected to meet

individual goals. Students should obtain a copy of

the booklet Preparation for Graduate Study from
the psychology department and consult with their
departmental advisers.

Graduate schools expect applicants to have a
background in introductory or general psychology,

experimental psychology with laboratory, and

statistics. Beyond these courses, there are few

specific requirements. Students planning to apply to

graduate schools should seek a broad background in
psychology rather than highly specialized

undergraduate training. A basic curriculum should

include courses in introductory psychology,

statistics and experimental design, laboratory

courses, survey courses in the major content areas,
and a few advanced electives.
The sample curriculum that follows lists the suggested courses for the freshman year. After students have earned 30 hours, they can transfer into the Department of Psychology. Students must also have a cumulative grade point average of 2.25 to enter the department. Once students have been accepted by the department, they are advised to obtain supplementary materials from the department and to work closely with their assigned advisers. Because of the breadth of psychology, a variety of different educational options exist. Students can select courses that best fit their area of interest. Advising materials for students interested in cognitive science, human factors, human services or clinical psychology, and industrial/organizational psychology can be obtained from the department. The department also offers a concentration in human factors. Credit hours in psychology may not be less than 65 for a Bachelor of Arts and 73 for a Bachelor of Science degree.

Note: Not all courses listed in the sample curriculum are required. Courses that are listed will not necessarily be offered in the quarter indicated. See the degree requirements and your adviser for possible substitutions.

### Sample

#### Psychology

**Freshman Year**

First Quarter 15

- BIO 112 4
- ENG 101 4

Second Quarter 15

- BIO 114 4
- ENG 102 4

Third Quarter 14-16

- BIO 115 4
- MTH 126 or 127 3-5

**Sophomore Year**

Fourth Quarter 16

- PSY 321 4
- STT 164 3
- SOC 200 3

Fifth Quarter 16

- PSY 331 4
- STT 265 3
- PLS 200 3

Sixth Quarter 15-17

- PSY 371 4
- PSY 300 5
- EC 200 3

**Junior Year**

Seventh Quarter 16

- PSY 391 4
- PSY 400 4

Eighth Quarter 16

- PSY 488 4
- PSY 323 4

Ninth Quarter 15

- PSY 481 4
- PSY 333 4

**Senior Year**

Tenth Quarter 15

- PSY 431 4
- PSY Elective 4

Eleventh Quarter 15

- PSY 471 4
- PSY Elective 4

Twelfth Quarter 11-15

- PSY 401 4

*Students have a choice of courses that meet General Education requirements in the following areas: Great Books of the Western World, Fine and Performing Arts, Comparative Studies, Regional Studies, and Natural Sciences. The chapter on General Education Requirements, on pages 62-67, lists the specific courses that meet the requirements in these areas.

### Psychology Honors Program

Application for admission to the program should be made before the beginning of the senior year. Students usually apply at the end of the sophomore year. After acceptance, students enroll in one departmental honors seminar each academic year. Part-time students must complete one honors seminar prior to graduation. All students must complete an honors thesis, for which academic credit is granted.

### Degree Requirements—Psychology/Academic Concentration

#### Bachelor of Arts Degree

**General Education Requirements** 54

**Required substitutions, which are also major program requirements:**

**Departmental Requirements (minimum)** 65

- PSY 105, 110 8
- PSY 300 5

Four of the following (at least one from each group):

- PSY 311, 331, 341, 351
- PSY 321, 361, 371, 391

Four 400-level electives in psychology (excluding 432, 489, 490, 498, 499) 16

Minimum electives in psychology 20
### Related Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>STT 164, 265</td>
<td>6</td>
</tr>
<tr>
<td>One additional course in Science and Mathematics or Engineering and Computer Science outside psychology</td>
<td>3</td>
</tr>
<tr>
<td>Electives outside of Science and Mathematics and Engineering and Computer Science</td>
<td>27</td>
</tr>
<tr>
<td>Electives</td>
<td>28</td>
</tr>
<tr>
<td><strong>Total (minimum requirements)</strong></td>
<td><strong>183</strong></td>
</tr>
</tbody>
</table>

### Degree Requirements—Psychology

**Bachelor of Science Degree**

**General Education Requirements**

Required substitutions, which are also major program requirements:

- STT 164, 265

**Departmental Requirements (minimum)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105, 110</td>
<td>8</td>
</tr>
<tr>
<td>PSY 300 and 400</td>
<td>9</td>
</tr>
<tr>
<td>Five of the following (at least two from each group):</td>
<td></td>
</tr>
<tr>
<td>PSY 311, 331, 341, 351</td>
<td>20</td>
</tr>
<tr>
<td>PSY 321, 361, 371, 391</td>
<td>8</td>
</tr>
<tr>
<td>Two courses from the following:</td>
<td></td>
</tr>
<tr>
<td>PSY 323, 333, 343, 353, 363, 373, 393</td>
<td>8</td>
</tr>
<tr>
<td>Four 400-level electives in psychology (excluding 432, 489, 490, 498, 499)</td>
<td>16</td>
</tr>
<tr>
<td>Minimum electives in psychology</td>
<td>12</td>
</tr>
<tr>
<td><strong>Related Course Requirements</strong></td>
<td><strong>17</strong></td>
</tr>
<tr>
<td>MTH 128 or 129</td>
<td>3</td>
</tr>
<tr>
<td>STT 164, 265</td>
<td>6</td>
</tr>
<tr>
<td>CS 141</td>
<td>4</td>
</tr>
<tr>
<td>CS 142 or PSY 401</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total (minimum requirements)</strong></td>
<td><strong>183</strong></td>
</tr>
</tbody>
</table>

### Human Factors Psychology Concentration

Human factors is a field that was pioneered by psychologists and the overwhelming majority of people in the field are psychologists. Graduates of the human factors concentration find employment in industry and government. They are also well prepared for graduate study in engineering psychology, experimental psychology, or human factors. There are three programs of study within the human factors concentration: human factors/experimental psychology; human factors/computer science; and human factors/biomedical science. The following requirements are for the human factors/experimental psychology concentration. The requirements for the other programs of study can be obtained from the department.

### Degree Requirements—Human Factors Concentration/Experimental Psychology

**General Education Requirements**

Required substitutions, which are also major program requirements:

- STT 164, 265
- PHY 111/101, 112/102, and 113/103, or PHY 240/200, 241/201, and 242/202

**Departmental Requirements (minimum)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105, 110</td>
<td>8</td>
</tr>
<tr>
<td>PSY 300, 400</td>
<td>9</td>
</tr>
<tr>
<td>PSY 321, 331, 351, 371, and 391</td>
<td>20</td>
</tr>
<tr>
<td>PSY 323 and 373</td>
<td>8</td>
</tr>
<tr>
<td>PSY 401, 421, 465, and 471</td>
<td>16</td>
</tr>
<tr>
<td>PSY 306</td>
<td>4</td>
</tr>
<tr>
<td>PSY 304</td>
<td>4</td>
</tr>
<tr>
<td>PSY 432, 498, or 499</td>
<td>4</td>
</tr>
<tr>
<td><strong>Related Course Requirements</strong></td>
<td><strong>40.5–41.5</strong></td>
</tr>
<tr>
<td>PHY 111, 112, 113, or 240, 241, 242</td>
<td>13.5</td>
</tr>
<tr>
<td>STT 164, 265</td>
<td>6</td>
</tr>
<tr>
<td>MTH 132, 133</td>
<td>10</td>
</tr>
<tr>
<td>CS 141, 142</td>
<td>8</td>
</tr>
<tr>
<td>EGR 142, or MTH 253, or PHY 243</td>
<td>3–4</td>
</tr>
<tr>
<td>Electives</td>
<td>14.5–15.5</td>
</tr>
<tr>
<td><strong>Total (minimum requirements)</strong></td>
<td><strong>183</strong></td>
</tr>
</tbody>
</table>

### Minor Program

The psychology minor serves to meet the needs of students who would like a better understanding of psychological processes. Students in a wide variety of majors may benefit by supplementing their knowledge and skill with a stronger background in psychology. The minor is flexible so that subsets of courses appropriate for particular majors may be selected. Students in biology, business, communication, computer science, education, nursing, and sociology may find that the psychology minor enhances their educational goals. The minor may be fulfilled by completing the following requirements.

**Minor Requirements—Psychology**

**Departmental Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required courses:</td>
<td></td>
</tr>
<tr>
<td>PSY 105, 110</td>
<td>8</td>
</tr>
<tr>
<td>Three of the following courses:</td>
<td></td>
</tr>
<tr>
<td>PSY 311, 321, 331, 341, 351, 361, 371, 391</td>
<td>12</td>
</tr>
<tr>
<td><strong>Elective Courses:</strong></td>
<td></td>
</tr>
<tr>
<td>Electives in Psychology (200–400 level)</td>
<td>16</td>
</tr>
</tbody>
</table>

A grade point average of at least 2.0 must be attained in all minor courses. Courses cross-listed with the student's major department cannot be included in the minor.
Mission Statement

The primary mission of Wright State University Lake Campus is to provide prebaccalaureate and technical education at the associate degree level through quality instruction and the sharing of knowledge through teaching, scholarly activity, and professional service. The Lake Campus shall seek to provide significant service to the community and is recognized as an integral part of Wright State University in both academic programs and shared governance. To accomplish this mission, the Lake Campus shall:

- provide instruction in general education courses, prebaccalaureate and applied associate degree curricula and baccalaureate curricula;
- provide professional counseling, placement services, program guidance, and financial assistance;
- provide a program which seeks to improve students’ basic skills and academic achievement for satisfactory participation in the learning experience;
- provide for students’ programs in athletics and recreation and organizations which meet students’ needs and interests and which assist in their development of a sense of social and civic responsibility;
- articulate associate degree programs with the parent institution and other four-year institutions;
- establish relationships which will delineate and enhance the role of the Lake Campus with secondary and postsecondary educational institutions and other agencies;
- enhance relationships with other colleges within the university to offer selected upper-division and graduate courses to the extent that local demand, physical resources, and OBR criteria allow;
- provide services and access for the handicapped;
- offer courses and programs throughout the service area at key locations as part of the philosophy that “the area is the college campus”;
- ensure that facilities reflect the nature of academic programs and meet community needs where possible;
- function as an intellectual, informational, and cultural resource for the community;
- contribute to the economic well-being of the service area by providing a total educational environment, including adult and continuing education courses, special training programs, and community service activities;
- defend academic freedom as important for intellectual inquiry and the development of ideas, recognizing that academic freedom imposes special obligations on individuals to be accurate and exercise appropriate restraint which shows respect for the rights and opinions of others;

The Wright State University Lake Campus was originally created in 1962 to meet the academic needs of residents in a four-county area in western Ohio; it became a regional branch campus of Wright State University in June 1969. Classes were held in downtown Celina, but the state promised funds to build a new campus if the community would raise the money to buy the land. In 1972, a successful campaign made it possible for the Lake Campus to move onto a new campus located on 173 acres on the north shore of Grand Lake St. Marys between Celina and St. Marys. Dwyer Hall, the first building on campus, contains laboratories, classrooms, faculty and administrative offices, the library, an auditorium, and student service facilities. Ground was broken in 1979 to expand the facilities for inclusion of additional two-year technical programs. Andrews Hall houses the secretarial, electronics, and mechanical drafting design programs. Trenary Lab was designed to accommodate the teaching of manufacturing industrial engineering programs. These buildings were named for the Andrews and Trenary families in recognition of their generous support. The dedication of these two new technical educational buildings in September 1980 highlighted the Lake Campus’s historic responsiveness to local needs and the community’s active involvement. The Amphitheatre and Marina were added in 1987.

The location of the campus enables many students to obtain an associate degree to earn approximately half their baccalaureate degree requirements without extensive commuting and to hold part-time jobs while in attendance. Students who do not plan to complete a degree program can further their education through selected courses of individual interest. Classes are scheduled during both day and evening hours.
• adhere to the belief that participatory and collegiate governance imposes standards of professional conduct and accountability in the balanced pursuit of institutional and individual achievement;
• ensure that all programs and services are open to qualified persons without regard to race, religion, marital status, gender, age, economic status, ethnic origin, or political belief and adhere to the affirmative action policy as established by the Board of Trustees of Wright State University.

Academics

The academic programs of the Lake Campus have been designed to meet the varied needs of area students, part time as well as full time. The campus is accredited by the North Central Association of Colleges and Schools as a two-year degree-granting institution and offers associate degrees in a number of fields.

Programs leading to the Associate of Arts or the Associate of Science degrees serve as prebaccalaureate programs in nearly all areas of the regular Wright State curriculum. Students can tailor their studies to provide the background required for transfer to a bachelor's degree program at WSU or another four-year institution.

Various technical programs leading to the Associate of Applied Business or the Associate of Applied Science degrees provide the skills and basic general knowledge needed to begin a satisfying career after two years of study.

Brief descriptions of programs in both the academic and technical areas follow.

Preprofessional Areas of Study

The following courses are recommended for students seeking to meet the educational requirements for entry into a professional school or program. Students are encouraged to complete the Transfer Module and 90 credit hours if they intend to transfer to any state-supported Ohio college or university. (See page 42 for Wright State University's Transfer Module; the Transfer Module can be completed at the Lake Campus.) Students meeting these requirements will receive preferential treatment under the terms of the Articulation and Transfer Agreement adopted by all Ohio colleges and universities and some private Ohio schools.

Biomedical Engineering

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in biomedical engineering include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230; Great Books—ENG 204, PHL 204, REL 204 (select one); Fine Arts—MUS 214, TH 214 (select one); Comparative Studies—CST 220, 230, 240, 250 (select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200; EC 200; MTH 231; CS 240*, 241*, 242*.

*Courses will be offered if there is sufficient enrollment.

Comparative Studies—CST 220, 230, 240, 250 (select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200; EC 200; CHM 121, 122, 123, 211, 212, 213; MTH 231.

Computer Engineering

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in computer engineering include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230; Great Books—ENG 204, PHL 204, REL 204 (select one); Fine Arts—MUS 214, TH 214 (select one); Comparative Studies—CST 220, 230, 240, 250 (select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200; EC 200; CHM 121; MTH 231; CS 240*, 241*, 242*.

*Courses will be offered if there is sufficient enrollment.

Computer Science (B.A.)

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Arts degree in computer science include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230; Great Books—ENG 204, PHL 204, REL 204 (select one); Fine Arts—MUS 214, TH 214 (select one); Comparative Studies—CST 220, 230, 240, 250 (select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200; EC 200; PHY 111/101, 112/102, 113/103; ENGL 200 level or above or foreign language**; CS 240*, 241*, 242*.

*Courses will be offered if there is sufficient enrollment.

**The foreign language requirement can be met at the Lake Campus.

Computer Science (B.S.)

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in computer science include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230; Great Books—ENG 204, PHL 204, REL 204 (select one); Fine Arts—MUS 214, TH 214 (select one); Comparative Studies—CST 220, 230, 240, 250 (select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200; EC 200; MTH 231; ENGL 200 level or above or foreign language**; CS 240*, 241*, 242*.

*Courses will be offered if there is sufficient enrollment.

**The foreign language requirement can be met at the Lake Campus.

Electrical Engineering

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in electrical engineering include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230; Great Books—ENG 204, PHL 204, REL 204 (select one); Fine Arts—MUS 214, TH 214 (select one); Comparative Studies—CST 220, 230, 240, 250 (select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200; EC 200; CHM 121, 122; CS 141, 142, MTH 231.
Human Factors Engineering

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in human factors engineering include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230;
Great Books—ENG 204, PHL 204, REL 204 (select one);
Fine Arts—MUS 214, TH 214 (select one);
Comparative Studies—CST 220, 230, 240, 250
(some one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200;
EC 200; CHM 121, 122; MTH 231; CS 205;
PSY 110.

Mechanical and Materials Science Engineering

Courses offered at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in mechanical and materials science engineering include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230;
Great Books—ENG 204, PHL 204, REL 204 (select one);
Fine Arts—MUS 214, TH 214 (select one);
Comparative Studies—CST 220, 230, 240, 250
(select one); Regional Studies—RST 260, 270, 280, 290 (select one); SY 105; SOC 200; PLS 200;
EC 200; CHM 121, 122; MTH 231.

Medical Sciences Program

Requirements for the Premedical Sciences Program without degree* include:

First Quarter
BIO 112, ENG 101, HST 101, CHM 121

Second Quarter
BIO 114, ENG 102, HST 102, CHM 122

Third Quarter
BIO 115, MTH 134, HST 103, CHM 123

Fourth Quarter
PHY 111/111; PLS 200; MUS 214 or TH 214
(select one); CHM 211, 215

Fifth Quarter
PHY 112/112; CHM 212, 216; Great Books—
ENG 204, PHL 204, or REL 204 (select one);
SOC 200

Sixth Quarter
PHY 113/113; CHM 213, 217; EC 200; Regional
Studies—RST 260, 270, 280, or 290 (select one)
*See your adviser for completion of the Transfer Module.

Medical Technology

Courses available at the Lake Campus that complete the Transfer Module and satisfy part of the curriculum leading to a Bachelor of Science degree in medical technology include the following:

ENG 101, 102; HST 101, 102, 103; MTH 229, 230;
Great Books—ENG 204, PHL 204, REL 204 (select one);
Fine Arts—MUS 214, TH 214 (select one);
Comparative Studies—CST 220, 230, 240, 250
(select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105; SOC 200; PLS 200;
EC 200; CHM 121, 122, 123, 211, 215, 212, 216,
213, 217; MTH 129 or 128; STT 165, 266; BIO
112; STT 164, 265.

Nursing

Courses available at the Lake Campus that partially satisfy the requirements for students seeking a Bachelor of Science degree in nursing include the following:

ENG 101, 102; HST 101, 102, 103; MTH 105;
Great Books—ENG 204, PHL 204, REL 204 (select one);
Fine Arts—MUS 214, TH 214 (select one);
Comparative Studies—CST 220, 230, 240, 250
(select one); Regional Studies—RST 260, 270, 280, 290 (select one); PSY 105, 110; SOC 200; PLS 200;
EC 200; CHM 101, 102; COM 102.

Associate of Arts (A.A.) and Associate of Science (A.S.) Degrees

Associate degrees in these programs prepare students for further work leading to a baccalaureate degree. Some programs offer both the Associate of Arts and the Associate of Science degrees. Students should seek the advice of the academic adviser in deciding which option to choose.

Biological Sciences

Biology careers are varied and numerous. The offerings for an associate degree in biological sciences are designed to provide students with a generalized background which may lead into almost any field of biology including botany, zoology, aquatics, oceanography, forestry, agriculture, and medical arts.

Program

Requirements for the Associate of Arts Degree

First Quarter
BIO 112, ENG 101, HST 101, CHM 121

Second Quarter
BIO 114, ENG 102, HST 102, CHM 122

Third Quarter
BIO 115, MTH 134, HST 103, CHM 123

Fourth Quarter
PHY 111/111; PLS 200; MUS 214 or TH 214
(select one); CHM 211, 215

Fifth Quarter
PHY 112/112; CHM 212, 216; Great Books—
ENG 204, PHL 204, or REL 204 (select one);
SOC 200

Sixth Quarter
PHY 113/113; CHM 213, 217; EC 200; Regional
Studies—RST 260, 270, 280, or 290 (select one)
*See your adviser for completion of the Transfer Module.

Requirements for the Associate of Science Degree

First Quarter
BIO 112, ENG 101, HST 101, CHM 121

Second Quarter
BIO 114, ENG 102, HST 102, CHM 122

Third Quarter
BIO 115, MTH 105, HST 103, CHM 123

Fourth Quarter
BIO 202, PLS 200, Fine Arts (select one); Art 214,
MUS 214, or TH 214, Elective

Fifth Quarter
BIO 206, SOC 200, Great Books (select one: ENG
204, PHL 204, or REL 204), PSY 105

Sixth Quarter
BIO 203, 204, or 205; EC 200; Comparative Studies
(select one: CST 220, 230, 240, or 250); Regional
Studies (select one: RST 260, 270, 280, or 290)

Total hours required for degree
90
Business and Administration

The Associate of Arts degree in business and administration is designed to prepare students to pursue a bachelor’s degree in business with majors in accountancy, business economics, finance, management, and marketing. A knowledge of basic business functions and an awareness of the businessperson’s responsibilities in the political, social, and economic order of society are fundamental objectives of the program.

Chemistry

Students may pursue either an Associate of Arts or an Associate of Science degree to prepare for further study in chemistry. Students considering medically related careers should follow the A.S. degree program. Students who pursue the A.A. degree in chemistry may satisfy the baccalaureate degree foreign language requirement with five quarters of any one foreign language or one year each of two languages. Either program is flexible enough to permit the combination of a chemistry major with extensive course work in other areas of science, business, or the arts.

Program

Requirements for Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter 17-19</td>
<td>ENG 101, HST 101, EC 201, MTH 129 or 128, Science I (select one sequence: BIO 105, CHM 105, GL 105/115, PHY 105/115)</td>
</tr>
<tr>
<td>Third Quarter 17</td>
<td>HST 103, EC 203, CS 205, Fine Arts (select one: TH 214, MUS 214, or ART 214), Science III (continue selected sequence: BIO 107, CHM 107, GL 107, PHY 107/117)</td>
</tr>
<tr>
<td>Fourth Quarter 19</td>
<td>ACC 201, TMK 201*, TMG 201*, MS 201, PSY 105, Regional Studies (select one: RST 260, 270, 280, or 290)</td>
</tr>
<tr>
<td>Fifth Quarter 16</td>
<td>ACC 202, TMK 202*, MS 202, ENG 330, SOC 200</td>
</tr>
<tr>
<td>Sixth Quarter 18</td>
<td>ACC 203, MS 203, PLS 200, TAD 232*, Great Books (select one: ENG 204, PHIL 204, or REL 204), Comparative Studies (select one: GST 200, 230, 240, or 250)</td>
</tr>
</tbody>
</table>

Total hours required for degree 105-108

*These courses are applicable to the baccalaureate program with special conditions. TMG 201 is accepted after the student earns a grade of C or better in MGT 302 (Introduction to Organizational Behavior), which is required of all business majors. TMK 201 and TMK 202 are accepted after the student earns a grade of C or better in either MKT 416 (Production Management) or MKT 418 (Price Management). TAD 232 is accepted after students earn a grade of C or better in either LAW 360 (Legal Aspects of Business Organization) or LAW 370 (Legal Aspects of Commercial Transactions).

Program

Requirements for the Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter 17</td>
<td>CHM 121, ENG 101, MTH 229, HST 101</td>
</tr>
<tr>
<td>Second Quarter 17</td>
<td>CHM 122, ENG 102, MTH 230, HST 102</td>
</tr>
<tr>
<td>Third Quarter 19</td>
<td>CHM 123, MTH 231, Great Books (select one: ENG 204, PHIL 204, or REL 204), HST 103, Comparative Studies (select one: GST 220, 230, 240, or 250)</td>
</tr>
<tr>
<td>Fourth Quarter 17</td>
<td>CHM 211, CHM 215, SOC 200, PHY 111, PHY 101, Fine Arts (select one: ART 214, MUS 214, or TH 214)</td>
</tr>
<tr>
<td>Fifth Quarter 18</td>
<td>CHM 212, CHM 216, PHY 112, PHY 102, PSY 105, Regional Studies (select one: RST 260, 270, 280, or 290)</td>
</tr>
<tr>
<td>Sixth Quarter 17</td>
<td>CHM 213, CHM 217, PHY 113, PHY 103, PLS 200, EC 200</td>
</tr>
</tbody>
</table>

Total hours required for degree 105
Communication

Communication involves people and includes a variety of methods for sending, receiving, and evaluating what individuals do and say. Good oral and written skills are required to solve problems and make decisions in personal relationships, the public forum, mass communication, government, and business. Communication is the most important tool for informing and persuading. A communication specialist will find a number of careers available in the public and private sectors of society.

Education

The College of Education and Human Services at Wright State University, whose program meets the standards set by the Ohio Department of Education and is accredited by the National Council for Accreditation of Teacher Education, is structured so that the freshman and sophomore years of study may be completed at the Lake Campus. General Education and Phase I (sophomore year) requirements can be fulfilled at the Lake Campus. In Phase I, the student’s role is that of an active participant rather than a passive listener and note-taker.
### English

The Associate of Arts degree in English prepares students to pursue a baccalaureate degree. The program is designed to provide a well-rounded, balanced curriculum and the opportunity for systematic study of a major humanistic discipline. Students who train in English often complement their study with electives that lead to careers in education, business, journalism, and government.

### Program

#### Requirements for the Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Quarter</strong></td>
<td>ENG 101, HST 101, Science I (select one sequence: BIO 105, CHM 105, GL 105/115, PHY 105/115), Elective</td>
</tr>
<tr>
<td><strong>Second Quarter</strong></td>
<td>ENG 102, HST 102, Science II (continue selected sequence: BIO 106, CHM 106, GL 106/116, PHY 106/116), Elective</td>
</tr>
<tr>
<td><strong>Third Quarter</strong></td>
<td>HST 103, Science III (continue selected sequence: BIO 107, CHM 107, PHY 107/117), PSY 105, PLS 200</td>
</tr>
<tr>
<td><strong>Fourth Quarter</strong></td>
<td>ENG 204, SOC 200, Regional Studies (select one: RST 260, 270, 280, or 290), Elective</td>
</tr>
<tr>
<td><strong>Fifth Quarter</strong></td>
<td>ENG 255, MTH 105, Fine Arts (select one: MUS 214, or TH 214), ENG 330 or 333, Elective</td>
</tr>
<tr>
<td><strong>Sixth Quarter</strong></td>
<td>ENG 256, ENG 301, COM 130, EC 200, Comparative Studies (select one: CST 220, 230, 240, or 250)</td>
</tr>
</tbody>
</table>

**Total hours required for degree:** 90

### Geography

The Associate of Arts curriculum in geography prepares students to pursue a baccalaureate degree in special areas of study such as physical geography, resource management, urban-economic geography, and urban planning. Students are encouraged to develop and understanding and awareness of the spatial organization and distribution of phenomena in the physical and human world.

### Program

#### Requirements for the Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Quarter</strong></td>
<td>ENG 101, HST 101, GL 105/115, Elective</td>
</tr>
<tr>
<td><strong>Second Quarter</strong></td>
<td>ENG 102, HST 102, GL 106/116, Elective</td>
</tr>
<tr>
<td><strong>Third Quarter</strong></td>
<td>HST 103, MTH 105, GL 107, Elective</td>
</tr>
<tr>
<td><strong>Fourth Quarter</strong></td>
<td>GEO 201, Great Books (select one: ENG 204, PHL 204, or REL 204), SOC 200, Regional Studies (select one: RST 260, 270, 280, or 290), Elective</td>
</tr>
<tr>
<td><strong>Fifth Quarter</strong></td>
<td>GEO 202, PLS 200, Fine Art (select one: TH 214, MUS 214, or ART 214), Electives (6 hours)</td>
</tr>
<tr>
<td><strong>Sixth Quarter</strong></td>
<td>GEO 203, EC 200, Comparative Studies (select one: CST 220, 230, 240, or 250), Electives (6 hours)</td>
</tr>
</tbody>
</table>

**Total hours required for degree:** 90

### History

The Associate of Arts degree prepares students to pursue a baccalaureate degree in history. Through exposure to a broad spectrum of human experience in the past and present, students come to understand their relationship to other human beings and the structure of society. The history major is useful to students who wish to seek a career in such fields as teaching, journalism, archival work, government, politics, and law.

### Program

#### Requirements for the Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Quarter</strong></td>
<td>ENG 101, HST 101, Science I (select one sequence: BIO 105, CHM 105, GL 105/115, PHY 105/115), Elective</td>
</tr>
<tr>
<td><strong>Second Quarter</strong></td>
<td>ENG 102, HST 102, Science II (continue selected sequence: BIO 106, CHM 106, GL 106/116, PHY 106/116), Elective</td>
</tr>
<tr>
<td><strong>Third Quarter</strong></td>
<td>HST 103, MTH 105, PSY 105, COM 130, Science III (continue selected sequence: BIO 107, CHM 107, GL 107, PHY 107/117)</td>
</tr>
<tr>
<td><strong>Fourth Quarter</strong></td>
<td>Great Books (select one: ENG 204, PHL 204, or REL 204), SOC 200, Regional Studies (select two: RST 260, 270, 280, or 290), Elective</td>
</tr>
<tr>
<td><strong>Fifth Quarter</strong></td>
<td>HST 211, PLS 200, Fine Arts (select one: ART 214, MUS 214, or TH 214), Communication Elective, Elective</td>
</tr>
<tr>
<td><strong>Sixth Quarter</strong></td>
<td>HST 212, EC 200, Comparative Studies (select one: CST 220, 230, 240, or 250), Elective</td>
</tr>
</tbody>
</table>

**Total hours required for degree:** 90
Psychology

Students may choose to follow an Associate of Science degree program in psychology to prepare themselves for further baccalaureate study. It is designed to provide a broad introduction to contemporary psychology.

The Associate of Science degree is recommended for students planning careers in academics, research, or professional fields.

Program

Requirements for the Associate of Science Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101, HST 101, PSY 105, Science I (sequence: BIO 105, CHM 105, GL 105/115, PHY 105/115)</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>HST 103, COM 102, Science III (sequence: BIO 107, CHM 107, GL 107, PHY 107/117, Elective)</td>
</tr>
<tr>
<td>Fourth Quarter</td>
<td>SOC 200, Great Books (ENG 204, PHL 204, REL 204), Regional Studies (RST 260, 270, 280, or 290), Psychology, Elective, Elective</td>
</tr>
</tbody>
</table>

Total hours required for degree 92

Social Work

A career in social work requires that the individual possess self-discipline, emotional stability, and intellectual creativity. Students should be interested in people of widely varying ages, abilities, and backgrounds. The program is designed to prepare students for further baccalaureate study in social work.

Career opportunities for the college graduate with a major in social work are found in governmental, private, and voluntary agencies. Typical agencies would include family services, children services, public schools, hospitals, mental health centers, and probation/parole boards.

Program

Requirements for the Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101, HST 101, PSY 105, Science I (sequence: BIO 105, CHM 105, GL 105/115, PHY 105/115)</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>HST 103, SOC 200, COM 102, Science III (sequence: BIO 107, CHM 107, GL 107, PHY 107/117, Elective)</td>
</tr>
</tbody>
</table>

Total hours required for degree 93

Sociology

A major in sociology increases students' understanding of the organizational and functioning of human social groups and of the methods and techniques for analyzing these social units. The study of sociology prepares students for careers in law, hospital administration, corrections, and government/community services. The Associate of Arts degree prepares students for further baccalaureate work.

Program

Requirements for the Associate of Arts Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101, HST 101, PSY 105, Science I (sequence: BIO 105, CHM 105, GL 105/115, PHY 105/115)</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>HST 103, MTH 105, BIO 107, COM 102, Elective</td>
</tr>
<tr>
<td>Fourth Quarter</td>
<td>SOC 200, SW 270, Great Books (ENG 204, PHL 204, or REL 204), Regional Studies (RST 260, 270, 280, or 290), RHB 201</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>PLS 200, MUS 214, Fine Arts (ART 214, ART 214), RHB 214, STT 164, STT 165</td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>CST 240, EC 200, SW 280, SOC 332, RHB 213</td>
</tr>
</tbody>
</table>

Total hours required for degree 97
Technical Associate Degree Programs:
Associate of Applied Business (A.A.B.)
Associate of Applied Science (A.A.S.)

Associate degrees in the following technical programs prepare students for career entry after two years of study. Graduates of the programs are referred to as technicians, as they provide technical assistance to those in professional positions which generally require at least a baccalaureate degree. Technical education programs provide the type of career training desired by business, industry, governmental units, and many other employers.

Accounting Technology
A major in accounting technology prepares the graduate to take an immediate position in the accounting field. This program concentrates on accounting principles used in business enterprises, including preparation and analysis of financial statements and reports for managers and other users. The required financial, cost, and tax accounting courses can be further supplemented with electives such as banking and insurance, which allow the student to specialize in a particular area of accounting. Basic instruction in data processing, English, business, mathematics, and economics gives students an understanding of the wide scope of business operations.

Program
Requirements for the Associate of Applied Business Degree
First Quarter 16
ACC 201, EC 201, ENG 101, MTH 127, General Education Elective
Second Quarter 17
ACC 202, EC 202, ENG 102, MTH 129, CS 205
Third Quarter 16
ACC 203, EC 203, ENG 330, TDP 210, Technical Elective
Fourth Quarter 16
TAC 210, TAC 225, TMG 201, MS 201, PSY 105
Fifth Quarter 18
TAC 211, TAC 220, TAC 226, TFI 205, General Education Elective, Technical Elective
Sixth Quarter 17
MGT 200, TMG 290, TAD 232, ENG 330, Technical Elective
Total hours required for degree 101

Business Management Technology
Management Option
Management technology is designed to qualify graduates for middle-level management positions in business, industry, or government. Courses structured to teach knowledge and skills in leadership, human relations, economics, personnel, marketing management, communication, finance, and accounting offer students the diversity of information essential for all levels of management. Technical electives give students the opportunity to tailor their degrees toward a specific management field.
Business Management Technology

Retail Marketing Option

Competition for the consumer’s dollar is becoming increasingly keen in all areas of retail marketing. The manager of a retail outlet must be capable not only of personnel management, inventory/reorder procedures, accounting, public relations, and economics, but also must possess creative ability in promotional techniques and new concepts of marketing. The objective of this program is to combine study of the functions of marketing such as economic and social determinants, practical evaluation of marketing functions relative to product development, promotion, pricing, and distribution with an analysis of the personal skills essential to selling.

Program

Requirements for the Associate of Applied Science Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>TMT 113, ENG 101, TEG 160, CS 205</td>
<td>17</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>TMT 114, ENG 102, PHY 111, PHY 101, TEG 161</td>
<td>18</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>TMT 115, TEG 210, TEG 211, TEG 240, General Education Elective</td>
<td>18</td>
</tr>
<tr>
<td>Fourth Quarter</td>
<td>TMT 116, TEG 220, TEG 241, Communication Elective, TEG 148</td>
<td>18</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>ENG 333, TEG 230, TEG 232, TEG 219, TEG 242</td>
<td>18</td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>TEG 221, TEG 233, TEG 235, TEG 250, PSY 105</td>
<td>18</td>
</tr>
<tr>
<td>Total hours required for degree</td>
<td>106</td>
<td></td>
</tr>
</tbody>
</table>

Microcomputer Electronics Major

The microcomputer major prepares students for employment in the field of microcomputers, either in computer repair or as a specialist using microcomputers to solve real world problems. To prepare students for this field, instruction is provided in all facets of the theory and use of microcomputers. A balance of course work in both the hardware and software of this important field is provided to give students a broad exposure to all aspects of the field.

Program

Requirements for the Associate of Applied Science Degree

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>TMT 113, ENG 101, TEG 160, CS 141</td>
<td>17</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>TMT 114, ENG 102, PHY 111, PHY 101, TEG 161</td>
<td>18</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>TMT 115, TEG 210, TEG 211, TEG 240, General Education Elective</td>
<td>18</td>
</tr>
<tr>
<td>Fourth Quarter</td>
<td>TMT 116, TEG 220, TEG 241, TDP 221, TDP 230</td>
<td>19</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>ENG 333, TDP 222, TDP 297, TEG 230, TEG 242</td>
<td>17</td>
</tr>
</tbody>
</table>
Mechanical Engineering Technology

Basic Program

The mechanical engineering technology basic program is designed to meet the needs of several industrial organizations in the local area and throughout Ohio. These differently expressed needs have as a common ground a recognition that American manufacturing requires more thoroughly educated people.

Mechanical engineering technology brings together the concepts of physics, the language of mathematics, and basic engineering design theory in order to solve engineering design problems. Modern industry, with its increased reliance on sophisticated devices (e.g., robots, lasers, and computers), will continue to demand trained individuals in development, design, manufacturing, testing, sales, troubleshooting, and management.

The basic program is also designed to allow graduates to smoothly articulate their studies into a baccalaureate degree program.

Program

Requirements for the Associate of Applied Science Degree

First Quarter 17
- TEG 141, TEG 144, TMT 113, ENG 101, TMG 201

Second Quarter 16
- TEG 150, TMT 114, ENG 102, PHY 101, PHY 111

Third Quarter 18
- TEG 151, TEG 131, TMT 211, TEG 170, TMT 115

Fourth Quarter 18
- TEG 152, TEG 201, TMT 116, TMG 270, PSY 105

Fifth Quarter 18
- TEG 153, TEG 202, TEG 212, TEG 219, ENG 333

Sixth Quarter 17
- TEG 203, TEG 218, TEG 221, General Education Elective, Communication Elective

Total hours required for degree 104

Industrial Major

The objective of the industrial major is to provide industry with graduates who have a knowledgeable and practical grasp of the skills needed in industry today. Courses provide a foundation in the efficient and safe use of people, materials, and machines needed to produce goods and services along with sufficient computer-aided manufacturing skills. Adequate training in the skills of writing, communication, mathematics, physics, management, and the humanities and social sciences helps graduates to relate effectively in their work as technologists and to specialize and expand their knowledge by keeping abreast of today's ever-changing state-of-the-art technology.

Program

Requirements for the Associate of Applied Science Degree

First Quarter 17
- TEG 141, TEG 144, TMT 113, ENG 101, TMG 201

Second Quarter 16
- TEG 150, TMT 114, ENG 102, PHY 101, PHY 111

Third Quarter 18
- TEG 151, TEG 131, TMT 211, TEG 170, TMT 115

Fourth Quarter 18
- TEG 152, TEG 201, TMT 116, TMG 270, PSY 105

Fifth Quarter 18
- TEG 153, TEG 202, TEG 212, TEG 219, ENG 333

Sixth Quarter 17
- TEG 203, TEG 218, TEG 221, General Education Elective, Communication Elective

Total hours required for degree 104

Mechanical/Computer Aided/Drafting Design Engineering Major

The main objective of this major is to provide industry with graduates who have the skills to develop detailed manual drafting-board or computer-aided design detail drawings of manufactured products and to assist engineers or industrial designers to prepare engineering specifications and calculations to produce mass-produced products.

Students gain engineering knowledge with scientific applications through courses in mathematics and the sciences. Also, along with these, students develop technical skills and craftsmanship methods to provide solid job knowledge for the drafter. The program starts with the basics of drafting through applications on computer-aided design (CAD) to higher-level theoretical and practical skills in CAD to prepare students for the modern changes anticipated in the industry. Students will learn the use of drafting instruments to produce working drawings. These drawings will include metric and dual dimensioning with good line work and lettering. Basic and advanced blueprint is used throughout the
curriculum in order to learn ANSI standards. To ensure that students will achieve the skills to perform typical calculations with the use of the machinery's handbook, numerical computations and machine design courses are provided.

Knowledge of sheet metal bending analysis and design of mechanical parts will be obtained through descriptive geometry and engineering tolerancing courses. Students will also learn advanced drafting practices on power transmissions and kinematics to design journal and roller bearings, belts, chains, gears, and CAMS. Statics, dynamics, strength of materials, and machine design courses take students through the study of simple stresses, bending and tensile stresses, variable loads, and stress analysis concepts that are applied to drafting practices.

Students will be involved in other courses such as the humanities, English composition, technical writing, and communication to gear them to prepare complete projects with technical research, calculations, and writing of technical papers. Written and verbal presentation of these projects will be required as a part of the curriculum.

Upon completion of this program, students will be expected to see the entire engineering stage of product development of a mass-produced object.

Program

Requirements for the Associate of Applied Business Degree

First Quarter
- OA 201, OA 211, TOA 101, TOA 250, ENG 101, TOA 225

Second Quarter
- OA 202, OA 212, TOA 102, ENG 102, ACC 201, COM 203

Third Quarter
- TOA 203, OA 213, OA 220, TOA 103, TOA 237, TOA 115

Fourth Quarter
- OA 221, TOA 104, TOA 224, TOA 230, EC 200, TOA 241

Fifth Quarter
- TOA 105, TOA 225, TOA 233, CS 205, PSY 105, General Education Elective

Sixth Quarter
- TOA 106, TOA 226, TOA 231, TOA 234, TDP 210, TAD 232

Total hours required for degree 100

Legal Administrative Assistant Option

Preparing legal documents for court action or any correspondence involving legal acts, rights, offenses, and ethics requires a precise understanding of form and terminology. Accuracy is vital for the legal administrative assistant. The legal administrative assistant program combines training and practice in office machines and in office procedures while teaching the nomenclature of law. Included is a basic introduction to accounting, business administration, and economics. Electives permit students to broaden knowledge in areas of career specialty or personal interest.

Program

Requirements for the Associate of Applied Science Degree

First Quarter
- TEG 141, TEG 144, TMT 113, ENG 101, PSY 105

Second Quarter
- TEG 145, TMT 114, ENG 102, PHY 101, PHY 111

Third Quarter
- TEG 146, TEG 150, TEG 170, TEG 211, TMT 115

Fourth Quarter
- TEG 147, TEG 201, TEG 270, TMT 116, General Education Elective

Fifth Quarter
- TEG 202, TEG 205, TEG 212, TEG 219, ENG 333

Sixth Quarter
- TEG 203, TEG 204, TEG 206, TEG 218, Communication Elective

Total hours required for degree 108

Office Information Systems

Administrative Assistant Option

The administrative assistant in today's business world is a professional person who must make decisions, project and advance the public image of the executive for whom he or she works through communication skills and writing expertise, be proficient in all areas of office procedure, and be skilled in operating office equipment in addition to assisting the executive. The office information systems program encompasses all of these necessary skills while giving the student a well-rounded background.
Medical Administrative Assistant Option

In addition to furnishing classroom techniques for perfecting basic office skills such as typing, shorthand, composition, and the use of office machines, the medical administrative assistant technology program incorporates fundamental courses in administration, accounting, economics, and data processing while giving students exacting instruction in medical terminology, medical office procedure, biology, and psychology. Students completing this program will be well prepared to fill medical administrative assistant positions.

Program

Requirements for the Associate of Applied Business Degree

First Quarter
- OA 201, OA 211, TOA 101, TOA 230, ENG 101, TOA 235
Second Quarter
- OA 202, OA 212, TOA 102, ENG 102, ACC 201, COM 203
Third Quarter
- OA 203, OA 213, OA 220, TOA 103, TOA 237, TOA 115
Fourth Quarter
- OA 221, TOA 104, TOA 224, TOA 230, BIO 105, TOA 241
Fifth Quarter
- TOA 105, TOA 225, TOA 233, CS 205, PSY 105, EC 200
Sixth Quarter
- TOA 106, TOA 226, TOA 231, TOA 234, TDP 210, TAD 232

Total hours required for degree 100

One-Year Certificate

The one-year office information systems certificate program encompasses all of the necessary skills needed for entry-level administrative assistant positions while giving students a well-rounded background in the office field. Students completing the one-year program will be well prepared to meet the challenges of today's office world.

Program

Requirements for the One-Year Certificate

First Quarter
- OA 211, TOA 101, TOA 224, TOA 230, ENG 101, TOA 235
Second Quarter
- OA 212, OA 220, TOA 102, TOA 225, TOA 233, TOA 241
Third Quarter
- OA 213, OA 221, TOA 103, TOA 115, TOA 237

Total hours required for degree 49

Word Processing Specialist Option

Today's technology is requiring more emphasis on the office applications using word/information processing software and the human aspects of word/information processing. The word processing specialist program will prepare students to meet this ever-increasing demand through a study of the document cycle as it relates to the electronic office applications of word/information processors. It explores the change from the traditional office to one using the word/information processing concepts.
Associate of Technical Study

The Associate of Technical Study degree uses courses from existing two-year technical programs along with the general education base to form a unique educational need. Intended for individuals with specialized technical interests, the Associate of Technical Study degree allows the student to develop, with the guidance of a designated faculty adviser, an individualized technical program. This program must establish an educational goal and include a concentration of courses required to accomplish that goal.

A minimum of 45 credit hours of the total program must be in a clearly identifiable area of concentration. This technical component may be developed by combining courses from two or more academic disciplines. General Education requirements and basic requirements must each account for a minimum of 21 credit hours of the program total or 42 total credit hours. The Associate of Technical Study degree will require from 90 to 110 total credit hours; graduation requirements are the same as for other A.A.S. and A.A.B. degrees.

Prior to completing 60 credit hours, each candidate for the Associate of Technical Study degree must complete an Associate of Technical Study application form outlining an intended area of concentration and designating course areas for further study to culminate this plan. The application is submitted to the director of technical education for review by the Associate of Technical Study Review Committee. Following approval of the application, each candidate will be required to complete no less than 30 credit hours of course work under the supervision of the designated faculty adviser. A maximum of 45 credit hours may be transferred into this degree program; transfer must be done prior to declaration of candidacy.

Many job opportunities in industry and business today are requiring a broader base exposure of the technologies such as technicians, programmers, and designers. The Associate of Technical Study degree will provide that needed flexibility that industry finds essential as they continue to diversify and meet the needs of a changing industrial market.

Program

Requirements for the Associate of Technical Study Degree

General Education Requirements 21
ENG 101, 102, and either 330 or 333 (all required)
COM 101, 102, 111, and 141 (choose one)
General Education Electives
(From disciplines listed below)
Communication (COMM) Philosophy (PHIL)
Comparative Studies (CST) Political Science (PLS)
Economics (EC) Psychology (PSY)
English (ENG) Regional Studies (RST)
Geography (GEO) Religion (REL)
History (HST) Sociology (SOC)
Music (MUS) Theatre (TH)

Basic Requirements minimum 21
These are courses that are closely related to the technical concentration area. Other course options are available with advisor approval.

Math Electives: Any math course except MTH 102 and MTH 105
Natural Science Elective: Choose either CHM 121 or PHY 101L, 111
Computer Science Elective: Choose from CS 141, CS 205, or TDP 130

Technical Requirements 45
This technical component may be developed by combining courses from two or more of the academic programs in the technical area. This development is done through the guidance of a designated faculty adviser. The technical programs are: accounting technology, business management technology, engineering technology, and office information systems.

Elective 3

Total hours required 90
Course Descriptions
A list of course abbreviations and an explanation of the course numbering system can be found on pages 5 and 6. Not all courses described here are offered every quarter or every year. For a more detailed listing of prerequisites, enrollment restrictions, and specific courses offered in a particular quarter, consult the Wright State class schedule published each fall, winter, spring, and summer.

**Accountancy/ACC**

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

- **200-3 Individual Income Tax Preparation**
  - Introduction to the basic concepts of income deductions, credits, and exemptions.
  - Calculation of taxable income and preparation of the individual income tax returns and selected schedules.

- **201-3, 202-3, 203-3 Accounting Concepts and Principles I, II, III**
  - Introduction to accounting for business enterprises. Includes preparation and analysis of financial statements and reports for managers and other users. Prerequisite: ACC 201, ACC 202.

**Advanced Courses**

All of the following courses require junior standing in addition to the listed prerequisites.

- **300-3 Accounting for Managerial Analysis**
  - Analysis and interpretation of accounting information for management in the functions of planning, control, and decision making. For nonmajors only. Prerequisite: ACC 203.

  - Development of financial accounting theory and its application to complex problems in the valuation of balance sheet accounts, determination of net income, and preparation of financial statements. Prerequisite: ACC 203, CS 205; for 305, ACC 304, CS 205; for 306, ACC 305.

- **321-3 Management Accounting I**
  - Concepts, techniques, and detailed accounting procedures for the manufacturing firm. Prerequisite: ACC 203, CS 205.

- **322-3 Management Accounting II**
  - Application of cost accounting concepts and techniques to complex problems in manufacturing accounting and to other areas including distribution, research, and development costs. Prerequisite: ACC 321.

- **328-3 Accounting Systems I**
  - Fundamental concepts of information, communication, and systems that form the framework for the design of data processing and accounting systems. Prerequisite: ACC 321, MIS 300 or 322.

- **407-3 Financial Accounting IV**
  - Comprehensive study of business combinations, consolidated financial statements, and accounting for governmental entities. Prerequisite: ACC 306.

**408-3 Financial Accounting V**

Topics include international accounting, partnership, financial reporting of changing prices, statement analysis, full disclosure, and industry segments. Prerequisite: ACC 306.

**412-3 Accounting Systems II**

Application of accounting systems in handling principal business transactions and situations. Prerequisite: ACC 328.

**421-3 Auditing I**

Introduction to principles, standards, and procedures involved in conduct of an audit by the independent accountant. Prerequisite: ACC 306, 328.

**422-3 Auditing II**

Application of auditing techniques with emphasis on the audit report and other special reporting problems. Consideration of management services and the auditor's responsibility to third parties. Prerequisite: ACC 421.

**431-3 Governmental Accounting**

Application of accounting principles to fund accounting for government units with consideration given to institutional accounting. Prerequisite: ACC 305, 321.

**441-3 Income Tax Accounting I**

History, theory, and basic tax structure pertaining to individuals and business. Prerequisite: ACC 203.

**442-3 Income Tax Accounting II**

Corporate, partnership, estate, gift, social security, and other federal taxes. Prerequisite: ACC 441.

**443-3 Individual Tax Planning**

Focuses on advanced concepts, techniques, and strategies for the individual taxpayer. An introduction to tax research sources is also provided. For accountancy majors: does not qualify as an accountancy elective but does qualify as a professional elective. Prerequisite: ACC 441.

**477-1 to 3 Special Studies in Accounting**

**478-3 Honors: Independent Study in Accountancy**

Research in accounting for fulfillment of the Honors Program project requirement.

**481-6 Internship in Accounting**

One quarter, faculty-supervised internship in the areas of public, industrial, or governmental accounting. Course requires semimonthly seminars and reports. Students enrolled in this course are considered to be full-time students.

**498-3 Seminar in Management Accounting**

Identification, description, and analysis of the behavioral science and quantitative methods applications for management accounting. Prerequisite: ACC 306, 322.

**499-3 Seminar in Financial Accounting**

Identification and analysis of contemporary issues and problems in the area of financial accounting. Prerequisite: ACC 306. Pre- or corequisite: ACC 421.
Aerospace Science/AES

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

121-1 U.S. Military Forces I

122-1 U.S. Military Forces II

123-1 U.S. Military Forces III

221-1 Development of Aerospace Power I
Explores the early development of air power until World War II. Studies center around the development of various concepts of air power employment and on factors that have prompted research and technological change.

222-1 Development of Aerospace Power II
Explores the early development of air power from World War II through the Berlin airlift. Studies center around the development of various concepts of air power employment and on factors that have prompted research and technological change.

223-1 Development of Aerospace Power III
Explores the development of air power from the Korean War until the present. Studies center around the development of various concepts of air power employment and on factors that have prompted research and technological change.

331-3 Aerospace Leadership and Management I
Examines the Air Force manager's world and elements of the job. Examines leadership with emphasis on the insights provided by leadership research. Provides experience in exercising communicative skills necessary for effective management and leadership.

332-3 Aerospace Leadership and Management II
Examines leadership styles and research models. A thorough review of the implications of the styles in improving management techniques is conducted. Planning, organizing, controlling, and management by objectives are studied extensively.

333-3 Aerospace Leadership and Management III
Examines the aspects of management delineating the decision-making process as it relates to the individual and the group. Discusses organizational structure staffing and examines managerial strategy and tactics. Reviews manager's role in dealing with conflict/change.

431-3 National Security Forces in Contemporary American Society I
Analysis of the role and function of the military officer in democratic society, the complex relationships involved in civil-military interactions, and the bureaucratic system for formulating and implementing U.S. defense policy.

432-3 National Security Forces in Contemporary American Society II
Continued analysis of the bureaucratic system for formulating and implementing U.S. defense policy, plus analysis of the impact of the domestic and international systems on U.S. defense policy and strategy.

433-3 National Security Forces in Contemporary American Society III
Analysis of the impact of the domestic and international system on U.S. defense policy and strategy; introduction to the laws of war and military law; and an exposure to initial commissioned service.

Anatomy/ANT

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-4 Basic Human Anatomy I
Osteology; histology of basic tissues; and topographical, histological, and developmental anatomy of nervous and endocrine systems. Laboratory exercises use human materials.

202-4 Basic Human Anatomy II
Basic topographical, histological, and developmental anatomy of the muscular, cardiovascular, digestive, respiratory, urinary, and reproductive systems. Laboratory exercises use human materials.

320-5 Anatomy of Human Motion
Examines the Air Force manager's world and elements of the job. Examines leadership with emphasis on the insights provided by leadership research. Provides experience in exercising communicative skills necessary for effective management and leadership.

332-3 Aerospace Leadership and Management I
Examines the Air Force manager's world and elements of the job. Examines leadership with emphasis on the insights provided by leadership research. Provides experience in exercising communicative skills necessary for effective management and leadership.

333-3 Aerospace Leadership and Management II
Examines leadership styles and research models. A thorough review of the implications of the styles in improving management techniques is conducted. Planning, organizing, controlling, and management by objectives are studied extensively.

333-3 Aerospace Leadership and Management III
Examines the aspects of management delineating the decision-making process as it relates to the individual and the group. Discusses organizational structure staffing and examines managerial strategy and tactics. Reviews manager's role in dealing with conflict/change.

488-1 Independent Reading

Anthropology/ATH

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

200-3 World of Primitive Contemporaries
Survey of the world's non-Western cultures. Discussions include the various ways contemporary peoples live and the relationship between primitive and contemporary cultures.
### Anthropology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-3</td>
<td>Introduction to Physical Anthropology</td>
<td>An overview of human biology and behavior, including human evolution, primate behavior, and human physical variation.</td>
</tr>
<tr>
<td>242-3</td>
<td>Introduction to Archaeology</td>
<td>Introduction to the nature of archaeological data, techniques of archaeological dating, and methods of data collection, analysis, and interpretation.</td>
</tr>
<tr>
<td>250-3</td>
<td>Introduction to Cultural and Social Anthropology</td>
<td>Surveys various fields or subdisciplines of anthropology to enable anthropology majors to complete upper-division courses effectively. Emphasis on identifying cultural symbols and social interaction in ethnic groups. Prerequisite: CST 240. (Previously listed as ANT 240.)</td>
</tr>
<tr>
<td>300-4</td>
<td>Laboratory in Archaeology</td>
<td>Emphasizes recognition and analysis of archaeological remains from prehistoric and historic sites. Students develop an original analysis of some body of archaeological material. Prerequisite: ATH 242, 369 or permission of instructor.</td>
</tr>
<tr>
<td>340-4</td>
<td>Applied Anthropology: An Introduction</td>
<td>Introduces various aspects of applied anthropology as currently used in a variety of behavioral activity fields locally, nationally, and internationally.</td>
</tr>
<tr>
<td>341-4</td>
<td>Indians of North America</td>
<td>Survey of selected North American Indian societies, contrasting their modern and aboriginal cultures.</td>
</tr>
<tr>
<td>346-4</td>
<td>Anthropology of Religion</td>
<td>(Also listed as REL 362.) Anthropological approach to meaning and function of religion in social life, and nature of thought or belief systems that give rise to different forms of religious life. Emphasis on primitive and peasant societies.</td>
</tr>
<tr>
<td>351-4</td>
<td>Fossil Evidence for Human Evolution</td>
<td>History, description, and interpretation of the fossil record for primate evolution with emphasis on human evolution.</td>
</tr>
<tr>
<td>352-4</td>
<td>Primate Behavior</td>
<td>Detailed examination of the behavior of nonhuman primates, including monkeys and apes, as it relates to human evolution and behavior.</td>
</tr>
<tr>
<td>358-4</td>
<td>Human Variation and Adaptation</td>
<td>Examination of human biological variation focusing on interpopulation variation, environmental adaptation, and the concept of race.</td>
</tr>
<tr>
<td>365-4</td>
<td>Archaeology of North America</td>
<td>Detailed examination of the major prehistoric cultures of North America. Emphasis on eastern North American prehistory.</td>
</tr>
<tr>
<td>368-4</td>
<td>Archaeological Field Techniques</td>
<td>Classroom and field preparation for archaeological survey and excavations. Prerequisite: ATH 242 or permission of instructor.</td>
</tr>
<tr>
<td>369-6</td>
<td>12 Field School in Archaeology</td>
<td>Excavation training on prehistoric sites.</td>
</tr>
<tr>
<td>392-4</td>
<td>Readings in Anthropology</td>
<td>May be taken for letter grade or pass/unsatisfactory.</td>
</tr>
<tr>
<td>399-1</td>
<td>Studies in Selected Subjects</td>
<td>Problems, approaches, and topics in the field of anthropology. Topics vary.</td>
</tr>
<tr>
<td>446-4</td>
<td>Peoples and Cultures of South Asia</td>
<td>Survey and analysis of cultural diversity and unity in southern Asia, particularly India, Pakistan, Bangladesh, and Sri Lanka.</td>
</tr>
<tr>
<td>447-4</td>
<td>Peoples and Cultures of Africa</td>
<td>Survey of the peoples and sociocultural systems of Africa with emphasis on sub-Saharan ecological and biocultural relationships.</td>
</tr>
<tr>
<td>448-4</td>
<td>Development of Ethnological Thought</td>
<td>Surveys historical development of ethnological thought and emphasizes theories of social and cultural change.</td>
</tr>
<tr>
<td>450-4</td>
<td>Political Institutions in Primitive Societies</td>
<td>(Also listed as PLS 450.) Study of the cultural part of primitive societies that we recognize as political organization. An attempt is made to show how in less complex (primitive) societies new local communities come into being through fission.</td>
</tr>
<tr>
<td>455-4</td>
<td>Biomedical Anthropology</td>
<td>An anthropological perspective of health and illness in selected societies of the world. Integrates physical, social, and cultural dimensions of disease, nutrition, fertility and population growth, health beliefs and practices, and the consequences of culture change and modernization.</td>
</tr>
<tr>
<td>465-4</td>
<td>Seminar in Woodland Archaeology</td>
<td>Intensive review of the prehistoric Woodland period (600 B.C. - 900 A.D.) of eastern North America. Regional cultures such as Adena and Ohio Hopewell and topics including trade, the economy, political organization, and mortuary customs are considered.</td>
</tr>
<tr>
<td>468-4</td>
<td>Seminar in Archaeological Theory</td>
<td>Wide-ranging survey of traditional and contemporary archaeoological theory, with study of its applications in various parts of the world. Prerequisite: ATH 242 or permission of instructor.</td>
</tr>
<tr>
<td>492-2</td>
<td>Independent Research in Anthropology</td>
<td>May be taken for letter grade or pass/unsatisfactory.</td>
</tr>
</tbody>
</table>

### Art and Art History/ART

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

All courses in the Department of Art and Art History are offered with a pass/unsatisfactory grade option.
General Education Course

214-3 Visual Art in Western Culture
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.

Departmental Courses

206-4 Drawing I
Introduction to materials, techniques, and concepts of drawing.

207-4 Photography I
Exploration of basic processes and concepts in still photography. Work involves learning basic skills and techniques. Assignments designed to develop an understanding of light as an expressive element.

208-4 Sculpture I
Introduction to basic processes, materials, and concepts of sculpture.

209-4 Introduction to Color
Introduction to the study of the elements and interaction of color.

211-4 Art History I
Painting and sculpture before A.D. 1150. Introduces the basic concepts of visual and stylistic analysis and a historical survey of painting and sculpture in the Western world from prehistoric to medieval times.

212-4 Art History II
Painting and sculpture from 1150 to 1850. Historical survey of painting and sculpture in the Western world from late medieval times to the dawn of the modern era. Prerequisite: ART 211 or permission of instructor.

213-4 Art History III
Painting and sculpture since 1850. Historical survey of modern painting and sculpture in the Western world. Prerequisite: ART 212 or permission of instructor.

214-3 Visual Art in Western Culture
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.

228-4 Drawing II
Introduces concepts and techniques of drawing. May include studies from the human figure and other natural forms. Topics vary. Prerequisite: ART 206.

258-4 Photography II
Development of personal concepts and aesthetic expression in photography. Emphasis on individualized approach to photographic problems that arise from students’ work. Prerequisite: ART 207 or permission of instructor.

278-4 Sculpture II
Introduction to fundamentals of sculpture emphasizing basic processes and materials. Topics vary. Prerequisite: ART 208.

300-1 to 4 Studio Workshop
Studio experience directly involving students with a professional artist executing a special project. Covers a range of information from preliminary planning to final discussion on the project.

301-1 to 4, 302-1 to 4, 303-1 to 4 Independent Study in Art
Special studies and intensive individual work with faculty supervision in art.

309-4 Studies in Art Theory and Philosophy
Courses offered under this number provide both historical surveys and intensive studies in art theory and philosophy. Prerequisite: ART 213 or permission of instructor.

327-4, 328-4, 329-4 Intermediate Drawing
Development of personal concepts and aesthetic expression in drawing. Emphasis on individualized approach to drawing problems that arise from the work of students. Topics vary. Prerequisite: for 329, ART 228.

337-4 Beginning Expanded Media
Study of visual and aesthetic techniques and concepts emphasizing the development of individual artistic expression in various media. Prerequisite: ART 228, 258, 278 or permission of instructor.

347-4 Beginning Painting
Working from still, figure, and landscape emphasizing the use of color and drawing in visual organization. Prerequisite: ART 206, 209, 228.

348-4, 349-4 Intermediate Painting
Emphasis on principles of pictorial organization. Attention to the relationship of subject matter and abstraction as related to contemporary and traditional approaches. Prerequisite: for 348, ART 347 or permission of instructor; for 349, ART 348 or permission of instructor.

357-4, 358-4 Intermediate Black-and-White Photography
Development of personal concepts and aesthetic expression in photography. Emphasis on individualized approach to photographic problems that arise from the work of students. Topics vary. Prerequisite: ART 258 or permission of instructor.

359-4 Color Photography
Development of personal concepts and aesthetic expression in photography. Emphasis on individualized approach to photographic problems that arise from the work of students. Topics vary. Prerequisite: ART 258.

367-4 Beginning Printmaking—Intaglio
Exploration of printmaking stressing intaglio methods: etching, engraving, drypoint, aquatint, and liftgrounds. Use of black-and-white techniques and introduction to color printing. Topics vary. Prerequisite: ART 206, 228. (ART 228 may be taken concurrently) or permission of instructor.
222

Courses

Art and
Art History

368-4 Beginning Printmaking—Lithography
Introduction to basic lithographic techniques using stone and/or metal plate. Emphasis on black-and-white printing and aesthetic possibilities of the media. Topics vary.
Prerequisite: ART 206, 228 (ART 228 may be taken concurrently), or permission of instructor.

369-4 Beginning Printmaking—Screenprinting
Introduction to screenprinting techniques such as stencil cut, photo stencil, and crayon and touche resists. Exploration of aesthetic possibilities of the media. Topics vary.
Prerequisite: ART 206, 207, 209 or permission of instructor.

Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using media selected by students. Titles vary.
Prerequisite: ART 278 or permission of instructor.

387-4 Visual Communication I
Introduction and orientation to the visual communication disciplines (graphic design, art direction, and illustration), historically and currently.
Prerequisite: ART 206, 209, 228.

388-4 Visual Communication II
Development of understanding and use of typography, typesetting procedures, and techniques.
Prerequisite: ART 387.

389-4 Visual Communication III
Creation of images using cultural forms in the solution of visual communication problems. Illustration techniques using drawing, photography, and graphic techniques.
Prerequisite: ART 388, 369, 258.

400-2 Junior Seminar
Group discussions of contemporary writings in art and critiques of junior work in a peer setting with faculty and visiting artists participating on an informal basis.

401-1 to 4, 402-1 to 4, 403-1 to 4 Independent Study in Art History
Intensive individual work with faculty supervision in art history.

404-1 to 4 Studies in Art History
Provides opportunities to explore problems and approaches to art and art history and includes cross-period and interdisciplinary studies.
Prerequisite: ART 213 or permission of instructor.

405-1 to 4 Studies in Art
Provides opportunities to explore problems and approaches to art history and includes cross-media and interdisciplinary studies.

409-4 Art Theory and Criticism
Historical surveys and intensive studies of art theory and criticism.
Prerequisite: ART 213 or permission of instructor.

410-4 Studies in American Art
General surveys and intensive studies of periods, major movements, and artists of the time.
Prerequisite: ART 213 or permission of instructor.

411-4 Studies in Ancient and Classical Art
(Also listed as CLS 340.) General surveys and intensive studies of the period, major movements, and artists of the time.

412-4 Studies in Medieval Art
General surveys and intensive studies of the period, major movements, and artists of the time.
Prerequisite: ART 211 or permission of instructor.

413-4 Studies in Renaissance Art
General surveys and intensive studies of the period, major movements, and artists of the time.
Prerequisite: ART 212 or permission of instructor.

414-4 Studies in Baroque Art
General surveys and intensive studies of the period, major movements, and artists of the time.
Prerequisite: ART 212 or permission of instructor.

415-4 Studies in Nineteenth-Century Art
General surveys and intensive studies of the period, major movements, and artists of the time.
Prerequisite: ART 213 or permission of instructor.

416-4 Studies in Twentieth-Century Art
General surveys and intensive studies of the period, major movements, and artists of the time.
Prerequisite: ART 213 or permission of instructor.

417-4 Studies in Non-Western Art
General surveys and intensive studies of periods, major movements, and artists in non-Western art.
Prerequisite: ART 211 or permission of instructor.

427-4, 428-4, 429-4 Advanced Drawing
Exploration of the structure and interrelationships of visual form in drawing, painting, and sculpture. Principal historical modes of drawing examined. Topics vary.
Prerequisite: ART 329 or permission of instructor.

437-4 Advanced Expanded Media
Development of personal concepts and aesthetic expression in media. Emphasis on individualized approach to media problems.
Prerequisite: ART 337 or permission of departmental adviser.

447-4, 448-4, 449-4 Advanced Painting
Continued emphasis on pictorial organization with increased attention to the personal imagery of students.
Prerequisite: ART 349 or permission of instructor.
Art Education/AED

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

214-4 Foundations of Art Education
Introductory course involving ideas and approaches to educating for aesthetic awareness, providing opportunities for the aesthetic development of students through experiences with conventional and unconventional art media and an introduction to theories of art.

224-4 Ceramics I
Rudiments of ceramic design; methods of forming, wheel throwing, firing, glazing, and decoration. Emphasizes ceramic techniques and procedures applicable to public school art programs.

225-4 Ceramics II
Advanced ceramic design, forming, wheel throwing, glaze calculations, and decoration. Includes a high degree of experimental involvement. Emphasizes advanced ceramic techniques and procedures applicable to public school art programs. Prerequisite: AED 224 or permission of instructor.

324-4 Enameling I
Introduction to basic methods and processes of applying and fusing ground glass to metals. Emphasizes enameling techniques and procedures for public school art programs. Prerequisite: AED 214 or permission of instructor.

325-4 Enameling II
Advanced study of special methods and techniques of applying and fusing ground glass to metals. Emphasizes advanced enameling techniques and procedures for public school art programs. Prerequisite: AED 324 or permission of instructor.

370-1 to 3 Independent Study
Planned readings, project, participation/observation clinic experiences, or other appropriate study on an independent basis.

423-4, 424-4, 425-4 Fibers and Fabrics
423: introduction to fibers and fabrics as art forms. Basic techniques in various materials such as weaving, wrapping, twining, rya, batik, and other approaches appropriate to any school art program. 424: use of loom and other hand techniques in weaving. Experimental approaches in completion of original ideas. Emphasizes techniques for public school art programs. 425: methods of silkscreen as it may be used in public school art programs. Analysis of textile design in contemporary living. Prerequisite: AED 214 or permission of instructor.

426-4 Creative Stitchery
Various methods and procedures of working with stitchery and appliqued forms; work with flat and stitched fabrics for wall hangings and other fabric art forms. Emphasizes stitchery and fabric techniques for public school art programs. Prerequisite: AED 214 or permission of instructor.

428-4 Pupil Expression through Mural Painting
Development of individual creative expression through mural painting; application of mural technique to public school art programs.

429-1 to 6 Workshop in Art Education
Problems, processes, and techniques for development of art activities in elementary and secondary schools. Development of craft processes concerned with suitable projects for classroom work and public art education curricula.

430-3 Independent Reading in Art Education
Expands students' knowledge of philosophy, aesthetics, and creative and mental growth as related to art teaching and art education curricula. Emphasis on current books, magazines, and research in art education.
431-4 Art and the Child
Understanding child growth and development through creative expression with emphasis on functions and procedures for art in the classroom. Includes curriculum implementation strategies. Experiences in art media appropriate to the early childhood and observation of art in the schools. Pre- or corequisite: ED 327 or permission of instructor.

432-3 Art and the Adolescent
Develops an understanding of individual differences, psychological sets, and various roles of the adolescent as related to art and creativity. Curriculum planning, comparative theories, in-field observations, and analysis of art class content included. Prerequisite: AED 431 or permission of instructor.

436-1 to 4, 437-1 to 4 Minor Problems in Art Education
Individual problems in specified areas for the purpose of intense and concentrated work in one or more media; the development of a proficiency in one or more craft areas.

438-4 Art Methods for Schools
Develops an understanding of the needs of children involved in art activities; study of elementary and secondary teaching techniques, materials, and curriculum organization. In-field work prior to student teaching. Reading components and teaching strategies included. Prerequisite: AED 431, 432; ED 214, 216, 218, 220; or equivalent. Corequisite: ED 323.

440-1 to 3 Workshop/Field Trip in Art Education
Survey of visual and performing arts. Visits to museums, galleries, and commercial sources of contemporary design and architecture. Written and/or visual evaluation of places visited required.

441-4 Art Appreciation and Criticism in the School
Understanding influences and interaction of the creative arts in our present culture. Emphasis on importance of developing appreciation in the public school. Study of processes inherent in aesthetic criticism and their relationship to teaching in the arts.

442-4 Advanced Problems in Art Education
Concentrated and advanced work with specific art media such as ceramics, metals, and fabrics. Emphasis on creative work and methods of teaching advanced procedures applicable to the public school art room.

Art Therapy/AT
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

370-1 to 3 Independent Study in Art Therapy
Planned readings, project, participation/observation, clinic experiences, or other study on an independent basis. Work is supervised by an art therapy faculty member. Graded pass/unsatisfactory.

429-1 to 6 Workshop in Art Therapy
Focuses on problems, processes, and techniques for the development of art therapy in special settings with diverse populations. Work in art media, assessment strategies, and treatment plans included. Discussion of implementation procedures with populations.

444-3 Art and the Special Student
Experiences to help those who will work with handicapped/disabled students to become aware of creative philosophy, art media, and therapeutic procedures. Approaches in creative activity included. Prerequisite: AED 431 or equivalent; or permission of instructor.

Aviation/AVI
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-4 Private Ground Instruction
Forty hours of ground instruction covering radio navigation, meteorology, FAA regulations, communications, aircraft construction, and performance data to meet requirements of private pilot's written examination.

102-4 Flight Instruction
Thirty-five hours of flight training and related lectures including primary flight maneuvers and cross-country flying. Meets requirements for private pilot's certificate. Students required to have passed FAA written examination.

Biochemistry/BCH
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

250-4 Human Nutrition
Nutrition as an integrated science emphasizing biochemical and physiological principles. Topics include nutritional energetics, specific nutrients, and nutrition and physiology. Relation of basic concepts to clinical situations and to nutritional management of specific disease conditions. Prerequisite: BIO 105, CHM 102; or equivalent.

401-1 to 4 Topics in Biochemistry
421-4 Biochemistry I
Chemistry of biological compounds and introduction to enzymes.

423-4.5 Biochemistry II
Intermediary metabolism of carbohydrates, proteins, nucleic acids, and lipids. Prerequisite: BCH 421.

427-4.5 Advanced Undergraduate Biochemistry
Metabolism of hormones and amino acids, integration of metabolism, and aspects of human biochemistry including some metabolic disorders and nutrition. Prerequisite: BCH 423.
488-1 Independent Reading
495-1 to 5 Honors Research in Biochemistry
Laboratory experience in biochemistry. Graded pass/unsatisfactory. Prerequisite: General chemistry and biology. Pre- or corequisite: BCH 421/423.

499-1 to 4 Undergraduate Research

Biological Sciences/BIO

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses

105-4 Cells, Genes, and Genetics
Study of cells and genetics provides the focus for examining the unique interactions of matter, energy, and information that produce life and provide for its continuity and change. 3 hours lecture, 2 hours lab.

106-4 Evolution and Ecology
Examination of the interactions between organisms and their environments that determine the abundance, forms, and adaptations of species in space and time. 3 hours lecture, 2 hours lab. Prerequisite: BIO 105.

107-4 Human Biology
Examination of the organization and function of the human body throughout the cycle of life. 3 hours lecture, 2 hours lab. Prerequisite: BIO 106.

Sequence substitutions: BIO 112, 114, 115. Honors students may substitute UH 203 for BIO 107.

Departmental Courses

105-4 Cells, Genes, and Genetics
Study of cells and genetics provides the focus for examining the unique interactions of matter, energy, and information that produce life and provide for its continuity and change. 3 hours lecture, 2 hours lab.

106-4 Evolution and Ecology
Examination of the interactions between organisms and their environments that determine the abundance, forms, and adaptations of species in space and time. 3 hours lecture, 2 hours lab. Prerequisite: BIO 105.

107-4 Human Biology
Examination of the organization and function of the human body throughout the cycle of life. 3 hours lecture, 2 hours lab. Prerequisite: BIO 106.

112-4 Principles of Biology: Cell Biology and Genetics
Introduction to basic concepts of biology. Topics include genetics and the molecular and cellular basis for the unity of life.

114-4 Organismic Biology
Introduction to the structure and function of plants and animals. Prerequisite: BIO 112.

115-4 Principles of Biology: Diversity and Ecology
Introduction to basic concepts of biology. Topics include evolution, ecology, and the diversity of life. Prerequisite: BIO 112. (Previously listed as BIO 111.)

119-1 Honors Recitation, Principles of Biology (112, 114, 115)
Recitation/discussion section to review basic concepts developed in the laboratory. Coregistration in lecture and honors laboratory required.

199-1 Introduction to Biological Investigation
For individually motivated students at the introductory level who wish to pursue some particular project under faculty supervision. Graded pass/unsatisfactory.

Departmental Unit Courses

202-5 Microbiology
Study of morphology, cultivation, and biochemical activities of microorganisms. Survey of viruses, bacteria, blue-green algae, fungi, and their diversity in natural environments. 3 hours lecture, 4 hours lab. Prerequisite: One year introductory biology.

203-5 Biology of Lower Plants
Study of morphology, taxonomy, and ecology of algae, fungi, and bryophytes. Emphasis on growth and developmental patterns, modes of reproduction, importance to humans and to ecosystems, diversity, distribution, and phyllogenetic relationships. 2 hours lecture, 6 hours lab. Prerequisite: One year introductory biology.

204-5 Biology of Vascular Plants
Study of form, development, reproduction, and life histories of vascular plants. Survey of representative plant families emphasizing phyllogenetic relationships, distribution, and vegetational types in natural habitats. 2 hours lecture, 6 hours lab. Prerequisite: One year introductory biology.

205-5 Biology of the Invertebrates
Morphology, development, physiology, and evolutionary relationships of major invertebrate groups. 3 hours lecture, 6 hours lab. Prerequisite: One year introductory biology.

206-5 Comparative Vertebrate Anatomy
Introduction to the anatomy and evolutionary history of vertebrate animals. Prerequisite: One year introductory biology.

294-1 Introduction to Medical Technology
Familiarizes students with the medical-technology profession and the educational programs required to become a medical technologist.

302-3 Genetics
The nature and function of genetic material and its role in quantitative, physiological, and population genetics of plants, animals, and humans. Prerequisite: One year introductory biology.
303-5 Vertebrate Histology
Study of structure/function relationships in vertebrate tissues, organs, and organ systems. 3 hours lecture, 4 hours lab. Prerequisite: at least one 200-level or above biology course; CHM 211; or permission of instructor.

304-5 Plant Physiology
Special aspects of plant physiology that set plants apart from other organisms. Laboratory introduces independent research concerning plant nutrition and bud development. 3 hours lecture, 4 hours lab. Prerequisite: BIO 203 or 204; CHM 123.

305-3 Animal Physiology
Basic adaptive mechanisms and their coordination in the activities of the metazoa. Prerequisite: One year introductory biology; and BIO 205 or 206.

306-5 Ecology
Introduction to ecology; emphasis on the organism's interaction with the environment. 3 hours lecture, 4 hours lab. Prerequisite: One year introductory biology.

307-6 Cell Biology
Elements of cell structure are studied with emphasis on functional correlations. Laboratory experiments demonstrate principles of isolation, fractionation, and purification of organelles; biochemical and physiological properties of cells and cell constituents; and metabolic interrelationships. 3 hours lecture, 6 hours lab. Prerequisite: One year introductory biology.

308-2 Animal Physiology Laboratory
Laboratory studies of basic adaptive mechanisms and their coordination in the activities of the metazoa. Prerequisite: BIO 112, 115. Prerequisite: One year introductory biology; and BIO 205 or 206.

312-2 Genetics Laboratory
Laboratory for BIO 302. Experiments and techniques in genetic research. Prerequisite: One year introductory biology.

321-5 Vertebrate Embryology
A study of embryonic growth and development viewed at the organismic and cellular levels. The relationship of the principles and patterns of morphogenesis to evolutionary theory is stressed. Prerequisite: One year introductory biology.

324-3 Molecular Biology
Molecular basis of the living state with emphasis on macromolecular structure and function and the molecular mechanisms for the transmission and expression of genetic information. Prerequisite: CHM 213.

402-3 Molecular Biology Laboratory

405-3 Molecular Biology Laboratory

407-2 Senior Seminar
Literature survey, discussion, and oral presentations of selected topics in the biological sciences. Course requires written presentations when offered for two credits and one recitation.

Additional Courses
201-1 to 3 Topics in Biology
Selected biological topics of current interest.

208-4.5 Anatomy and Physiology I
Lecture topics in human anatomy and physiology, including tissues, skeletal, muscular, nervous, and endocrine systems. Laboratory features dissection and physiological techniques complementary to the lecture topics. Prerequisite: BIO 112.

209-4.5 Anatomy and Physiology II
Lecture topics in human anatomy and physiology including the cardiovascular, respiratory, digestive, excretory, and reproductive systems. Laboratory features dissection and physiological techniques complementary to the lecture topics. Prerequisite: BIO 208.

310-3 Issues in Science
(Also listed as CHM 310, PHY 310, MTH 310 and GL 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.

401-1 to 3 Topics in Modern Biology
Advanced topics in modern biology of current interest. Topics vary.

404-6 Basic Electron Microscopy
Basic theory and practical experience in transmission electron microscopic technology. Animal, plant, and particulate specimens are processed in the laboratory. Prerequisite: BIO 303 or 307, completion of chemistry requirement, and permission of instructor.

406-3 Evolutionary Biology
Historical development and current understanding of the principles of evolution. Prerequisite: One year introductory biology.

408-3 Writing in the Biological Sciences
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. Writing grants will also be discussed. Prerequisite: One year introductory biology.

411-6 The Aquatic Environment
Introduction to limnology. Field and laboratory course concerned with physical, chemical, and biological factors that characterize natural waters.

413-5 Biological Problems of Water Pollution
Introduction to biological aspects of water pollution. Lectures, discussions, laboratories, and field trips on various types of pollutants and their impact on aquatic life.
414-5 Terrestrial Communities
Organization, diversity, distribution, and abundance of animals in plant communities with emphasis on terrestrial insect-plant relationships. Laboratories and field trips acquaint students with various techniques used for ecological studies of population and community dynamics in natural environments. Prerequisite: BIO 306 or equivalent.

415-4 Environmental Toxicology
Covers toxicological problems encountered in the field of environmental health. Emphasis on monitoring, control, and regulation of toxic substances in air and water and in industrial environments. Completion of a course in physiology and in organic chemistry required.

417-4 Evolution, Religion, and Ethics
(Also listed as REL 487.) Introduction to biological, philosophical, theological, and ethical aspects of the concept of evolution.

420-3 Designing Biological Experiments
Principles of effective sampling design for biological experiments. Reconciling the peculiarities of biological data with the assumptions of statistical methods. Lectures and problem sets. Completion of two 300-level or above biology courses and one course in statistics required.

421-3 Human Genetics for Health Professionals
Describes mechanism of inheritance and genetic diseases so that health professionals can recognize possible genetic abnormalities and make appropriate referrals, participate in genetic counseling, and consider ethical and legal implications of the "new geneties." For nonmajors only. Prerequisite: BIO 112 or equivalent.

423-3 Biological Basis for Genetic Counseling
Intended to provide an overview of the methods involved in genetic counseling, risk analysis, linkage scores, and diagnostic screening tests but will not serve toward accreditation of certification in genetic counseling. Prerequisite: BIO 421, 426, or permission of instructor.

425-5 Microbial Ecology
Microbes in soil, water, and air. Experiments on mineral cycles, physical and biological limiting factors, and environments. Includes field studies. Prerequisite: CHM 123.

426-4 Human Genetics
Nature of human genetic traits, methods of analysis of inheritance. Prerequisite: BIO 302, 402.

429-5 Plant Anatomy
Examines the internal structure of vascular plants. Special emphasis is placed on structure-function relations and their adaptive significance. Prerequisite: One year introductory biology.

450-3 Behavior Genetics
Behavior genetics is considered as an adaptive process and as a population phenomenon. Behavior is shown to be a powerful evolutionary mechanism as well as a mechanism for maintaining species integrity. Prerequisite: BIO 302, 312.

454-3 Microbial Genetics
Basic concepts of production of microbial mutations, their detection and analysis. Use of microbial genetics in elucidating cellular functions. The construction of plasmids and their use in genetic engineering. Prerequisite: BIO 202, 302; BIO 402; BCH 421 or 423; or permission of instructor.

464-3 Microbiology of Food
Principles of food microbiology, preservation, and handling. Major organisms of food poisoning and means of control are considered. Completion of a course in microbiology required.

473-5 Biology of Selected Marine Environments
Biological aspects of marine environments. Sampling and observation of living marine specimens during week-long trip to marine laboratory.

475-2 Microbiology of Food Laboratory
Methods for evaluating microbial quality of food. Includes investigation of major pathogens, and techniques and principles of processing food. Completion of a laboratory course in general microbiology required. Prerequisite: BIO 202 or M&I 220. Corequisite: BIO 464.

476-2 Human Parasitology

477-3 Human Parasitology Laboratory
Examination and identification of protozoan, helminthic, and arthropod parasites of humans. Corequisite: BIO 476.

478-4 Animal Behavior
(Also listed as PSY 478.) Physiology, phylogeny, and ontogeny of behavior. Prerequisite: One year introductory biology.

484-3 Introduction to Biogeography
(Also listed as GEO 484.) Introduction to the factors affecting the distribution of plants and animals. Prerequisite: One year introductory biology.

488-1 Independent Reading
Graded pass/unsatisfactory.

490-9 to 12 Biology Internship
Off-campus experience in cooperating scientific agency or industrial organization. Reports and specific assignments determined in consultation with faculty adviser and supervising professionals. Junior standing in biology and department approval required.

495-1 to 5 Senior Honors Research

499-1 to 3 Special Problems in Biology
Biomedical Engineering/BME

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

419-3 Biomedical Engineering Systems I
Derivation and use of the basic conservation laws underlying the fluid mechanical behavior of the cardiopulmonary system. Includes applications to the flows of blood, pulmonary air, and extracorporeal fluids. Prerequisite: MTH 233, ME 212, 315.

420-3 Biomedical Engineering Systems II
Application of the mechanics of fluids and solids together with thermodynamic principles in formulating the basic equations governing cardiovascular and pulmonary functions. Topics include rheology, hemodynamics, lung aerodynamics, cardiac mechanics, and system interactions. Prerequisite: BME 419.

422-3 Engineering Biophysics
Application of mathematical and engineering techniques toward describing biophysical systems. Topics include cellular transport, electrical properties of membranes, and biophysics of muscle contraction. Prerequisite: EE 321 or permission of instructor.

428-3 Biomechanics and Biothermodynamics
Application of solid mechanics and thermodynamics toward describing physiological systems. Topics include mechanics of the skeletal, cardiac, and pulmonary systems, and analysis of the biothermal regulation system. Prerequisite: ME 212, 315 or permission of instructor.

439-4 Biotransport and Artificial Organs I
Introduction to transport processes vital to the design of medical devices for artificial intervention into living systems. Topics include circulatory system dynamics, mathematical modeling of physiological systems, membrane transport, and biological/artificial organ design. Prerequisite: BME 420.

440-4 Biomaterials
Application of properties of materials and solid mechanics to problems and design of medical implants, external prostheses, and living tissues. Topics include mechanical properties of biologic and synthetic materials, stress-strain analysis, viscoelasticity, tissue response to implants and vice versa, and implant materials for interfacing with hard and soft tissues and blood. Prerequisite: BME 439.

460-3 Design and Analysis of Engineering Experiments
Introduction to planning and analysis of engineering experiments. Covers basic topics required for experimental work and their applications to engineering problems. Brief coverage of basic statistics, probability distributions, tests of hypotheses, linear regression and analysis of variance, and the application of these tools using randomized block, factorial, and fractional factorial experimental design in investigation of engineering problems.

461-4 Bioinstrumentation I
Principles of design and analysis of electronic instrumentation for biological applications. Topics include transducers, electrodes, signal processors, image processing, and electrical safety. 3 hours lecture, 2 hours lab.

462-4 Bioinstrumentation II
Continuation of principles of design and analysis of electronic instrumentation for biological applications. Topics include transducers, electrodes, signal processors, image processing, and electrical safety. Prerequisite: BME 461.

463-3 Biomedical Computers I
Digital computer applications in medical sciences involving medical research, patient care, and physician assistance. Topics include medical data cases, medical expert systems, and data structures for patient care. Prerequisite: EGR 153.

464-4 Biomedical Computers II
Digital computer (hardware) applications in the health-care field. Topics include hospital/operating room computer systems, microprocessors in clinical and medical research laboratories, and computers in rehabilitation engineering. Prerequisite: BME 463.

465-3 Medical Imaging
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. Prerequisite: BME 420, PHY 252.

493-3 Biomedical Engineering Design
Individualized design projects allowing students to make use of design and analytical skills.

494-3 Biomedical Engineering Design II
Individualized design projects allowing students to use design and analytical skills. Prerequisite: BME 461, 493.

495-3 Biomedical Engineering Design III
Individualized design projects allowing students to use design and analytical skills. Prerequisite: BME 494.

499-1 to 5 Special Problems in Engineering
Special problems in advanced engineering topics. Topics vary.
Chemistry/CHM

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses

105-4 Chemistry of Our World: Living Things
Examination of the principles of covalent bonding, structures, and reactions of molecules important to living things, with attention to the technological, regulatory, and social complexities of problems related to them. 3 hours lecture, 2 hours lab.

106-4 Chemistry of Our World: Materials
Examination of the bonding of metals and nonmetals to explain the nature of familiar materials of industrial importance. Attention to the risk/benefit implications of these materials and technologies for consumers. 3 hours lecture, 2 hours lab. Prerequisite: 3 units of high school science or equivalent; or CHM 101; or CHM 105.

107-4 Chemistry of Our World: Energy and the Environment
Examination of gaseous and liquid states and thermochemistry as a basis for understanding air and water quality and fossil and nuclear fuels. Attention to the chemistry of the solar system. 3 hours lecture, 2 hours lab. Prerequisite: 3 units of high school science or equivalent; or CHM 101; or CHM 106.

121-5 Submicroscopic Chemistry
Structure and properties of atoms and molecules and the macroscopic consequences thereof. 3 hours lecture, 3 hours lab, 1 hour recitation. Prerequisite: High school chemistry or CHM 101; and MTH 127 or Level 4 on math placement test.

122-5 Macroscopic Chemistry
Physical and chemical behavior of large collections of atoms and molecules. 3 hours lecture, 3 hours lab, 1 hour recitation. Prerequisite: CHM 121.

123-5 Reaction Dynamics
Quantitative aspects of chemistry; emphasis on computational and experimental estimation of the composition of chemical systems. 3 hours lecture, 3 hours lab, 1 hour recitation. Prerequisite: CHM 122; MTH 128 or 129 or Level 5 on math placement test.

211-4, 212-4, 213-4 Organic Chemistry
Principles, theories, and applications of the chemistry of carbon compounds. 3 hours lecture, 1 hour recitation. Prerequisite: for 211, CHM 123; for 212, CHM 211; for 213, CHM 212. Corequisite: for 211, CHM 215; for 212, CHM 216; for 213, CHM 217.

215-2 Organic Chemistry Laboratory I
Laboratory illustrations of CHM 211 lecture material and techniques of preparative organic chemistry. Prerequisite: CHM 123. Corequisite: CHM 211.

216-2 Organic Chemistry Laboratory II
Laboratory illustrations of CHM 212 lecture material and techniques of preparative organic chemistry. Prerequisite: CHM 215. Corequisite: CHM 212.

217-2 Organic Chemistry Laboratory III
Laboratory illustrations of CHM 213 lecture material and techniques of preparative organic chemistry. Prerequisite: CHM 216. Corequisite: CHM 213.

310-3 Issues in Sciences
(Also listed as BIO 310, PHY 310, MTH 310, and GL 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.
311-7.5 Qualitative Organic Analysis
Systematic classification and identification of organic compounds by chemical and instrumental methods. 3 hours lecture, 9 hours lab. Prerequisite: CHM 213, 217.

312-3 Quantitative Analysis
Introduction to chemical methods of analysis covering traditional as well as modern techniques and equipment; emphasis on calculations and the interpretation of analytical data. Prerequisite: CHM 213. Corequisite: CHM 314.

313-3 Instrumental Analysis
Introduction to the theory and practice of modern chemical instrumentation. Elementary electronics, spectrophotometry, atomic absorption, electrochemical techniques, chromatography, and other instrumental techniques. Prerequisite: CHM 312, 452. Corequisite: CHM 315.

314-4.5 Quantitative Analysis Laboratory
Experimental methods of analysis. Practical applications of lecture material presented in CHM 312. Prerequisite: CHM 123. Corequisite: CHM 312.

315-4.5 Instrumental Analysis Laboratory
Introduction to experimental instrumental analysis. Practical experience in the operation of chemical instrumentation; emphasizes applications of material presented in CHM 313. Prerequisite: CHM 312, 452. Corequisite: CHM 313.

319-2 Chemical Literature
Introduction to chemical literature in journals, handbooks, abstracts, monographs, and patents. Literature searches required in a variety of chemical areas. Prerequisite: CHM 212, 451.

361-4 The Organic Chemistry of Engineering Materials
Molecular structure, stereochemistry, properties, and reactivities of selected organic substances of industrial importance, including fuels, lubricants, solvents, coatings, plastics, dyes, and naturally occurring engineering materials. Not open to students with credit for CHM 212. Prerequisite: CHM 122.

410-3.5 Environmental Chemistry I: Air
Study of the Earth's atmosphere including its normal composition and atmospheric reactions; emphasis on nature, causes, effects, detection, and abatement of various types of air pollution. 2 hours lecture, 3 hours lab or field project. Prerequisite: CHM 213, 312; or permission of instructor.

411-3.5 Environmental Chemistry II: Water
Study of the Earth's fresh and saline water including its normal composition and aquatic reactions; emphasis on nature, causes, effects, detection, and abatement of various types of water pollution. 2 hours lecture, 3 hours lab or field project. Prerequisite: CHM 213, 312; or permission of instructor.

417-3 Applied Chemical Spectroscopy
The practical applications of various spectrophotometrical techniques (mass spectroscopy, infrared spectroscopy, ultraviolet spectroscopy, and nuclear magnetic resonance) are integrated for the elucidation of the structure of organic molecules. A problemsolving approach is used. Prerequisite: CHM 213, 312.

420-3, 421-3 Inorganic Chemistry
Principles and concepts of inorganic chemistry including the periodic table, atomic structure, chemical bonding, coordination compounds, and an introduction to group theory. Prerequisite: CHM 453 or permission of instructor.

425-2 Inorganic Preparations
Preparation of representative inorganic compounds. Prerequisite: CHM 421.

440-3, 441-3 Synthetic Medicinal Chemistry I, II
Covers various chemical aspects of drugs including synthetic design, mode of action, and uses of various pharmaceuticals. Topics include cardiovascular agents, antibiotics, anti-tumor agents, and central nervous system drugs. Prerequisite: CHM 213.

443-3, 444-3 Chemical Toxicology I, II
Study of the basic principles of chemical toxicology. Chemicals that have the greatest incidence of abuse are discussed in detail with regard to their chemical-biological interactions, symptomatology of toxicity, clinical chemistry tests, and treatment. Prerequisite: CHM 213, 312.

451-3, 452-3, 453-3 Physical Chemistry
Theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids. Prerequisite: CHM 123, MTH 231, PHY 252; or permission of instructor.

457-2 Physical Chemistry Laboratory I
Experimental methods of physical chemistry. Corequisite: CHM 452.

458-2 Physical Chemistry Laboratory II
Experimental methods of physical chemistry. Corequisite: CHM 453.

461-3 Synthetic Polymer Chemistry
Step-growth and chain-growth polymerization in homogeneous and heterogeneous media; properties of commercial polymers. Prerequisite: CHM 213 or 361.

465-3 Physical Polymer Chemistry
Introduction to the structural and physical aspects of macromolecules; emphasis on the relationship of polymer structure to physical and mechanical properties. Prerequisite: CHM 213 or 361. Corequisite: CHM 467.

467-1 to 2 Physical Polymer Chemistry Laboratory
Laboratory illustrations of CHM 465 lecture material and techniques of polymer science. Corequisite: CHM 465.
468-1 to 2 Polymer Synthesis Laboratory
Laboratory illustrations of CHM 461 lecture material and techniques of polymer science.
Pre- or corequisite: CHM 461.

469-4 Engineering Plastics: Materials, Processes, and Design
(Also listed as ME 489.) Properties and manufacturing processes of engineering plastics, and effects of these factors on plastics design. Illustrative laboratory projects are included. 2 hours lecture, 4 hours lab.
Prerequisite: CHM 465.

479-4 Materials Corrosion
(Also listed as ME 479.) Survey of principles of corrosion processes with application to metallic and nonmetallic materials. Principles of electrochemistry are included. Prerequisite: ME 315, 371, or corequisite CHM 453, or permission of instructor.

488-1 to 3 Independent Reading
499-1 to 5 Special Problems in Chemistry

Chinese/CHI
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

111-4 Essentials of Chinese
Introduction to Chinese with emphasis on speaking the language.

Classics/CLS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Courses under this heading do not require knowledge of Greek or Latin.

100-4 Latin and Greek Roots in English
Builds English vocabulary through a study of Latin and Greek roots. Emphasis on words used commonly in higher education rather than on specialized terminology.

101-4 Medical and Scientific Terminology
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.

150-3 Greek and Roman Culture
Survey of the development of classical culture from prehistoric Greece to the fall of the Roman Empire. A broad view of the interrelated political, economic, and social conditions, and philosophy, religion, mythology, literature, art, and architecture.

160-3 Introduction to Classical Mythology
Survey of the myths and legends of ancient Greece and Rome that are an important part of the Western literary and cultural tradition. Emphasis on story patterns and characters. CLS 150 is strongly recommended, but not required, as a prerequisite for all advanced courses.

300-4 How We Know about Antiquity
How do we know what we think we know about classical antiquity? Study of the different types of evidence and of ways in which this evidence is analyzed, handled, and interpreted by scholars.

310-4 The Golden Age of Greece
Greek experience in fifth and fourth centuries B.C. with emphasis on Athenian democracy and the Golden Age of Athens: drama, history, oratory, and philosophy.

320-4 Rome: Republic and Empire
Emphasis on Late Republic and Early Empire, particularly the Augustan Age. The idealism of Virgil and Lucretius; the realism of Cicero, Sallust, and Tacitus.

The following courses offer a variety of topics; they may be repeated for credit by number, although not by content. Students should consult the department for the scheduled subjects.

330-4 Studies in Ancient Literature
Drama, epic, and lyric poetry; prose; selected themes in ancient literature; and literary criticism.

340-4 Studies in Ancient Art and Archaeology
(Also listed as see ART 411.) Greece in the Bronze Age; classical Greece and Rome; and selected areas of Greek and Roman archaeology.

350-4 Studies in Ancient Culture and Society
Greek and Roman civilization with evidence from art, literature, archaeology, law, and other sources.

360-4 Studies in Ancient Mythology
Greek and Roman mythology; aspects and approaches to the study of myths; and archaeological and nonliterary sources.

370-4 Studies in Ancient Law, Government, and Politics
Law and legal systems of Greece and Rome; government and administration; and political problems of the ancient world.

399-1 to 4 Studies in Selected Subjects
Course of variable content dealing with problems, approaches, and topics in the field of classics.

481-4 Independent Reading
Directed studies in literature, mythology, archaeology, law, and government. For classical humanities majors only.

499-2 Senior Comprehensive Review
Required of majors in the classics, Greek, or Latin. Independent study and review leading to comprehensive examination based on the course work undertaken by each individual student. For classics, Greek, or Latin majors only.
Communication/COM

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-3 Essentials of Public Address
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.

102-3 Essentials of Interpersonal Communication
Introduction to intrapersonal and interpersonal communication processes as they affect communication style and competence. Emphasis on a holistic approach to communication by understanding concepts, analyzing experiences, and practicing new skills.

103-3 Communication for Teachers
Examination of types of communication in the classroom. Principles and practice of oral and written communication in story-telling, lecturing, discussion, and interpersonal communication. For elementary education majors only.

104-2 Effective Career Planning
Assists students in developing academic major and career goals through identifying skills and interests and then researching appropriate options.

111-3 Oral Interpretation
Introduction to the oral experience of literature. Theory and technique of oral reading. Frequent performances by students. Not open to students with credit for ENG 115.

130-1 Introduction to Communication Activities
Research, practice, and participation in communication forums, symposia, or an oral communication project designed to meet the interest of individual students. Graded pass/unsatisfactory.

133-2 Parliamentary Procedure
Theory and practice in parliamentary procedure, including an examination of principal motions, constructing a constitution, managing a meeting, and major parliamentary law cases.

141-3 Small-Group Communication
Theory and practice in small-group communication with projects in definition, analysis, research, organization, logical processes, and leadership.

152-3 Mass Communication
Study of the types, functions, and impact of the various mass communication media.

221-3 Voice and Articulation
Theory and practice of voice and articulation effectiveness.

232-3 Argumentation and Debate
Projects in analysis, research, briefing, ordering of arguments and evidence, refutation, audience evaluation, argumentative composition, and delivery. Prerequisite: COM 101 or permission of instructor.

253-3 Basic Video Production
(Also listed as TH 253.) A basic introduction to the use of video production equipment using lecture, demonstration, and experiential approaches. Appropriate laboratory time provided in television studio. Prerequisite: COM 152 and 251 or permission of instructor.

256-3 Basic News Writing
(Also listed as ENG 257.) Introduction to writing for print media. Structure and organization of news stories. Course requires reporting in the field.

303-3 Introduction to Organizational Communication
Elements of the communication process as pertinent to the field of organizational communication. By developing understanding, a framework is established for contextual applications of the features of organizations. For communication majors only.

304-2 Implementing Career Decisions
Assists students in their career/job search. Through research, analysis, and structured exercises, the participants learn effective job-seeking skills. Final results for students should include discovering, exploring, and locating satisfying job situations.

330-1 Advanced Communication Activities
Research, practice, and participation in communication forums, symposia, or an oral communication project designed to meet the interest of individual students. Graded pass/unsatisfactory.

333-3 Persuasion
Delineation of the concept of persuasion. Survey of classical theory and behavioral research and theory. Experience in preparation and presentation of persuasive communication. Prerequisite: COM 101. (Previously listed as COM 233.)

335-4 Classical Rhetorical Theory
Survey of rhetorical theory in the Greek and Roman world. Emphasis on selected works of Plato, Aristotle, Socrates, Cicero, and Quintilian. Prerequisite: COM 101 or permission of instructor.

343-4 Communication and Human Relations
Focuses on the need for both personal and professional communication skills. Examines how communication enhances relationships between people, leading to healthy social transactions and productive work situations. Prerequisite: COM 102 or permission of instructor.
345-4 Public Relations: Principles and Practices
Simulation focusing on the processes of a public-relations campaign: fact finding, action planning, implementation of communication channels, and program evaluation. Experiences focus on one internal and one external campaign for students.

346-4 Public Relations Campaign Techniques
Development of skills necessary for effective planning and implementation of public relations campaigns. Includes audiences and media analysis, and the design and writing of a variety of campaign materials. Prerequisite: COM 345.

347-4 Case Studies in Public Relations
In-depth analysis of the public relations process through an examination of various cases involving public relations problems. Prerequisite: COM 345.

358-4 Emerging Communication Technologies
Examines developing communication technologies with emphasis on alternative delivery systems. Prerequisite: COM 251 or permission of instructor.

360-4 Broadcast Journalism
Examination of broadcast news with special attention given to coverage, selection, and reporting of the news. Prerequisite: COM 256 or permission of instructor.

364-4 Communication Graphics
(Also listed as ENG 364.) Introduces basic principles of graphics communication, primarily as applied to print media. Includes history and basic concepts of graphics communication, typography, photo editing, and graphic design.

365-4 Issues in Broadcasting
An in-depth examination of the major issues facing American broadcasting, including such topics as media effects, content of television programming, the commercialization of public broadcasting, children's programming, and others. Prerequisite: COM 152, 251.

366-4 Advanced News Writing
(Also listed as ENG 366.) Advanced study of writing skills, practices, and procedures used in reporting news to mass media. Actual reporting in the field is required. News-writing skills introduced in COM 256 are further refined. Prerequisite: COM 256.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of speech. Topics vary.

401-3 Communication Theory
A study of various classical and contemporary theories of communication. An examination of theories related to communication systems, communication interaction, and social contexts. Prerequisite: COM 101, 102, 141, and 152.

411-4 Performance for the Media
Development of skills necessary for effective television and radio presentations. Study of criteria for selecting appropriate talent and frequent practice in a wide range of media settings. Prerequisite: COM 111, 251, or permission of instructor.

429-4 Urban Communications Theory
(Also listed as PLS 429.) Processes and institutions by which individuals and groups communicate in an urban environment. Model of an urban communication system developed by interdisciplinary systems approach.

439-4 Freedom of Speech
Study of the growth and development of free speech in the United States. Emphasizes the development of definitions of free speech and various communication strategies in different settings. Prerequisite: COM 101 or permission of instructor.

441-4 Advanced Interpersonal Communication
In-depth view of interpersonal communication skills: presenting, receiving, and challenging. A group context is used to promote self-directed changes in interpersonal style. Prerequisite: COM 102 or permission of instructor.

443-4 Interviewing
Through a matrix organizational structure, students experience theory in selection, survey, journalistic, performance appraisal, persuasion, and counseling interviewing situations with the focus on human resource development.

445-4 Conference Leadership
Simulation focusing on the creation, development, and execution of a professional conference through assessment of participants' needs. Experiences include completing group tasks through assigned roles developed from current leadership theories.

447-4 Organizational Communication: Applications and Strategies
Simulation focusing on the creation of an organizational product, philosophy, and environment within a designated organizational structure. Experiences include development of communication channels, networks, roles, and climate based on current communication theory.

449-4 Survey of Communication Research
Provides a basic knowledge of the behavioral approach and current theories and experiments in communications research.

451-4 Communication Consulting and Training
By means of a matrix structure, consulting and training theories are experienced in communication programs and processes as a methodology for human resource development within organizations. Prerequisite: COM 447 or permission of instructor.
453-4 Communication and Conflict
In-depth study of the function of communication in conflict/crisis situations. Emphasizes the role that communication performs in intrapersonal, interpersonal, group, and international situations.

454-4 Feature Story Writing
(Also listed as ENG 454.) Finding, writing, polishing, and marketing feature material. Prerequisite: COM 256 or permission of instructor.

455-4 Nonverbal Communication
Theory, survey of research, and experiential learning in nonverbal communication. Exploration of types and forms, and methods of sending and receiving nonverbal communication. Prerequisite: COM 102 or 141.

457-4 Intercultural Communication
Study of communication in intercultural environments. Emphasis on research and theory to better understand the complexity of intercultural communication interactions.

458-4 Editing for the Media
(Also listed as ENG 458.) Editing of copy for mass media with special emphasis on newspaper format, headline writing, rewriting, and general copy desk. Prerequisite: COM 256 or permission of instructor.

460-4 Programming and Management of Electronic Media
Analysis of programs and program strategies for broadcast and other electronic media. Emphasis on information for managing these media. Prerequisite: COM 251 or permission of instructor.

462-4 Mass Media: Law and Regulation
Study of laws and regulations affecting mass media. Prerequisite: COM 251 or permission of instructor.

464-4 Broadcast Criticism
Analysis of contemporary programming and production practices including the development of critical standards for evaluation. Prerequisite: COM 251 or permission of instructor.

471-4 Topics in Communication
Examination of special topics in the various areas of speech communication. Titles vary.

481-1 to 4 Independent Study
Faculty-directed readings and research.

482-1 to 4 Senior Honors Project
Independent studies course that allows students to pursue research that culminates in a senior honors thesis or project.

489-4 Communicating with the Elderly
Analysis of the unique communication behaviors of the elderly and the physical, social, and emotional changes that cause them. Development of interpersonal, interviewing, and reporting skills by direct interaction with this age group.

491-1 Communication Techniques and Evaluation
Philosophy and techniques of conducting communication events. Includes the planning, initiating, and summarizing of communication activities, and evaluating written and oral performance.

Comparative Literature/CPL
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

310-4 Problems in Comparative Literature
Readings in comparative literature dealing with themes, myths, genres, literary movements, or characters; e.g., the myth of Electra in the modern theatre, the picaresque novel, existentialism in European fiction, and the ambitious hero in literature.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of comparative literature. Topics vary.

Comparative Studies/CST/CSE
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses
CST 220-3 Comparative Non-Western Environments
Examination of distinctive environments of Asia and Africa through analysis of the geographic patterns of land use, population, settlements, economic activities, languages, religions, and political systems.

CST 230-3 Comparative Non-Western World Views
Examination of the world views of selected non-Western peoples and their varied expressions in literature and religion, emphasizing examples from Asia, Africa, Latin America, and the Middle East. Titles vary.

CST 240-3 Comparative Non-Western Cultures
Introduction to the cultural diversity and uniqueness of selected areas of Asia, Africa, Latin America, and the Middle East as reflected in their cultural systems or in particular cultural manifestations such as the arts. Titles vary.

CST 250-3 Comparative Non-Western Social Systems
Examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues. Titles vary.

CSE 250-3 Comparative Non-Western Economic Systems
Examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues. Titles vary.
Departmental Courses

CST 220-3 Comparative Non-Western Environments
Examination of distinctive environments of Asia and Africa through analysis of the geographic patterns of land use, population, settlements, economic activities, languages, religions, and political systems.

CST 230-3 Comparative Non-Western World Views
Examination of the world views of selected non-Western peoples and their varied expressions in literature and religion, emphasizing examples from Asia, Africa, Latin America, and the Middle East. Titles vary.

CST 240-3 Comparative Non-Western Cultures
Introduction to the cultural diversity and uniqueness of selected areas of Asia, Africa, Latin America, and the Middle East as reflected in their cultural systems or in particular cultural manifestations such as the arts. Titles vary.

CST 250-3 Comparative Non-Western Social Systems
Examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues. Titles vary.

CSE 250-3 Comparative Non-Western Economic Systems
Examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues. Titles vary.

Computer Engineering/CEG

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

260-4 Digital Computer Hardware/Switching Circuits
(Also listed as EE 351.) Provides computer scientists, engineers, and other computer users with terminology and understanding of physical components used in computer hardware. Topics include switching algebra and switching functions, logic design of combinational and sequential circuits using TTL, combinational logic design with MSI and LSI, busing, storage elements, and instrumentation. 3 hours lecture, 2 hours lab. Prerequisite: CS 142 or 220 or 240 or EGR 153.

305-4 Introduction to Expert Systems
Definitions of AI, discussion of the different methodologies and techniques that comprise the field, introduction to the fundamental concepts and methodologies of expert systems, and hands-on experience developing small expert system applications. CS and CEG majors may not take this course for credit. Prerequisite: CS 141, 220, 240, EGR 153.

320-4 Computer Organization and Assembly Language Programming
Terminology and understanding of functional organizations and sequential operation of a digital computer. Program structure, and machine and assembly language topics including addressing, stacks, argument passing, arithmetic operations, traps, and input/output. Macros, modularization, linkers, and debuggers are used. 3 hours lecture, 2 hours lab. Prerequisite: CEG 260, CS 242.

360-4 Digital System Design
(Also listed as EE 451.) Design of digital systems. Topics include flip-flops, timers, registers, digital arithmetic, register-level design, memory devices and their logic, controller and processor design, computer logic design, and microcomputer system design. Students must show competency in the design of digital systems. 3 hours lecture, 2 hours lab. Prerequisite: CEG 260.

402-4 Introduction to Computer Communication Design
Survey of modern digital communications techniques. Focus on serial transmission over public communications channels. Topics include information content and coding, asynchronous and synchronous formats, concentrating and multiplexing, channel properties, modulation techniques, common carrier services, error sources and control, regulatory policies, and networks and their analyses. Students must design both hardware and software components of computer communications systems. 3 hours lecture, 2 hours lab. Prerequisite: CEG 360.

411-4 Microprocessor-based System Design
Introduction to the design and development of software and computer-interfacing hardware for effective use of microprocessors in process control, data collecting, and other special-purpose computing systems. Software topics include assembly language programming, input/output, interrupts, direct memory access, and timing problems. For nonmajors only. Prerequisite: CEG 260 or EE 351.

416-4 Matrix Computations
(Also listed as MTH 416.) Survey of numerical methods in linear algebra emphasizing practice with high-level computer tools. Topics include Gaussian elimination, LU decomposition, numerical eigenvalue problems, QR factorization, least squares, singular value decompositions, and iterative methods. Prerequisite: MTH 253 or 355; and CS 142 or 241.

421-4 Microcomputer Design Projects
In-depth study of the design and use of microcomputer systems. Computer organization and interface facilities are examined. Hardware/software projects are required to develop techniques for hardware and software design of open-ended projects. 3 hours lecture, 2 hours lab. Prerequisite: CEG 320, 360.
428-4 Linear Optical Systems for Computer Engineers
Introduction to linear optical systems, transformation properties of optical systems, correlation, convolution, diffraction, applications related to optical computers, such as beam steering for optical interconnection and parallel optical algorithm for pattern search, and neural network. Prerequisite: EE 321, 322.

433-4 Operating Systems
The management of resources in multi-user computer systems. Emphasis is on problems of file-system design, process scheduling, memory allocation, protection, and tools needed for solutions. Course projects use the C language and include the design of portions of an operating system. Prerequisite: CEG 320, CS 400. (Previously listed as CS 433.)

434-4 Concurrent Software Design
Classical problems of synchronization and concurrency and their solutions are examined through course projects and through readings on operating-system design. Prerequisite: CEG 433.

452-4 Standard Cell VLSI Design Techniques
(Also listed as EE 452.) Standard cell VLSI design techniques. Topics include introduction to VLSI, MOS transistors, CMOS logic circuits, standard cell libraries, cell usage, schematic capture and simulation circuit testing, and test program generation. Prerequisite: CEG 360/EE 451.

453-4 Design of Computing Systems
Laboratory projects combine engineering hardware and computer-science software concepts in the design and implementation of small, special-purpose computer systems. 3 hours lecture, 2 hours lab. Prerequisite: CEG 320, 360.

454-4 VLSI Design
(Also listed as EE 454.) Introduction to VLSI system design. Topics include NMOS devices and circuit design techniques, basic building blocks for NMOS design, fabrication processing and design rules, chip planning and layout, system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI. Prerequisite: EE 441; CEG 360 or EE 451.

456-4 Introduction to Robotics
(Also listed as EE 456, ME 456.) An introduction to the mathematics, programming, and control of robots. Topics include coordinate systems and transformations, manipulator kinematics and inverse kinematics, trajectory planning, Jacobians, and control. Prerequisite: Senior standing and MTH 253; proficiency in Pascal, C, or FORTRAN programming.

460-4 Introduction to Software Engineering
Concepts of software engineering. Analysis, design, and implementation of software engineering concepts that comprise structured programming and design. Case studies serve as examples illustrating the software life-cycle model. 3 hours lecture, 2 hours lab. Prerequisite: CS 400 and 340 or 480.

476-4 Computer Graphics
(Also listed as MTH 476.) The principles of design, use, and understanding of computer graphics systems. Covers basic drawing techniques, line and polygon clipping, two-dimensional and three-dimensional transformations, segmentation, projections, and three-dimensional viewing. Graphics standards (GKS and PHIGS) and hardware are discussed. Each student will create a menu-driven, interactive graphics package capable of generalized three-dimensional viewing. Prerequisite: CS 400, MTH 253.

477-4 Computer Graphics II
(Also listed as MTH 477.) Continuation of CEG 476. Covers selected topics in detail including hidden line and surface removal, shading models, curved surface generation, and color models. Projects are individualized and creative. Selected papers are used for in-depth material. Emphasis is on the design of graphics systems. 3 hours lecture, 2 hours lab. Prerequisite: CEG 476.

499-1 to 5 Selected Topics
Topics vary. May be taken for letter grade or pass/unsatisfactory.

Computer Science/CS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

141-4 Computer Programming I
Introduction to use of computers as a problem-solving tool. Examples from and applications to a broad range of problems. Methodology for algorithm design and for structured modular implementation is stressed. 3 hours lecture, 2 hours lab. Prerequisite: MTH 127 or at least Level 4 on math placement test.

142-4 Computer Programming II
Concepts introduced in CS 141 are developed in greater detail and depth. Emphasis on verification and testing of programs. 3 hours lecture, 2 hours lab. Prerequisite: CS 141.

146-4 Introduction to Data Structures
Introduction to computer programming for computing majors. Topics include program design, style, debugging, and testing, especially for larger programs; algorithmic analysis; and basic aspects of string processing, recursion, internal search/sort methods, and simple data structure. 3 hours lecture, 4 hours lab. Corequisite: MTH 230.
205-4 Computer Literacy and Office Automation

Introductory course in the use of computers in a professional environment. Personal computer work stations are employed and used for popular applications (e.g., word processing, spreadsheets and data base management, and electronic mail). 2 hours lecture, 4 hours lab.

206-4 Computer Software Productivity Tools

Advanced use of application software to increase productivity. Covers advanced DOS and hard disk management, desktop publishing, presentation graphics, sharing data and files among different packages, spreadsheet macros, and dBase IV. CS and CEG majors may not take this course for credit. Prerequisite: CS 205 or waiver.

220-4 Introduction to C Programming for Engineers

Introduction to digital computers and computer programming with C language. Algorithms and techniques useful to engineers. Data representation, debugging, and program verification. Programming assignments include complex arithmetic. CS and CEG majors may not take this course for credit. Prerequisite: MTH 229.

225-4 Introduction to Ada Programming

Introduction to computer programming with Ada language relative to the software engineering environment. CS and CEG majors may not take this course for credit. Prerequisite: Previous programming experience.

240-4 Computer Science I

Basic concepts of programming and programming languages are introduced. Emphasis is on structured programming and stepwise refinement. For CS/CEG majors with familiarity of a high-level programming language. Corequisite: MTH 229.

241-4 Computer Science II

A continuation of CS 240. The emphasis is on data abstraction and software engineering. For CS/CEG majors only. Prerequisite: CS 142 or 240. Corequisite: MTH 230.

242-4 Computer Science III

Further refinement of the concepts covered in CS 241. For CS/CEG majors only. Prerequisite: CS 241 and MTH 230.

300-4, 301-4 COBOL Programming I, II

Elements of COBOL language; techniques for debugging and interpreting computer output; linkage to subroutines and overlays; file structure involving both sequential and random access; and case studies with business applications. 3 hours lecture, 2 hours lab. Prerequisite: for 300, CS 142 or 241; for 301, CS 300.

315-2 Job Control Language

Introduces system 370 job control language. Studies the various JCL statements. Programming exercises are assigned to give students the practical experience needed to create and run various jobs. Prerequisite: CS 142 or equivalent programming experience.

316-4, 317-4 Numerical Methods for Digital Computers

Introduction to numerical methods used in the sciences. Methods of interpolation, data smoothing, functional approximation, integration, solutions of systems of equations, and solutions of ordinary differential equations. 3 hours lecture, 2 hours lab. Prerequisite: for 316, MTH 231, 253 or 355; for 317, CS 316, MTH 233.

340-1 Programming Language Workshop

Self-directed study in computer languages. Language varies. Individual workshops are offered in significant languages such as COBOL, PL/1, SNOBOL, LISP, SIMSCRIPT, and GPSS. May be taken for letter grade or pass/unsatisfactory. Prerequisite: CS 400.

399-1 to 5 Selected Topics

Selected topics in computer science. May be taken for letter grade or pass/unsatisfactory.

400-4 Data Structures and Software Design

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. 3 hours lecture, 2 hours lab. Prerequisite: CS 242, MTH 253, 257.

405-4 Introduction to Data Base Management Systems

Survey of logical and physical aspects of data base management systems. Hierarchical, network, and relational models of a data base are presented. Physical implementation methods are discussed. Experience in creating and manipulating a data base. 3 hours lecture, 2 hours lab. Prerequisite: CS 242, MTH 253, 257.

407-3 Optimization Techniques

(Also listed as MTH 407.) Concepts of minima and maxima; linear programming; simplex method, sensitivity, and duality; transportation and assignment problems; and dynamic programming. Prerequisite: MTH 233, 253 or 355.

410-4 Theoretical Foundations of Computing

(Also listed as MTH 410.) Turing machines; recursive functions; equivalence of computing paradigms; Church-Turing thesis; undecidability; intractability. 3 hours lecture, 2 hours lab. Prerequisite: CS 406.

415-2 Social Implications of Computing

Examines the impact of computers and computing on society. Topics include privacy, dangers introduced by computers performing critical tasks, the effect of robots on the work force, the impact of computers on education, and the new legal issues introduced by computing.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>419-3</td>
<td>Cryptography and Data Security</td>
<td>Introduction to mathematical principles of data security. Various developments in cryptography are discussed, including public-key encryption, digital signatures, the data encryption standard (DES), and key safeguarding schemes. Prerequisite: MTH 253 or 355.</td>
</tr>
<tr>
<td>458-3</td>
<td>Applied Graph Theory</td>
<td>Introduction to methods, results, and algorithms from graph theory. Emphasis on graphs as mathematical models applicable to organizational and industrial situations. Prerequisite: CS 142, MTH 231.</td>
</tr>
<tr>
<td>459-3</td>
<td>Combinatorial Tools for Computer Science</td>
<td>Introduction to some of the mathematical tools needed for an understanding of computer programming. The topics covered are summations, elementary number theory, combinatorial identities, generating functions, and asymptotics. MTH 457 recommended. Prerequisite: MTH 280.</td>
</tr>
<tr>
<td>466-4</td>
<td>Introduction to Formal Languages</td>
<td>Introduction to the theory of formal languages and automata. Emphasis is on those classes of languages commonly encountered by computer scientists (e.g., regular and context-free languages). 3 hours lecture, 2 hours lab. Prerequisite: CS 400, MTH 257; or MTH 257 and completion of a 400-level math or statistics course.</td>
</tr>
<tr>
<td>470-4</td>
<td>Systems Simulation</td>
<td>Introduction to simulation and comparison with other techniques. Discrete simulation models. Introduction to queuing theory and stochastic processes. Comparison of simulation languages. Simulation methodology and selected applications. 3 hours lecture, 2 hours lab. Prerequisite: CS 400, STT 360.</td>
</tr>
<tr>
<td>480-4</td>
<td>Comparative Languages</td>
<td>Basic concepts and special-purpose facilities in programming languages examined through several representative languages. 3 hours lecture, 2 hours lab. Prerequisite: CS 400.</td>
</tr>
<tr>
<td>499-1 to 5</td>
<td>Selected Topics</td>
<td>Selected topics in computer science. May be taken for letter grade or pass/unsatisfactory, at instructor's option.</td>
</tr>
</tbody>
</table>

**Cooperative Education/CPE**

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>499-1 to 5</td>
<td>Cooperative Education</td>
<td>Participation in field experience program.</td>
</tr>
</tbody>
</table>

**Counseling/CNL**

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>461-4</td>
<td>Principles of Counseling</td>
<td>Overview of major counseling theories and techniques. Review of historical foundations of the mental health movement. Social, psychological, and philosophical influences are considered.</td>
</tr>
<tr>
<td>463-4</td>
<td>Mental Health</td>
<td>Factors influencing behavior of individuals; methods a counselor may use in observing, analyzing, and improving attitudes and behavior.</td>
</tr>
<tr>
<td>464-4</td>
<td>Crisis Intervention</td>
<td>Introduction 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. Prerequisite: CNL 461.</td>
</tr>
<tr>
<td>467-4</td>
<td>Group Background and Theory</td>
<td>Surveys the background, theory, patterns of function, technique of facilitating, and use of small groups in counseling. Prerequisite: CNL 461, RHB 407.</td>
</tr>
<tr>
<td>470-1 to 6</td>
<td>Counselor Education Workshop</td>
<td>Intensive study of selected areas from counselor education to meet the particular needs of participating students, schools, and agencies. Titles vary. Graded pass/unsatisfactory.</td>
</tr>
</tbody>
</table>

**Dance/DAN**

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>101-3, 102-3, 103-3</td>
<td>Ballet I</td>
<td>Introduction to vocabulary, techniques, and theories of ballet. Emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet training.</td>
</tr>
<tr>
<td>121-3, 122-3, 123-3</td>
<td>Beginning Jazz</td>
<td>Emphasis on various contemporary jazz techniques and styles beginning with a warm-up and ending with a center floor combination.</td>
</tr>
</tbody>
</table>
131-2, 132-2, 133-2 Intermediate Jazz I
First-year intermediate work in jazz dance technique. Emphasis is on technical proficiency and versatility through staccato and lyrical movement. Focus on musicality and individual artistry. Prerequisite: for 131, DAN 111 or permission of department; for 132, DAN 131 or permission of department; for 133, DAN 132 or permission of department.

201-3, 202-3, 203-3 Ballet II
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: for 201, DAN 103; for 202, DAN 201; for 203, DAN 202.

211-3, 212-3, 213-3 Modern Dance I
Fundamentals of modern dance: emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: for 211, DAN 113.

214-2, 215-2, 216-2 Modern Dance for Actors
Fundamentals of modern dance. Emphasis on body alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: for 214, DAN 113; for 215, DAN 214; for 216, DAN 215.

231-2, 232-2, 233-2 Intermediate Jazz II
Second-year intermediate work in jazz dance technique. Emphasis on varied allegro and adagio jazz movements. Focus will be on technical diversity, musicality, artistry, and performance. Prerequisite: for 231, DAN 133; for 232, DAN 231; for 233, DAN 232.

251-1, 252-1, 253-1 Dance History
Survey of Western theatrical dance from its roots in early cultures to the twentieth century. Prerequisite: for 251, DAN 113 or departmental approval; for 252, DAN 251; for 253, DAN 252.

301-3, 302-3, 303-3 Ballet III
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: for 301, DAN 203; for 302, DAN 301; for 303, DAN 302.

311-3, 312-3, 313-3 Modern Dance III
Further study of modern dance techniques and styles. Material is on the intermediate to advanced level. Prerequisite: for 311, DAN 213.

321-2, 322-2, 323-2 Jazz/Theatre Dance I
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis is on movement proficiency and versatility within the realm of jazz and theatre dance. Prerequisite: for 321, DAN 213; for 322, DAN 321; for 323, DAN 322.

341-1 Improvisation
Exploration of improvisation techniques as a compositional tool. For dance majors only. Prerequisite: DAN 213.

342-1, 343-1 Choreography
Exploration of compositional techniques culminating in the creation of solos and ensemble works. For dance majors only. Prerequisite: for 342, DAN 341; for 343, DAN 342.

371-1, 372-1, 373-1 Dance Pedagogy
Methods for teaching dance using an anatomical approach as the basis for good training in all techniques. For dance majors only. Prerequisite: for 371, DAN 252; for 372, DAN 371; for 373, DAN 372.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of dance. Topics vary.

401-3, 402-3, 403-3 Ballet IV
Advanced work in classical ballet technique stressing the development of musicality and virtuosity. Pointe work is included. Prerequisite: for 401, DAN 303; for 402, DAN 401; for 403, DAN 402; or departmental approval.

411-3, 412-3, 413-3 Modern Dance IV
Advanced work in modern dance techniques and styles. Prerequisite: for 411, DAN 313.

421-2, 422-2, 423-2 Jazz/Theatre Dance II
Diversified styles and techniques of contemporary musical theatre dancing including jazz adagio and allegro combinations, focusing on technique, musicality, style, and performance. Prerequisite: for 421, DAN 323; for 422, DAN 421; for 423, DAN 422.

431-1 Pointe Class
Emphasizes pointe work for the female dancer, to develop strength on pointe for classical ballet. Prerequisite: DAN 203.

432-1 Men’s Ballet Class
Specific movements and exercises geared to the male dancer, to develop strength and virtuosity. Prerequisite: DAN 203.

433-1 Pas de Deux Class
Trains male and female dancers in the art of partnering, an essential part of all dance. Prerequisite: DAN 203.

491-1, 492-1, 493-1 Senior Dance Project
Advanced work for dance majors in creative projects and/or dance research. Prerequisite: for 491, DAN 343; for 492, DAN 491; for 493, DAN 492; or departmental approval.

Danish/DN
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

111-4 Essentials of Danish
Introduction to Danish with an emphasis on speaking the language.

Developmental Education
See Study Skills
Economics/EC

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course

200-3 Economic Life

Introduction to basic economic concepts such as resource allocation, costs, supply, and public goods. Topics include American capitalism, market failures, unemployment, inflation, and taxation. The sequence EC 201, 202, 203 may be substituted.

Departmental Courses

200-3 Economic Life

Introduction to basic economic concepts such as resource allocation, costs, supply, and public goods. Topics include American capitalism, market failures, unemployment, inflation, and taxation. The sequence EC 201, 202, 203 may be substituted.

201-3, 202-3, 203-3 Principles of Economics

Fundamental economic principles as an aid in understanding modern society. EC 200: Introduction to Economics; 202: Microeconomics; 203: Macroeconomics. Prerequisite: for 202 and 203, EC 201.

300-3 Consumer Economics

Understanding the economic world in which the consumer lives, works, spends, and frequently invests is stressed. Prerequisite: EC 200 or 201.

330-3 Urban Economic Problems and Prospects

Analysis of economic processes that influence urban economic conditions, population movements, economic problems facing metropolitan areas, and alternative problem-solving techniques. Prerequisite: EC 200 or EC 201, 202, 203, or permission of instructor.

Advanced Courses

All of the following courses require junior standing in addition to the listed prerequisites.

301-3 Money and Banking

Analysis of behavior and significance of money, credit, and the banking system. Prerequisite: EC 201, 202, 203 or permission of instructor.

315-4 Intermediate Microeconomics

Develops the analytical tools of microeconomics, stressing market behavior of firms, industries, and consumers. Examines the production processes and the operation of market mechanisms. Policy implications are emphasized. This is a writing-intensive course. Prerequisite: EC 201, 202, 203 or permission of instructor.

316-4 Institutional Economics

Focuses on interrelationships between market and nonmarket forces, exploring contemporary social, technological, political, and other influences on resource allocation decisions and on economic change. This is a writing-intensive course. Prerequisite: EC 201, 202, 203 or permission of instructor.

317-4 Intermediate Macroeconomics

Analysis of national economic problems including inflation, unemployment, interest rates, and economic stability. Emphasizes the impact of public policy. This is a writing-intensive course. Prerequisite: EC 201, 202, 203 or permission of instructor.

321-3 Economic History

Analysis of economic, political, social, and cultural changes resulting from industrial advancements and the control over industrial changes exercised by different societies. Prerequisite: EC 200 or EC 201, 202, 203.

326-3 Economics of Poverty and Discrimination

Analysis of economic causes, effects, and cures for poverty and discrimination. Study of trends, economic explanations, and current programs and legislation. Prerequisite: EC 200 or EC 201, 202, 203 or permission of instructor.

328-3 Socialist and Radical Economics

Development of Marxian, socialist, and radical economic doctrines with emphasis on contemporary ideas and trends. Prerequisite: EC 200 or EC 201, 202, 203, or permission of instructor.

340-3 International Economic Relations

Covers the complexities, prospects, and consequences of international flow of goods, services, technology, and capital across countries with a diverse range of economic, social, and political institutions. Prerequisite: EC 200 or EC 201, 202, 203 or permission of instructor.

351-3 Labor Markets and Unions

Determinants of labor market behavior, wages, employment, and unemployment. The role of public policy, collective bargaining, and union behavior. Prerequisite: EC 201, 202, 203 or permission of instructor.

352-3 Labor History and Legislation

History of the American labor movement from the early national period to the present, including labor legislation, public policy, and current labor issues. Prerequisite: EC 201, 202, 203 or permission of instructor.

354-3 Job-training Analysis and Planning

Application of statistical and manpower tools to human capital development, structural change, planning, training, placement, income maintenance, supporting services, and public policy. Prerequisite: EC 201, 202, 203 or permission of instructor.
370-3 Environmental Economics
Analysis of environmental quality from both microeconomic and systems frameworks. Emphasis on effectiveness of alternative approaches to environmental problems, including specific solutions to particular problems and general approaches to broad problems. Prerequisite: EC 200 or EC 201, 202 or permission of instructor.

401-3 Managerial Economics
Application of economic analysis to management decision making. Practical methods and problems are stressed. Prerequisite: EC 201, 202, 203 or permission of instructor.

402-3 Monetary Economics
Analysis of monetary policy development and the theory of money market behavior. Emphasizes the relationship between money and national economic conditions. Prerequisite: EC 301.

409-3 Applied Econometrics
Application of statistics and economic theory to measurement, forecasting, and other economic problems. Prerequisite: EC 201, 202, 203, and MS 202.

410-3 Mathematical Economics
Application of mathematical tools in the formulation of economic theory. Methods used in model construction. Completion of a college algebra course required. Prerequisite: EC 201, 202, 203.

412-3 Forecasting Economic Activities
Techniques and theories used in forecasting. Practical methods and problems are stressed. Prerequisite: EC 201, 202, 203; MS 201 or equivalent.

425-3 Development of Economic Thought
Historical development of economic thought and philosophies. Prerequisite: EC 201, 202, 203 or permission of instructor.

430-3 Economics of Health Care Service: A Survey
Explores problems with the current health care delivery system and the political and economic factors responsible for the evaluation of the health care system.

431-3 Federal Finance and the Economy
Analysis of federal government expenditures and taxation policies and their impact on economic conditions. Techniques for policy evaluation are discussed. Prerequisite: EC 201, 202, 203 or permission of instructor.

432-3 State and Local Finance and the Economy
Analysis of different taxation policies of state and local governments. Efficient methods of producing public goods such as education and public health services. Prerequisite: EC 201, 202, 203 or permission of instructor.

435-3 Comparative Economic Systems
Comparison of chief characteristics of capitalism, communism, socialism, and fascism to clarify the economic process in a free-enterprise society. Prerequisite: EC 201, 202, 203 or permission of instructor.

436-3 Industrial Organization
Analysis of business behavior under various industry structures and government policies. Emphasis on actual case studies. This is a writing-intensive course. Prerequisite: EC 201, 202, 203 or permission of instructor.

440-3 Regional Economic Growth and Change
Regional economic analysis in a policy and planning context. Interdisciplinary approach to analyze the economics of location, inter-regional trade, regional development, urban regions, and growth strategies. Prerequisite: EC 201, 202, 203 or EC 330, or permission of instructor.

441-3 International Trade and the Economy
Economic reasons for international trade. Impact of trade and its restrictions on economic aggregates. Prerequisite: EC 201, 202, 203 or permission of instructor.

442-3 International Monetary Theory and Problems
Studies international monetary relations and problems. Focuses on institutions and arrangements used to finance international trade. Topics include balance of payments, the dollar and foreign exchange markets, Euro currencies, petrodollars and OPEC, and multinational corporations. Prerequisite: EC 201, 202, 203 or permission of instructor.

444-3 Economic Development and World Poverty
Economic development in less developed countries as it relates to population growth, cultural change, and industrialization. Prerequisite: EC 201, 202, 203 or permission of instructor.

477-3 Economic Studies
Examination of special economic issues.

478-3 Honors: Independent Study in Economics
Research in economics for fulfillment of the Honors Program project requirement.

480-3 International Economic Issues
Examination of selected economic issues with a view to integrating the discipline. Topics vary. For economics majors or permission of instructor.

481-1 to 3, 482-1 to 3, 483-1 to 3 Independent Reading
Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area.
Education/ED

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-1 to 2 Interpersonal Process Learning Laboratory
Explores such areas as listening, communicating, life planning, sexuality, and the helping relationship with emphasis on interpersonal process.

120-1 Teaching as a Career
Designed for prospective teacher candidates to explore teaching as a career choice. Includes an elementary/secondary field placement.

200-1 to 3 Education Honors: Special Topics
Introductory seminar to promote leadership in education through the study of special topics (such as futurology, global education, and creativity) related to the foundations of educational thought and the context of educational practices.

214-3 Introduction to Education
Provides an introduction to the teaching profession and the opportunity to examine beliefs, motives, values, and behaviors as they relate to the self as a teacher. Emphasis on philosophical, social, and psychological foundations. Corequisite: ED 216, 221.

216-3 Cultural Diversity: Schools and Society
Introduces the make-up of the culturally diverse schools: racial, religious, economic, social, intellectual, physical, age, and sex differences; focuses on implications for education. Corequisite: ED 214, 221.

218-3 Learning Theories and Problem Solving
Introduction to cognitive, affective, and psychomotor domains of learning, problem-solving models, and associated learning theories as applied to teaching. Prerequisite: ED 214, 216, 221. Corequisite: ED 220, 223.

219-1 to 8 Assistant Teacher in the Public School
Supervised experience in which students assume membership positions of an instructional team to perform such functions as preparing instructional materials; completing routine managerial tasks; supervising playground, lunchroom, and bus activities; and working with small groups of pupils.

220-3 Development of the School-Age Student
Introduction of basic developmental principles; examination of various stages of development; implications for education; and review of special topics and issues of importance to educators. Graded pass/fail. Prerequisite: ED 214, 216, 221. Corequisite: ED 218, 223.

221-1 Field Experience
Field experience in which students are introduced to the educational process through participation in a classroom and through an examination of dynamics of the classroom and its setting. Graded pass/unsatisfactory.

223-1 Field Experience
Field experience in which students apply knowledge of child development, learning theory and problem solving strategies to examine issues that affect the educational system. Graded pass/unsatisfactory. Prerequisite: ED 214, 216, 221. Corequisite: ED 218, 220.

241-3, 242-3, 243-3 Physical Science
Content of the physical sciences integrated to promote understanding of and intelligent interaction with physical aspects of environment. 3 hours lecture, 1 hour lab. Prerequisite: for 242, ED 241 or permission of instructor; for 243, ED 242 or permission of instructor.

302-2 Classroom Management
Introduction of four discipline models; implications for classroom applications; legal concerns in discipline; and discussion of recent research, practice, and innovation in the area. Completion of Phase I program required. Corequisite: ED 327.

311-3 Elementary School Science: Curriculum and Materials
Study of basic principles, methods, curriculum trends, and materials; individual laboratory work. Prerequisite: ED 214, 216, 218, 220 or equivalent. Pre- or corequisite: ED 327.

315-3 Elementary School Children's Literature: Curriculum and Materials
Introduction to children's literature. Wide reading of children's books with emphasis on selection and use of books and related activities in the elementary school. Prerequisite: ED 214, 216, 218, 220 or equivalent. Pre- or corequisite: ED 327.

316-3 Elementary School Language Arts: Curriculum and Materials
Language and communication in elementary school including practices and materials used in teaching oral and written communication. Prerequisite: ED 315 or equivalent. Corequisite: ED 323.

317-3 Elementary School Reading: Curriculum and Materials
Practice and materials used in the teaching of reading and related skills in the elementary school. Prerequisite: ED 315, 316 or equivalent.

321-1, 323-1 Field Experience IV, V
Sixty hours of field/clinical experiences in the public school in which students implement teaching strategies that have been introduced in the Phase II methods components. Graded pass/unsatisfactory. For 321, completion of Phase I and registration in Phase II required. For 323, permission of the Phase II coordinator required. Corequisite: for 321, ED 302; for 323, ED 316 for elementary education majors and the designated special methods course for secondary majors.
327-3 Teaching Skills
Explores the use of basic skills in planning, motivating, and questioning; audio-visual equipment and production; alternative instructional strategies; and management techniques that help facilitate instruction. Prerequisite: ED 214, 216, 218, 220, or equivalent.

369-3 Children's Literature for Teachers of Foreign Languages
(Also listed as ML 369.) Reading and discussion of children's books in modern languages (French, Spanish, German, and Russian) and reading information books about the countries where the languages are spoken. Prerequisite: SPN 202 or FR 202 or RUS 202 or GER 202.

370-1 to 9 Independent Reading and Minor Problems
Planned reading and/or project under the guidance of a faculty member of the College of Education and Human Services.

Advanced Courses
All of the following courses require junior or senior standing in education in addition to the listed prerequisites.

400-1 to 9 Education Honors Research
In-depth independent study under the guidance of a faculty adviser.

403-3 to 4 Child Development
Factors that influence growth and development. Prerequisite: ED 200, 214, 216, 218, or equivalent.

404-3 Adolescent Development
Examination of adolescence; physical development and its psychological and social concomitants; and the effect of social forces; especially school, on the adolescent. Prerequisite: ED 214, 216, 218, 220 or equivalent.

405-1 to 4 Current Tendencies in Education
Consideration of current trends and theories in education; development of criteria and procedures for their evaluation and implementation.

413-3 Inductive Geometry in the Elementary School
Prepares elementary teachers to teach geometrical concepts included in current K-6 mathematics programs. Emphasis on informal approach to teaching geometry using experimentation, intuition, and guided discovery. Prerequisite: ED 437, MTH 345; or equivalent; or permission of instructor.

415-3 Improvement of Elementary Reading Instruction
Curriculum, methods, materials, and evaluation in reading designed to improve teachers' instructional skills. Prerequisite: ED 315, 316, 317; or permission of instructor.

417-3 to 4 Elementary School Social Studies: Curriculum and Materials
Objectives, principles, and trends in elementary social studies education. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220, or equivalent.

418-3 to 4 Problem Solving in School Mathematics
Designed to prepare teachers of mathematics K-8 to teach problem solving as a basic mathematical skill. Emphasis on the teaching/learning of a variety of problem-solving heuristics, applying problem-solving strategies, and using both routine and non-routine problems in school mathematics. Prerequisite: ED 214, 216, 218, 220 or equivalent.

419-4 to 14 Supervised Teaching: Elementary
Student teachers, assigned to a public school full time, work under direct supervision of an experienced classroom teacher. Prerequisite: SPN 202 or FR 202 or RUS 202 or GER 202.

420-2 to 4 Studies in English Education
(Also listed as ENG 485.) Focuses on theoretical issues and practical problems of teaching English at all levels, including the teaching of writing and the teaching of English to speakers of other languages (TESOL).
421-3 Books and the Educational Program
Knowledge of a wide range of children's literature including the selection criteria and the rationale for classroom practices with children's literature. Prerequisite: ED 315, 316, 317 or equivalent.

422-1 to 3 Student Teaching Seminar
An elective seminar discussion of problems and concerns encountered during student teaching to bring professional theory and practice into working perspective. Corequisite: ED 419 and/or 429.

423-3 Secondary School English: Curriculum and Materials
Curriculum, methods, and materials for language arts in the secondary school; current trends in teaching English. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

424-3 Secondary Speech and Drama: Curriculum and Materials
Curriculum and materials for those preparing to teach speech and drama in secondary schools; curriculum, teaching methods, class organization, producing plays, and cocurricular activities. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

425-3 Modern Foreign Languages: Curriculum and Materials
Modern language curriculum in public schools; purposes; methods; and materials. Completion of a 200-level language course or permission of instructor required. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

426-2 to 5 Outdoor Education
Provides teachers and leaders seeking skills in the use of the out of doors as a resource for program or curriculum enrichment: laboratory experiences and field work in a variety of biotic communities emphasizing ecological relationships.

429-4 to 15 Supervised Teaching: Secondary
Same as ED 419 except applied to secondary level. Requirements include completion of appropriate Phase II courses with grade of C or above and ED 464 with grade of C or above; completion of 126 credit hours (at least 12 of which must have been taken at Wright State, normally including work in both academic major and professional education); involvement in participation experiences; achievement of the currently required grade point average; and the currently required teaching field cumulative grade point average. Specific course prerequisites in academic majors vary. See description under major field. Enrollment by permission of office of laboratory experiences. Concurrent enrollment in any course other than ED 440 not permitted. Formal application must be made through the Office of the Director of Laboratory Experiences during the posted times. Concurrent enrollment in ED 440 is required.

431-3 Secondary School Science: Curriculum and Materials
Curriculum and materials for teaching science; emphasis on objectives, evaluation, planning, resources and facilities, and curricular trends in science education. Completion of two-thirds of major content is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

432-3 Improving Reading in the Secondary School
Techniques of diagnosing and correcting reading problems of secondary students. Explores secondary reading problems with emphasis on skill development. Prerequisite: ED 214, 216, 218, 220 or equivalent. Pre- or corequisite: ED 327.

436-3 Science, Technology, and Society as a Teaching Imperative
Curriculum and materials about issues that interface science, technology, and society now and in the future. Clinical experiences, approaches to teaching, the professional literature, and resources and facilities are emphasized.

437-3 Elementary School Mathematics: Curriculum and Materials
Instructional materials and methods of meaningful explanations of mathematics in the elementary school based on structural properties of number and numeration system studies at this level. Completion of two-thirds of major content field is required. Prerequisite: MTH 243 and ED 214, 216, 218, 220 or equivalent. Pre- or corequisite: ED 327.

438-3 Secondary School Mathematics: Curriculum and Materials
Curriculum, methods, and materials in the mathematics of grades 7-12. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

439-3 to 4 Secondary School Social Studies: Curriculum and Materials
Objectives, principles, and trends in secondary social studies education. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

440-1 to 4 The Teacher in School and Society
Seminar dealing with the student teaching experience, legal and social issues affecting education, and the development of a personal philosophy of education. Corequisite: ED 419 and/or 429.

447-4 Teaching in the Public School
Study, observation, and evaluation of practices. Open only to students who have completed the pertinent curriculum and materials course and are seeking a waiver of all or part of student teaching on the basis of full-time teaching experience.
448-3 Improvement of Social Studies Instruction
In-depth analysis of new social studies resource materials and curriculum models with emphasis on improving instruction. Prerequisite: For elementary, ED 417; for secondary, ED 439.

450-3 Computer Science: Curriculum and Materials
Prepares teachers to teach computer science in a precollege setting. A study of curriculum, teaching methodology, and the computing teacher's role in computer science, K-12. Completion of a minimum of 30 credit hours in computer science, including CS 400, is required. Prerequisite: ED 214, 216, 218, 220, or equivalent; ED 302, 327. Corequisite: ED 323.

458-1 to 9 Practicum in Education
Supervised teaching experience for students who have completed student teaching (or its equivalent) and are seeking certification in another field. Topics vary.

460-1 to 4 Practicum in English Education
Students are assigned to an instructional class that focuses on the teaching of English to speakers of other languages (TESOL) for a supervised practicum experience. Graded pass/unsatisfactory. Prerequisite: ED 214.

464-3 to 4 Evaluation
Evaluation of learning including selected forms of measurement and interpretation of data; sociometric techniques, anecdotal records, and testing. Prerequisite: ED 214, 216, 218, 220 or equivalent; ED 302, 327. Corequisite: ED 323.

470-1 to 6 Curriculum and Instruction Workshop
Intensive study of a selected area of the school curriculum to meet the particular needs of the participating preservice and in-service teachers, administrators, and curriculum supervisors. Topics vary.

490-3 to 12 Internship in the School
Students assume major responsibility for a group of pupils in a classroom setting for an academic year while having the support and guidance of school and university personnel.

Education-Early Childhood Education/EDE
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

230-2 Early Childhood Education Foundations
History, program models, social issues affecting programs, state and federal involvement and regulation; development of professionals in programs for children birth to eight years. Concurrent enrollment in ED 221 field placement K-3.

231-4 Developmentally Appropriate Programming ECE
Introduction to appropriate environment, curriculum content, scheduling, developmental evaluation, teaching strategies, and group management in the early childhood classroom. Concurrent enrollment in ED 321 and field placement in K-P required. Prerequisite: ED 214, 216, 218, 220, EDE 230 or equivalent.

303-4 Social Studies/Social Development in ECE
Objectives, principles, trends, and appropriate practices in social studies and social development for ECE. Field/clinical experience required. P-K placement. Prerequisite: EDE 230, 231, or permission of instructor.

309-4 Emerging Literacy in Early Childhood
Understanding the roots of language learning and the reading and writing behaviors common to each age group. Designing and implementing readiness and literacy instruction. Field placement in classroom with children K-P. Prerequisite: ED 214, 216, 218, 220, EDE 230.

312-4 Math and Science in Early Childhood Education
Examination of the theoretical basis for and appropriate content of curriculum in math and science for children age three to eight. Field placement required in P-K setting one to two days per week. Prerequisite: ED 214, 216, 218, 220, EDE 230.

401-3 Parents and the Schooling Process
Orientation to the role of the family in the education of the child, birth to age 8, including the effects of various parental behaviors, family composition, and types of parent involvement in child care and schools which affect development and learning of children. Prerequisite: ED 214, 216, 218, 220 and EDE 230.

409-4 Early Childhood Curriculum and Materials: Sociocultural
Historical, philosophical, and sociological aspects of early childhood education. Emphasis on the development of race awareness in young children and the development of self-concept. Prerequisite: EDE 411 or 412 or permission of instructor. (Previously listed as ED 409.)

411-4 Early Childhood Education
Introduction, history, and development of the profession of early childhood education. Focuses on job opportunities, professional organizations, and needs and development levels of young children. Includes basic information about skills and competencies necessary for teaching young children. Prerequisite: ED 214, 216, 218, 220 or equivalent. (Previously listed as ED 411.)
412-4 Kindergarten: Curriculum and Materials
Research in historical backgrounds of various types of early childhood programs in the United States. Review of basic human growth and learning principles significant for understanding young children, prenatal through age eight. Focus on planning effective preschool and early learning programs. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. (Previously listed as ED 412.)

414-4 Early Childhood Education Curriculum and Materials: Language
Emphasizes existing commercial materials for preschool language development, evaluation of these materials, and design and presentation of supplementary and basic teacher-made materials. Prerequisite: ED 214, 216, 218, 220 or equivalent. (Previously listed as ED 414.)

Education-Special Education/EDS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

441-3 Mental Retardation and Developmental Disabilities
Causes and effects of mental retardation and related developmental disabilities in home, school, and community settings. Prerequisite: ED 214, 216, 218, 220; ED 403 or equivalent. (Previously listed as ED 441.)

442-4 Curriculum, Methods, and Materials for the Mildly Handicapped
Practices and procedures used in developing elementary and secondary curricula for the mildly handicapped. Includes academic adaptations and social and motor skills development as applied to development and implementation of the IEP. Prerequisite: ED 214, 216, 218, 220; EDS 455 or equivalent. Corequisite: ED 323. (Previously listed as ED 442.)

443-3 Introduction to Augmentative Communication
Introduces etiology, problems, and needs of nonspeaking individuals. Hands-on experiences are required using augmentative aids and devices with multiply handicapped individuals. Prerequisite: EDS 451 or experience with multiply handicapped individuals. (Previously listed as ED 443.)

444-3 Instructional and Behavioral Management of Exceptional Individuals
Prepares special educators to meet the instructional and behavioral management demands particular to working with exceptional individuals, including those with severe behavior difficulties. Prerequisite: ED 302, EDS 451 or 455 (EDS 451 and 455 may be taken concurrently). (Previously listed as ED 444.)

445-3 Career Education and Occupational Training for Exceptional Individuals
Role of occupational training in the curriculum; relationships with the world of work; problems of organizing and administering; and methods and techniques used in developing occupational interests and abilities at various levels. Prerequisite: EDS 451 or 455 or RHB 301. (Previously listed as EDS 445.)

451-3 Nature and Needs of the Multiply Handicapped
Reviews etiological aspects; historical, educational, and training programs; and concerns and issues related to multiply handicapped individuals including mildly, moderately, severely, and profoundly retarded or physically handicapped. Prerequisite: ED 220. (Previously listed as ED 451.)

452-3 Education of Individuals with Physical, Sensory, and Motor Disorders
Overview of the etiology and educational implications of physical disabilities, sensory deficits, and communication disorders. Emphasis on psycho-educational, physical, and medical needs of these individuals. Prerequisite: ED 220 or EDS 451 or permission of instructor. (Previously listed as ED 452.)

453-3 Curriculum, Methods, Materials, and Adaptive Equipment for Multiply Handicapped
Reviews organizations, methods, materials, and techniques for educating and training multiply handicapped children, youth, and adults. Related professional organizations and community services are reviewed. Prerequisite: EDS 444, 451, 452. Corequisite: ED 323. (Previously listed as ED 453.)

454-3 Administration and Interpretation of Educational Data
Students learn to administer and interpret formal and informal educational assessment instruments and to communicate assessment data to parents and colleagues. Pre- or corequisite: EDS 455. (Previously listed as ED 454.)

455-2 to 4 Nature and Needs of the Mildly Handicapped
Causes and effects of specific learning and language disabilities, severe behavior disorders, and mild developmental disabilities. Study of teaching strategies appropriate for these individuals. Prerequisite: ED 218, 220. (Previously listed as ED 455.)

456-4 Clinical Practice in Remediation
Supervised clinical practice in the diagnostic teaching of basic academic and social skills including learning and study strategies. Prerequisite: ED 317 or ED 432, 437, EDS 442, 454, 455. Nonspecial education majors do not need EDS 442 and 455. (Previously listed as ED 456.)
459-3 Communication and Consultation Skills for Special Educators
Techniques of collaborative consultation needed to enhance communication with exceptional individuals, parents, and educational team members. Pre- or corequisite: EDS 451 or 455. (Previously listed as ED 459.)

Educational Technology/EDT

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

110-1 Using the Library
Presents basic approaches for using the Wright State library. Includes library classification, COLS, indexes, and the introduction to selected reference sources.

210-1 Using Business Information Sources
Survey course covering standard business bibliography and reference information including government documents.

280-3 Classroom Applications of Computers
Instruction to the use of computer-based technology in K–12 instruction. Focus is on selecting courseware and integrating it into lessons.

335-3 Business Mathematics for Business Teachers
Designed for business education majors to review, demonstrate, and develop teaching strategies applicable to consumer math. Teaching methods integrated with the basic math fundamentals and other math applications. (Previously listed as ED 335.)

370-1 to 4 Independent Study
Advanced individual study in an area not available through regular course offerings.

433-4 Business Education: Curriculum and Materials in Basic Business Subjects
Accompanies students with business education philosophy, objectives, and curricula on the secondary level of instruction. Curriculum and materials in basic business subjects, bookkeeping, data processing, and sales communication. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323. (Previously listed as ED 433.)

434-4 Business Education Curriculum and Materials: Typewriting, Keyboarding, Word Processing, and Office Procedures
Curriculum, methods, and materials in typewriting, keyboarding, word processing, and office procedures in secondary schools; current trends in teaching these skills are also covered. Field/clinical experiences required. Pre- or corequisite: EDS 433, OA 213. (Previously listed as ED 434.)

435-3 Business Education Curriculum and Materials: Shorthand, Transcription, and Secretarial Procedures
Curriculum, methods, and materials in teaching shorthand, transcription, and secretarial procedures. Field/clinical experiences required. Completion of two-thirds of major content field is required. Pre- or corequisite: ED 322; OA 203, 213. Corequisite: ED 327. (Previously listed as ED 435.)

436-2 Production of Instructional Materials
A nontechnical course with emphasis on production of locally made materials for classroom use including mounting, lettering, computer graphics, and transparency production. (Previously listed as EDT 435.)

445-3 Storytelling Principles
Students learn storytelling principles to include story selection, various styles of presentation, and methods of planning.

455-4 Television Production
Survey of television production from a single-camera, remote production perspective, including use of editing equipment.

463-3 Survey of Adolescent Literature
Study of books appropriate for students ages 12–19. Survey and evaluation of the literature, and studies of reading interests and issues related to this field of literature.

470-1 to 6 Workshop in Educational Technology and Vocational Education
Intensive, practical study in a selected area of educational or applied technology. Titles vary.

485-3 Computers for Educators
Computer software and hardware systems and their uses are discussed with emphasis on their effects on education and the teacher.

487-4 Introduction to BASIC for Educators
Introduction to computer programming in the BASIC language including programs and techniques useful to educators. Topics include techniques for program design, flowcharting, coding, testing, and documentation.

491-1 to 12 Library/Media Practicum in the Elementary School
Supervised student teaching in an elementary public school library media center. Prerequisite: Certification requirements completed. (Previously listed as EDT 481.)

492-1 to 12 Library/Media Practicum in the Secondary School
Supervised student teaching in a secondary public school library media center. Prerequisite: Certification requirements completed. (Previously listed as EDT 482.)
Courses

Electrical Engineering

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

231-1 Contemporary Areas of Engineering Physics
Specification of areas to which engineering physics is relevant. Discussion of specific problems in fields such as space science, fluid and plasma dynamics, thermal science, lasers, instrumentation, design utilization of material properties, and nuclear engineering.

301-4 Circuit Analysis I
Basic elements and laws, circuit analysis techniques and concepts, energy storage elements, first and second order circuits, sinusoidal steady state analysis. Prerequisite: MTH 233, PHY 252. Co- or post requisite: EE 302.

302-1 Circuit Analysis I Laboratory
Computer-assisted analysis, RLC circuits, operational amplifiers and circuits, Thevenin and Norton equivalents, maximum power transfer, and AC networks. Prerequisite: EE 301.

303-3 Circuit Analysis II
Circuit review, alternating current concepts, computer-aided circuit analysis, two-port networks, power. Prerequisite: EE 301 and 302. Co- or post requisite: EE 304.

321-4 Linear Systems I
Considers systems in a broad context including linear, nonlinear, variant, invariant, and analog and discrete. Various approaches to system and signal modeling are also discussed with emphasis on the Fourier transform technique. 4 hours lecture, 1 hour recitation.

322-4 Linear Systems II
Extends techniques of EE 321. Introduces convolution and emphasizes the relationship among convolution, the system function, and the differential equation description. Develops the Laplace and z-Transform techniques and provides an introduction to digital filter theory. Prerequisite: EE 321.

325-4 Numerical Methods for Electrical Engineering
Root location, polynomial interpolation, numerical methods for linear systems analysis, matrix methods in circuit analysis, frequency domain circuit analysis techniques. Prerequisite: EE 322 or proficiency in Pascal or FORTRAN.

331-3 Electronic Devices
Introduction to basic solid-state electron devices. Fundamentals necessary for comprehension and further study of modern engineering electronics. Major topics include carrier flow in semiconductors, p-n junction theory, semiconductor diodes, bipolar junction transistors, field effect transistors, biasing, and introduction to amplifiers. Prerequisite: EE 301, 302, 303, 304.

345-4 Electromagnetics
Electrostatics and magnetism; induced electromagnetic force. Maxwell's equations and their physical interpretation and application. Prerequisite: MTH 232.

346-4 Transmission Lines, Waveguides, and Radiating Systems
Plane waves in free space and matter. Development of the transmission line equations and application of Smith charts. Application of Maxwell's equations to the rectangular and circular waveguides. Introduction to radiating systems including the dipole and loop antennae. Actual design of typical systems containing transmission lines, waveguides, and antennae. Prerequisite: EE 345.

351-4 Digital Computer Hardware/Switching Circuits
(Also listed as CEG 260.) Topics include switching algebra and switching functions, logic design of combinational and sequential circuits using TTL, combinational and sequential circuits using TTL, combinational logic design with MSI and LSI, busing, storage elements, and instrumentation. 3 hours lecture, 2 hours lab. Prerequisite: CS 142, 220, 240 or EGR 153.

401-3 Electronic Circuits and Devices
Application of modern electronics to instrumentation and data collection. Topics include semiconductor devices, small signal and power amplifiers, operational amplifiers, power supplies, digital fundamentals, and microprocessors. For nonmajors. Prerequisite: EE 301, 302. Co- or post requisite: EE 402.

402-2 Electronic Circuits and Devices Laboratory
Experiments in simple circuits, diode and transistor circuits, operational amplifiers, and simple microprocessors. Prerequisite: EE 301, 302. Pre- or corequisite: EE 401.

413-3 Control Systems I
An introductory course providing students with a general control background. Topics include block diagrams and signal-flow graphs, electromechanical modeling, time response, root locus, and introduction to design. Prerequisite: ME 213, EE 321. Co- or post requisite: EE 414.

414-1 Control Systems I Laboratory
Application and testing of control systems theory with electromechanical systems. Pre- or corequisite: EE 413.
415-3 Control Systems II
Using Control Systems I background, this course concentrates on controller design, in both the time and frequency domains, using Nyquist, Bode, root locus, and state variable techniques. Digital control concepts are introduced. Prerequisite: EE 322, 413, 414. Co- or postrequisite: EE 416.

416-1 Control Systems II Laboratory
Application and testing of control systems theory with electromechanical systems. Prerequisite: EE 413, 414. Pre- or corequisite: EE 415.

421-4 Communication Theory
Analysis of linear systems by the Fourier transform and the time convolution integral methods. Introduction to information theory. Comparative evaluation of various analog and pulse modulation techniques. Selected topics from radar theory and electro-optics as well as an introduction to random process theory. Prerequisite: EE 322; STT 363 or equivalent.

427-4 Digital Control Systems
Sampled spectra and aliasing, analysis and design of digital control systems using root locus and transform techniques; discrete equivalents of continuous controller and quantization effects. 3 hours lecture, 2 hours lab. Prerequisite: CEG 411.

430-4 Distributed Systems
Distributed constants and traveling waves in various types of physical systems. AC steady-state in distributed systems; phase and group velocities; and reflections, standing wave ratios, and impedance matching techniques. Prerequisite: EE 322; MTH 232.

431-3 Electronic Circuits
Theory and application of basic engineering electronics developed for discrete and integrated circuits. Topics include bipolar and field effect transistor amplifier analysis and design, frequency response, multi-stage and feedback amplifiers. Prerequisite: EE 321, 331. Co- or postrequisite: EE 434.

434-2 Electronic Circuits Laboratory
Applications of diodes and operational amplifiers in analog circuits, design of bias circuits; single and multiple stage amplifier circuits; feedback amplifiers; circuits to meet frequency response specifications; output stages. Prerequisite: EE 331. Pre- or corequisite: EE 431.

435-3 Network Synthesis and Design

444-4 Linear Integrated Circuits
Theory and applications of linear integrated circuits. Topics include ideal and real operational amplifiers, frequency response and compensation, active filters, comparators, and waveform generators. 3 hours lecture, 2 hours lab.

446-4 Microwave Circuit Design
Review of Smith chart, introduction to microstrip lines, impedance matching, power gain equations, stability considerations, design methods for amplifiers and oscillators. CAD is used. Prerequisite: EE 346.

449-4 Pulse and Digital Circuits
Design and analysis of pulse and switching circuits including linear wave and diode wave shaping; logic types; DTL, DCTL, RTL, TTL, and ECL; bistable, astable, and monostable multivibrators; voltage comparators; Schmitt triggers; blocking oscillators; and magnetic core switching. 3 hours lecture, 2 hours lab.

451-4 Digital Systems Design
(Also listed as CEG 360.) Design of digital systems. Topics include digital arithmetic, register-level design, memory devices and their logic, and controller and processor design. 3 hours lecture, 2 hours lab. Prerequisite: EE 351.

452-4 Standard Cell VLSI Design Techniques
(Also listed as CEG 452.) Standard cell VLSI design techniques. Topics include introduction to VLSI, MOS transistors, CMOS logic circuits, standard cell libraries, cell usage, schematic capture and simulation, circuit testing, test program generation. Prerequisite: EE 451/CEG 360.

453-4 VLSI Design
(Also listed as CEG 454.) Introduction to VLSI system design. Topics include NMOS devices and circuit design techniques, basic building blocks for NMOS design, fabrication processing and design rules, chip planning and layout, system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI. Prerequisite: EE 451 or CEG 360.

456-4 Introduction to Robotics
(Also listed as CEG 456, ME 456.) An introduction to the mathematics, programming, and control of robots. Topics include coordinate systems and transformations, manipulator kinematics and inverse kinematics, trajectory planning, Jacobians and control. Prerequisite: Senior standing and MTH 253; proficiency in Pascal, C, or FORTRAN programming.

473-4 Communication Systems Design I
Introduction to communication system design. Topics include source characterization and encoding, choice of modems and the tradeoffs involved, and choice of received configuration. Techniques developed applied in the design of a deep-space communication system. Prerequisite: EE 322, 421.

474-3 Communication Systems Design II
Course completes the communication system design sequence and is intended to provide the support necessary to complete the EE 473 design project. Topics include multi-level modems, coding, equalization, and link design. Prerequisite: EE 473.
475-3 Introduction to Radar Systems
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. Prerequisite: EE 322.

499-1 to 4 Special Problems in Engineering
Special problems in advanced engineering. Topics vary.

English/ENG
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses
101-4 Freshman Composition
Introduces the writing process and its applications. Stresses planning, drafting, and revising for greater focus, development of subject, and audience awareness, as well as clarity, conciseness, and correctness. Placement based on performance on placement essay examination.

102-4 Freshman Composition
Continues focus on writing process, stressing principles of argumentation and academic research techniques. Prerequisite: Grade of C or better in ENG 101.

204-3 Great Books: Literature
Introduction to selected masterpieces of poetry, drama, and fiction from the Western literary tradition of the Greeks to the twentieth century, viewed in their historical context and for their enduring interest.

Departmental Courses
094-4 English as a Second Language: Speaking
Basic course in spoken English, both production and comprehension. Graded pass/unsatisfactory. For non-native speakers of English only.

097-4 English as a Second Language: Basic Writing
Basic course in written communication with an emphasis on sentence structure. For non-native speakers of English only.

098-4 English as a Second Language: Advanced Writing
Course in written communication with an emphasis on writing paragraphs and short compositions. Graded pass/unsatisfactory. For non-native speakers of English only.

101-4 Freshman Composition
Concentrates on the writing process and its applications, stressing clarity, conciseness, and correctness.

102-4 Freshman Composition
Expository writing, stressing rhetorical principles. Prerequisite: ENG 101.

190-3 Issues and Ideas in Literature
Readings in literature dealing with a single theme or a specific problem; for example, Crisis and Confrontation in American Literature, the Images of the Hero in Literature, the Supernatural and Occult in Literature, and Sex and Censorship in Literature.

199-1 to 4 Topics in English
Problems, approaches, and topics in the fields of English. Topics vary. May be taken for letter grade or pass/unsatisfactory.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>201-3</td>
<td>Contemporary Literature</td>
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<tr>
<td></td>
<td>Readings in American and British fiction, poetry, and drama of the present and the recent past; for example, American Novel since 1945, Literature of the Absurd, Protest Literature, and Contemporary Poetry.</td>
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<tr>
<td>202-3</td>
<td>The Literary Tradition</td>
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<td>Readings in British and American literature; for example, Shakespeare, American Masterpieces, British Novel, and Readings in Biography.</td>
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<tr>
<td>203-3</td>
<td>World Literature</td>
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<tr>
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<td>Readings in world literature; for example, the Literature of Africa, the International Best Seller, and the Hero in World Myth.</td>
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<tr>
<td>204-3</td>
<td>Great Books: Literature</td>
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<td>Introduction to selected masterpieces of poetry, drama, and fiction from the Western literary tradition of the Greeks to the twentieth century, viewed in their historical context and for their enduring interest.</td>
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<td>205-3</td>
<td>Afro-American Literature</td>
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<td>Readings in African-American literature; for example, Phyllis Wheatley to the present, nineteenth-century freedom literature, twentieth-century black novel, and the female African-American tradition. Titles vary.</td>
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<tr>
<td>210-3</td>
<td>Introduction to Poetry</td>
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<td>Poetry as a type of literature together with an introduction to various approaches to the enjoyment of poetry.</td>
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<tr>
<td>211-3</td>
<td>Introduction to Fiction</td>
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<td>Introduction to the reading of prose fiction including a study of the elements of fiction, various forms and modes of fiction, and the enjoyment of fiction.</td>
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<tr>
<td>212-3</td>
<td>Introduction to Drama</td>
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<td>Introduction to the study and analysis of drama including differences among plays of different periods.</td>
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<tr>
<td>240-3</td>
<td>Intermediate Composition</td>
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<td>Improvement of writing skills with special attention to individual writing weaknesses. Includes a review of basic writing principles. Prerequisite: ENG 101, 102, or equivalent.</td>
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<tr>
<td>254-3</td>
<td>Introduction to Journalism</td>
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<tr>
<td></td>
<td>Overview of the role of the press in American society with emphasis on print media. Topics include the press, government, and the First Amendment.</td>
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<tr>
<td>257-3</td>
<td>Basic News Writing</td>
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<tr>
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<td>(Also listed as COM 256.) Introduction to writing for print media. Structure and organization of news stories. Requires reporting in the field.</td>
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<tr>
<td>330-4</td>
<td>Business Writing</td>
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<tr>
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<td>Written business and organizational communication; attention to various forms including short reports and informal oral presentations. Prerequisite: ENG 101, 102, or equivalent.</td>
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<tr>
<td>333-3</td>
<td>Fundamentals of Technical Writing</td>
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<td>A survey of the fundamental principles and skills used in scientific and technical writing. Prerequisite: ENG 101, 102, or equivalent.</td>
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<tr>
<td>340-4</td>
<td>Language for Elementary Teachers</td>
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<tr>
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<td>Systematic methods of examining the sound system and sentence structure of English, with applications of language acquisition and variation related to the elementary classroom.</td>
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<tr>
<td>342-3</td>
<td>Advanced Composition for Elementary Teachers</td>
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<td>Study and practice of writing emphasizing informative and creative writing taught in the elementary school and problems of teaching writing to elementary school students. Prerequisite: ENG 101, 102, or equivalent.</td>
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<tr>
<td>344-4</td>
<td>Research Writing</td>
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<td>Instruction in organizing, documenting, and writing of research papers. Research projects based not only on primary and secondary sources but also on experiment and investigation. Prerequisite: ENG 101, 102, or equivalent.</td>
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<tr>
<td>347-3</td>
<td>Desktop Publishing and Technical Graphics</td>
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<td>An introduction to the design and illustration of technical documents through labs requiring use of word processing and desktop publishing systems.</td>
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<td>364-4</td>
<td>Communication Graphics</td>
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<td></td>
<td>(Also listed as COM 364.) An introduction to basic principles of graphics communication, primarily as applied to print media. Includes the history and basic concepts of graphics communication, typography, photo editing, and graphic design.</td>
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<tr>
<td>366-4</td>
<td>Advanced News Writing</td>
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<tr>
<td></td>
<td>(Also listed as COM 366.) Advanced study of writing skills, practices, and procedures used in reporting news for mass media. Actual reporting in the field is required. News-writing skills introduced in COM 256 are further refined. Prerequisite: ENG 257 or COM 256.</td>
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<tr>
<td>400-3</td>
<td>Advanced Technical Writing</td>
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<td>Reviews the fundamentals of technical writing with attention to reports, proposals, manuals, technical articles, and using style manuals. Emphasis on writing for specific fields with opportunity for independent writing projects in the student's major field. Prerequisite: ENG 333, 347.</td>
</tr>
<tr>
<td>402-3</td>
<td>Technical Editing</td>
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<td>Experience in various types of technical editing—copy, style, content, and contextual; editing for consistency of format and adherence to standards; and preparing a document for printing. Prerequisite: ENG 400.</td>
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<tr>
<td>405-1 to 6</td>
<td>Topics in Technical Writing</td>
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<td>Courses, seminars, or workshops in specialized topics relating to technical writing. Prerequisite: ENG 400 or permission of instructor.</td>
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<tr>
<td>454-4</td>
<td>Feature Story Writing</td>
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<td>(Also listed as COM 454.) Finding, writing, polishing, and marketing feature material. Prerequisite: ENG 257 or permission of instructor.</td>
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</table>
458-4 Editing for the Media
(Also listed as COM 458.) Editing of copy for mass media with emphasis on newspaper format, headline writing, rewriting, and general copy desk. Prerequisite: ENG 257 or COM 256 or permission of instructor.

479-4 History of the English Language
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. Prerequisite: ENG 101, 102.

485-2 to 4 Studies in English Education
(Also listed as ED 420.) Focus is on theoretical issues and practical problems of teaching English at all levels, including the teaching of writing and the teaching of English to speakers of other languages (TESOL).

495-4 Internship
Practical work experience performing writing-related tasks in cooperation with local business, professional, and service organizations. Performance is supervised and evaluated by the director of Writing Programs. Graded pass/unsatisfactory.

Major Courses
Unless otherwise specified, successful completion of freshman English is the minimum prerequisite for all major courses. Bachelor of Arts degree candidates majoring in English must meet the minimum major requirements from courses in this group. For majors, ENG 255 and 256 are prerequisite to enrollment in other literature courses in this group.

255-4 English and American Literary History
Designed to give a sense of the continuity of literary history.

256-4 Writing about Literature
Techniques of reading literature and of writing analytical, critical, and scholarly papers about literary topics. Prerequisite: ENG 101, 102; or equivalent.

301-4 Introduction to Creative Writing
Emphasizes foundations of the short story and poetry. Prerequisite: ENG 101, 102; or permission of instructor.

302-4 Poetry Writing
Fundamentals of verse writing; practice in traditional and contemporary concepts of poetic form. Prerequisite: ENG 101, 102; or permission of instructor.

303-4 Short Story Writing
Theory and practice of techniques of fiction emphasizing reading of literary models and writing of original stories. Prerequisite: ENG 101, 102; or permission of instructor.

309-4 Creative Writing Workshop
Students work closely with the instructor on advanced projects in poetry, short story, drama, or the novel. Prerequisite: ENG 302 or 303 or 304; or permission of instructor.

341-3 Advanced Composition for Secondary Teachers
Combines study and teaching of composition with practice in writing. Emphasis on expository writing with special attention to evaluation of writing and problems of secondary school teachers.

343-4 Advanced Composition
Emphasis on sophisticated techniques of expository writing and the refinement of style.

351-4 Major English Writers: Chaucer to Shakespeare
Representative works of such major English writers of the medieval period and the sixteenth century as Chaucer, the Pearl-poet, Malory, Sidney, Spenser, Marlowe, and Shakespeare.

352-4 English Literature: Renaissance and Enlightenment
Representative works of such major British writers of the seventeenth and eighteenth centuries as Donne, Jonson, Milton, Dryden, Congreve, Swift, Addison, Steele, Pope, Fielding, Gray, and Johnson.

353-4 English Literature: Romantic and Victorian
Representative works of such major Romantic and Victorian writers as Blake, Austin, Wordsworth, Coleridge, Keats, Shelley, Byron, Carlyle, Dickens, Tennyson, Browning, and Arnold.

354-4 English Literature: Modern Period
Representative works of such major English writers of the modern period as Hopkins, Hardy, Housman, Shaw, Conrad, Yeats, Joyce, Lawrence, Woolf, and Eliot.

355-4 American Literature: Romanticism
Representative works of such major American writers before the Civil War as Cooper, Poe, Emerson, Thoreau, Hawthorne, Melville, and Whitman.

356-4 American Literature: Realism and Naturalism
Representative works of such major American writers from the Civil War to World War I as Dickinson, Twain, James, Howells, Wharton, Crane, and Dreiser.

357-4 American Literature: Modern Period
Representative works of such major American writers since the twenties as Fitzgerald, O'Neill, Frost, Hemingway, Faulkner, and Stevens. Also includes selected contemporary writers.

Note: The following series of "Studies" is intended to provide a wide range of courses approaching literature from a variety of significant viewpoints. Because a large number of courses can be offered under each "Studies" number, students should consult the department for a list and brief description of the particular courses that will be offered during a given academic year. Completion of at least three of the following courses is prerequisite to enrollment in the "Studies" courses: ENG 351, 352, 353, 354, 355, 356, 357.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of English. Topics vary.
Courses offered under this number provide intensive study of English literature from the point of view of literary history and are intended to develop an understanding of the historical approach to literature and an ability to deal critically with historical generalizations about literary periods and movements.

Courses offered under this number provide intensive study of American literature from the point of view of literary history and are intended to develop an understanding of the historical approach to literature and an ability to deal critically with historical generalizations about literary periods and movements.

Courses offered under this number provide intensive study of the work of single, major English authors and are intended to develop an understanding of individual works of literature in the context of an author's life and total literary production.

Courses offered under this number provide intensive study of the work of single, major American authors and are intended to develop an understanding of individual works of literature in the context of an author's life and total literary production.

Courses offered under this number provide intensive study of important literary forms such as poetry, the novel, comedy, tragedy, satire, and the epic, and are intended to develop an understanding of the formal aspects of literature as approached theoretically, analytically, and historically.

(Also listed as REL 456.) Courses offered under this number provide intensive study of literary works in terms of significant and recurring literary themes as they can be traced in various eras, cultures, and literary traditions.

Survey of major branches of English linguistics; present-day phonology, morphology, syntax, and their historical development; and social and psychological approaches to language.

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. Prerequisite: ENG 101, 102.

Courses offered under this number provide intensive study of the English language and linguistics and are intended to develop an understanding of historical, comparative, and descriptive approaches to the study of language and of the nature and value of their findings. Prerequisite: ENG 478.

Courses offered under this number provide study, in English, of non-European literatures, focused nationally, regionally, cross-culturally, thematically, or generically (e.g., Caribbean fiction, modern Japanese literature, and Commonwealth literature).

Supervised 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.

Writing of fiction and/or poetry, group discussion of manuscripts, and special assignments in technique, related criticism, and contemporary professional writing.

Two-quarter sequence for senior English majors who are doing an English honors project.

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Introduction to the role of the environmental health profession in meeting current problems in public health and environmental quality.

Relationship of physical and biotic environments to design and operation of systems and procedures employed in maintenance and promotion of a quality, healthful human environment. Emphasis on water quality control and waste disposal methods. Prerequisite: BIO 202, CHM 123.

Field and laboratory technology used in monitoring the environment and evaluating the effectiveness of environmental control operations. Emphasis on water quality control and waste disposal methods. For environmental health majors only. Corequisite: EH 360.

Relationship of physical/chemical/biotic environments to design/operation of systems and procedures employed in maintenance/promotion of quality, healthful human environments. Emphasized: food/dairy sanitation; solid waste; institutional/housing/recreational sanitation; and vector control.
Courses

Environmental Health Sciences

Environmental Studies

Finance

363-3 Environmental Health Field and Laboratory Practice II
Field and laboratory technology used in monitoring the environment and evaluating the effectiveness of environmental control operations. Emphasis on food sanitation, solid waste, and institutional sanitation. Corequisite: EH 362.

364-3 Air Pollution and Hazardous Wastes
Theory, design, and operation of systems, facilities, and procedures employed in maintenance and promotion of a quality, healthful environment with emphasis on air pollution, radiation, and hazardous wastes.

365-3 Environmental Health Field and Laboratory Practice III
Field and laboratory technology used in monitoring the environment and evaluating the effectiveness of environmental control operations. Emphasis on housing and recreation sanitation. Corequisite: EH 364.

366-9 Environmental Health Field Internship
One-quarter internship in a cooperating environmental or public health agency or industrial organization. Supervised by faculty and professional environmentalists. Reports and specific assignments determined in cooperation with internship director. Graded pass/unsatisfactory. For environmental health majors only. Prerequisite: Three 300-level EH courses.

461-2 Problems in Environmental Health
Seminar/workshop in professional aspects of environmental health. For environmental health majors only. Prerequisite: EH 366 or permission of instructor.

462-3 Epidemiology and Community Health
Communicable and occupational diseases of contemporary importance; includes epidemiological investigation, environmental considerations, and control procedures. Prerequisite: EH 360 and 362 or permission of instructor.

463-3 Public Health Organization
Lecture/seminar course covering principles of public health organization and administration, public health law, comprehensive health planning, and the community services provided by health-related agencies. May be taken for letter grade or pass/unsatisfactory.

466-3 Occupational Health and Safety
Introduction to accident recognition, evaluation, and control in the work environment. Emphasis on methods of hazard recognition and control management. Prerequisite: CHM 123.

467-2 Occupational Health and Safety Laboratory
Introduction to accident recognition, evaluation, and control in the work environment by hands-on equipment use. Methods of inspection, accident investigation, and evaluation of accident programs are stressed. Prerequisite: CHM 123.

468-3 Industrial Hygiene I
Introduction to industrial hygiene. Emphasis on routes of entry into the human body and physiological effects of industrial pollutants. Prerequisite: CHM 123.

469-2 Industrial Hygiene I Laboratory
Introduction to industrial hygiene. Methods of measuring toxic effects and providing adequate protection discussed and demonstrated. Prerequisite: CHM 123.

Environmental Studies/ENV

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

499-1 to 5 Special Problems
Research or individual study designed for specific needs and abilities of students.

Finance/FIN

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

205-3 Personal Financial Management
Provides knowledge that helps nonbusiness students effectively manage their personal financial affairs. Topics include personal financial statements, budgeting, tax planning, investing and savings, consumer borrowing, insurance, real estate, and retirement planning. For environmental health majors only. Prerequisite: EH courses.

280-3 Special Topics in Finance
Seminar in a finance topic of current and timely interest. Topics and prerequisites vary. For nonmajors only.

Advanced Courses

All of the following courses require junior standing in addition to the listed prerequisites.

301-3 Business Finance I
Introduction to the basic concepts, principles, and analytical techniques of financial management. Topics include financial planning and analysis, risk and return, time value of money, and capital budgeting. Prerequisite: ACC 203, CS 205, EC 201, 202, 203, MS 202.

302-3 Business Finance II
Continuation of FIN 301. Emphasis on financial decisions and cost of capital. Prerequisite: FIN 301.

303-3 Case Problems in Financial Management
Application of basic financial concepts and analytical techniques to financial decision making. Extensive use of cases. Prerequisite: FIN 302.

305-3 Personal Financial Planning
Financial problems encountered in managing individual affairs such as family budgeting, installment buying, insurance, home ownership, investment in securities, taxes, retirement planning, and estate planning.
331-3 Real Estate Principles and Practices
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.

332-3 Real Estate Law
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.

351-3 Risk and Insurance
Introduction to principles and practices of personal risk management and insurance. Topics include property and liability insurance, life insurance, disability insurance, health insurance, and social security.

401-3 Investing in Securities
Introduction to the theory and practice of investing in stocks, bonds, and other securities. Prerequisite: FIN 302, EC 301.

402-3 Seminar in Investments
Advanced treatment of the theory and practice of investing. Provides opportunities for individual investigation of selected topics. Prerequisite: FIN 401.

403-3 Management of Financial Institutions
Analysis of issues relating to the financial management of financial institutions. Prerequisite: FIN 302, EC 301.

420-3 Seminar in Financial Management
In-depth treatment of advanced problems in managerial finance. Topics include capital budgeting, capital structure theory, cost of capital, dividend policy, and long-term financial management. Prerequisite: FIN 303.

421-3 Working Capital Management
Theory and practice of working capital management, including cash management, credit policy, inventory policy, and short-term financing. Extensive use of cases. Prerequisite: FIN 302.

431-3 Real Estate Finance
In-depth study of the instruments, markets, techniques, and strategies of real estate finance. Successful completion of this course meets part of the licensing requirements for real estate brokers in Ohio. Prerequisite: FIN 302, 331.

433-3 Real Estate Valuation and Appraisal
In-depth analysis of the theory and practice of valuing and appraising real estate. Successful completion of this course meets part of the licensing requirements for real estate brokers in Ohio. Prerequisite: FIN 302, 331.

435-3 Investing in Real Estate
Explores the theory and practice of real estate investment analysis as it relates to personal financial planning objectives. Prerequisite: FIN 302, 331; ACC 441.

452-3 Life and Health Insurance
Analysis of the problem of economic insecurity resulting from premature death, disability, and old age. General theory of life and health insurance, its economic and social implications, and underlying principles and reasons for various contract provisions, underwriting practices, and legal doctrines are analyzed. Individual and group plans are covered. Prerequisite: FIN 351.

453-3 Property and Liability Risk Management
Study of the concepts and techniques of property and liability risk management from the perspective of both individuals and business firms. Prerequisite: FIN 351.

461-3 Retirement Planning and Employee Benefits
Familiarizes students with the concepts of retirement planning and employee benefits and the application of these concepts to overall financial planning for individuals and small businesses. Prerequisite: FIN 302, 351; ACC 441.

462-3 Estate Planning
Provides a theoretical and practical approach to estate planning. Includes estate and gift taxes, wills, trusts, and estate planning techniques. Prerequisite: FIN 302, 351, ACC 441.

463-3 Seminar in Financial Services
Emphasizes the development and application of a coordinated and systematic approach to financial planning. Extensive use of cases. For financial services majors only. Prerequisite: FIN 401, 461, 462; MKT 336.

470-3 or 6 Practicum in Financial Planning
Students participate in financial planning laboratories and attend workshops on interviewing techniques, data gathering, plan preparation, and computerized planning models. For financial services majors only. Prerequisite: FIN 351, 401, 461, ACC 441, and permission of instructor.

471-1 to 3 Finance Studies
Independent study in selected areas of finance or financial services.

478-3 Honors: Independent Study in Finance
Research in finance for fulfillment of the Honors Program project requirement.

480-3 Special Topics in Finance
Seminar in a finance topic of current and timely interest. Topics and prerequisites vary.

481-3 or 6 Internship in Finance
One-quarter faculty-supervised internship in finance. Students work in a firm or public agency, participate in seminars, and submit reports.
International Financial Management
Study of the international aspects of financial management. Topics include foreign exchange management, international capital budgeting, international financing, tax planning, and working capital management. Prerequisite: FIN 302, EC 301.

French/FR
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

First-Year French
Study of the vocabulary and structure of the French language; practice in conversation, reading, and writing.

Second-Year French
Grammar review, reading and discussion of selected texts, with practice in speaking and writing the language. Prerequisite: FR 103 or equivalent.

Advanced Courses
French Conversation
Practice in oral use of French emphasizing the culture of the French-speaking world. Prerequisite: FR 203 or equivalent.

French Composition
321: writing techniques and grammar review. 322: explication de texte; oral and written stylistic analyses. Prerequisite: FR 203 or equivalent.

Survey of French Literature
331: Middle Ages, sixteenth and seventeenth centuries. 332: eighteenth, nineteenth, and twentieth centuries. Prerequisite: FR 312 and 322 or permission of instructor.

French Phonetics
Pronunciation, diction, and intonation. Corrective exercises and laboratory work.

Applied Elementary French Instruction
French majors assist elementary course instructors in conducting classes. For French majors only.

Studies in Selected Subjects
Problems, approaches, and topics in a field of French. Topics vary.

Advanced Studies: Language/Civilization
Conducted in French. Topics vary.

Independent Undergraduate Research
Topics vary.

Nineteenth-Century Novel
Chateaubriand, Constant, Stendhal, Balzac, Flaubert, Zola, and France.

Poetry from Baudelaire to Breton
Symbolists, Decadents, and Surrealists.

Twentieth-Century Literature
462: The Novel, 463: Drama.

Problems in French Literature
Selected topics in French literature that investigate various themes, myths, genres, literary movements, or characters. Titles vary.

Independent Reading for Advanced Students
Topics vary.

Global Awareness through Map Study
Introduction to maps and their uses as a means to gain global awareness.

Principles of Physical Geography
Study of the elements of the human natural environment at regional and global scales including examination of the interactions among climate, soils, vegetation, landscapes, and people.

Principles of Cultural Geography
Study of major cultural elements of the human environment including examination of their spatial interactions and factors influencing their location and distribution.

Principles of Economic Geography
Examination of the principal geographic factors influencing human activities related to production, exchange, and consumption of goods and services.

Urban Planning I: Introduction to Urban Planning
Examination of the development of city planning as a professional discipline. Consideration of the contributions to planning by the arts and sciences. Selected activities and functions of contemporary urban planning agencies are viewed from the perspective of current urban problems.

Urban Planning II: Principles of Planning
Includes the role of planning in urban structures, and duties and responsibilities of planning commissions; process of preparing comprehensive plans; population change, the economic base, and employment change; and determinants of future urban structure. Prerequisite: GEO 311 or permission of instructor.

Principles of Geomorphology
Distribution of world's landforms with emphasis on processes and systems functioning to shape the natural landscape. Attention to three-way interaction among landforms, other physical factors, and people.
325-4 World Regional Geography
Discussion of the nature of selected world regions and their spatial relationships. Emphasizes the unique characteristics of the cultures and landscapes of these regions applying basic geographic concepts.

330-4 Climatology I
Observation, measurement, and analysis of climatic elements and controls, climatic classification, and relation of climate to human economic and social activities.

331-4 Meteorology
Development and application of first principles governing the atmosphere at rest and in motion. Examination of the general circulation and applied meteorology. Prerequisite: MTH 131 or permission of instructor.

334-4 Climatology for Earth Science Teachers
Interaction of weather and climate with various earth systems. Includes observation, measurement, and analysis of meteorological elements and controls. For nonmajors only.

340-4 Urban Geography
General nontechnical introduction to urban geography focusing on major geographic concepts and principles relating to location, function, and structure of urban areas.

353-4 Location Theory
Study of theoretical aspects of the location of human activities. Introduction to theories and concepts relating to location, function, and structure of urban areas.

354-4 Geography of Manufacturing
Factors of industrial location using empirical examples. Includes introduction to basic theories and techniques underlying the decision process in manufacturing locations.

361-4 Remote Sensing
Basic survey of imaging remote sensor types and their operational characteristics including sensors for the ultraviolet, visual, infrared, and microwave portions of the electromagnetic spectrum.

362-4 Remote Sensing of the Environment
Application of remote sensing techniques to environmental and resource problems. Emphasis on optimizing sensor selection to enhance image information content.

365-5 Cartography
Principles of map projections, their construction, and their use in illustrating geographic relationships. Includes methods of design compilation and graphic representation of data.

370-4 Regional Geography
Physical and cultural analysis of major and minor world regions. Topics vary.

375-4 Conservation of Resources
Economic and geographic appraisal of resource conservation in the world, emphasizing an analytical approach to solving such contemporary problems as human population growth, environmental quality, recreation and open space, and resource management.

385-5 Geographic Methodology
Examination of the nature, tools, methods, and techniques of geographic analysis. Emphasis on design, compilation, interpretation, and presentation of research materials.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of geography. Topics vary.

413-4 Urban Planning III: The Land Use Plan
Process of preparing comprehensive urban plans. Methods for assessing land use conditions, housing patterns, and urban deterioration. Students participate in the development of a land use plan for a selected area. Prerequisite: GEO 312.

414-4 Urban Planning Seminar
Examination of urban plans and planning proposals. Includes future land use plans, community facilities and public utility plans, and traffic and circulation plans. Consider modern theories of planning and the planning and design of new communities.

432-4 Climatology II
Principles of physical and dynamical climatology. Evaluation of local and regional transports and conversions of energy in the earth-atmosphere system. Prerequisite: GEO 331.

441-4 Seminar in Urban Geography
Geographic perspective in the study of cities. Recent developments in theory, method, and techniques in urban geographic research with emphasis on the behavioral approach. Prerequisite: GEO 343 or permission of instructor.

445-4 Intermediate Cartography and Map Interpretation
Study and practice of compilation processes for the development of maps and models using primary data sources. Prerequisite: GEO 365 or permission of instructor.

446-4 Map and Photo Interpretation
Use of map and photographic data in close and long range photogrammetry. Emphasis on the full spectrum of photo interpretation as applied to the controlled mapping of terrestrial and marine surfaces. Prerequisite: GEO 445 or permission of instructor.

447-5 Geographic Information Systems
Principles, structures, and applications of geographic information systems and utilization of data from topographic, remotely sensed, and photogrammetric sources. Prerequisite: GEO 365 or permission of instructor.

455-4 Geography of Transportation
An analysis of spatial aspects and structural characteristics of transport networks, the movement of goods, and their relationship to regional economic structures.
463-4 Geographic Applications for Remotely Sensed Data
Application of geographic methodology to problems employing photographic and machine-processed multispectral scanner data in contemporary use in academic research, environmental analysis, and planning. Prerequisite: GEO 362 or permission of instructor.

479-5 Landscape Analysis for Urban Planning
A systematic approach to landscape analysis for urban site planning using basic data sources. Emphasis is on landscape capabilities for satisfying human needs and uses. Prerequisite: GEO 312 or permission of instructor.

481-1 to 4, 482-1 to 4 Special Problems in Geography
Research and problems designed for specific needs and talents of students. Topics vary.

484-3 to 4 Biogeography
(Also listed as BIO 484.) Introduction to factors affecting the geographical distribution of plants and animals. Students registering for 3 credit hours attend lectures only; registration for 4 credit hours requires an additional laboratory section. Prerequisite: GEO 201, 330, or permission of instructor.

486-3 Foundations of Geography
A study of the evolution of the discipline through analyses of the approaches, emphases, methodologies, paradigms, and traditions in geography. Prerequisite: Completion of departmental core courses or 40 credit hours of geography courses or senior standing.

492-1 to 6 Geography Internship
Provides geography majors 15 clock hours of practical experience under academic supervision each week during the quarter with a cooperating public agency or private firm. Topics vary. For geography majors only.

Geological Sciences/GL
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses
105-3 The Planet Earth
Introduction to the composition and structure of the earth through a study of the physical and chemical processes (weathering, sedimentation, and the plate tectonic cycle) that have produced the earth, its minerals, rocks, landforms, and economic mineral fuel deposits. Corequisite: GL 115.

106-3 The Evolving Earth
Exploration of time in geology through a study of the history of the earth and of life as revealed by the physical and biological evidence recorded in the rocks. Corequisite: GL 116.

107-4 The Earth and Human Affairs
Examination of the interactions of humans with the earth in terms of geological hazards (floods, landslides, earthquakes, and volcanoes) and of natural resources (soil, water, ores, industrial minerals, and fossil fuels). Laboratory exercises on slope stability, earthquakes, soil conservation, ground water, toxic waste, and the economic aspects of mineral extraction and fossil fuels. 3 hours lecture, 2 hours lab.

115-1 The Planet Earth Laboratory
Study of rocks and minerals; field trips; map interpretation; and practical work on ground water, glaciation, and structural geology. Laboratory component for GL 105.

116-1 The Evolving Earth Laboratory
Exercises in time measurement, correlation of stratified rocks, evolution and biological diversity in the fossil record, and paleontology. Laboratory component for GL 106.


Departmental Courses
105-3 The Planet Earth
Introduction to the composition and structure of the earth through a study of the physical and chemical processes (weathering, sedimentation, and the plate tectonic cycle) that have produced the earth, its minerals, rocks, landforms, and economic mineral fuel deposits. Corequisite: GL 115.

106-3 The Evolving Earth
Exploration of time in geology through a study of the history of the earth and of life as revealed by the physical and biological evidence recorded in the rocks. Corequisite: GL 116.

107-4 The Earth and Human Affairs
Examination of the interactions of humans with the earth in terms of geological hazards (floods, landslides, earthquakes, and volcanoes) and of natural resources (soil, water, ores, industrial minerals, and fossil fuels). Laboratory exercises on slope stability, earthquakes, soil conservation, ground water, toxic waste, and the economic aspects of mineral extraction and fossil fuels. 3 hours lecture, 2 hours lab.

111-4.5 Physical Geology Honors I
Comprehensive treatment of the dynamic systems and materials of the earth. External processes and resulting land forces are also studied. 3 hours lecture, 3 hours lab.

112-4.5 Physical Geology Honors II
Comprehensive treatment of external and internal processes of the earth and the resulting landforms. Introduction to earth resources and other earth-like planets. 3 hours lecture, 3 hours lab. Prerequisite: GL 111.
113-4.5 Historical Geology Honors
Summary of current thought about the earth’s history from its origin to the present. Topics include movement and evolution of the earth’s crust, world climatic changes, and evolution of plants and animals. 3 hours lecture, 3 hours lab.

115-1 The Planet Earth Laboratory
Study of rocks and minerals; field trips; map interpretation; and practical work on ground water, glaciation, and structural geology. Laboratory component for GL 105.

116-1 The Evolving Earth Laboratory
Exercises in time measurement, correlation of stratified rocks, evolution and biological diversity in the fossil record, and paleontology. Laboratory component for GL 106.

120-12 Honors Geology—Physical, Historical Field
Offers the equivalent of a three-quarter introductory geology sequence to honors students during one summer. Five weeks of double lectures and labs are followed by a five-week field trip to the northern Rocky Mountains.

199-1 to 4 Directed Studies
Research and problems related to specific needs and talents of students.

201-4 Water Resources
Hydrologic cycle; emphasizes past, present, and future problems in flood control, water pollution, and water resource development. 3 hours lecture, 2 hours lab or field trip.

234-4 Geology of the Smoky Mountains Area
Geological development of the Smoky Mountains area studied through lecture, examination of literature, and direct observation in the field. Emphasis on geologic processes that developed the present landscape and geologic history.

251-3 Physical Geology and Geomorphology I
Comprehensive treatment of the dynamic systems and materials of the earth. External processes and resulting land forces are also studied. Corequisite: GL 252.

252-1.5 Physical Geology and Geomorphology Laboratory I

253-3 Physical Geology and Geomorphology II
Comprehensive treatment of external and internal processes of the earth and the resulting landforms. Introduction to earth resources and other earth-like planets. Prerequisite: GL 251, 252.

254-1.5 Physical Geology and Geomorphology Laboratory II
Laboratory for topographic and geologic map and geologic cross sections interpretation to recognize geological structures and their relation to geomorphology and landforms. Prerequisite: GL 251, 252. Corequisite: GL 253.

Advanced Courses

301-6 Crystallography and Optics
Introduction to symmetry of crystals and crystal optics. Determination of optical constants of crystals by polarizing microscope. 3 hours lecture, 6 hours lab.

304-3 Earth Resources
Nature and description of earth-derived resources. Political, financial, and environmental issues concerning their exploitation. 3 hours lecture. One-day field trip. Prerequisite: GL 105, 106, 107, 115, 116, or equivalent.

309-4 Environmental Geology
Impact and interrelationship of geological processes on the quality of human life and work. 3 hours lecture, 2 hours lab or field trip.

310-3 Issues in Sciences
(Also listed as BIO 310, CHM 310, PHY 310, and MTH 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.

311-4.5 Introduction to Structural Geology
Concepts of stress, strain, and material behavior used to describe and explain how rocks deform. Depositional structures. 3 hours lecture, 3 hours lab.

312-4 Advanced Structural Geology
Development of theory of rock behavior. Finite strain and gravity tectonics. 3 hours lecture, 2 hours lab.

333-4.5 Stratigraphy
Principles, rules, and techniques of correlation. Relationships between surface and subsurface correlation. Geologic and geophysical correlation techniques. 3 hours lecture, 3 hours lab.

341-4.5 Paleontology I
Morphology, geologic record, and geographic distribution of major invertebrate groups characterized by significant fossil representation. 3 hours lecture, 3 hours lab. Prerequisite: GL 106.

342-4.5 Paleontology II
Morphology, geologic record, and geographic distribution of major vertebrate and plant groups characterized by significant fossil representation. 3 hours lecture, 3 hours lab.
260 Courses

Geological Sciences

365-3 Regional Geomorphology
Distribution, position, and surface form of geologic regions of the United States; study of the geologic structure that underlies them and the erosional processes that have modified their surface expressions.

399-1 to 6 Special Problems
Research problems for specific needs and talents of students. Topics vary.

410-6 Mineralogy
Lecture: chemistry and physics of minerals. Lab: identification of minerals by microscopic, macroscopic, and X-ray techniques. 3 hours lecture, 6 hours lab.

412-6 Petrology
Origin of igneous, metamorphic, and sedimentary rocks. Lab: use of thin sections for mineral identification, microscopic structures, and rock classifications. 3 hours lecture, 6 hours lab.

413-5 Geochemistry
Principles governing distribution of elements within the earth. Introduction to geochemical research methods. 3 hours lecture, 4 hours lab.

416-4.5 X-Ray Techniques
Generation, spectrum, and absorption of X-rays. Diffraction of X-rays on crystals. Identification of crystals using powder cell dimensions of crystals. Solid solutions. 3 hours lecture, 3 hours lab.

420-3 Tectonics
Existence of large-scale tectonic features as demonstrated by current geophysical measurements; their geologic interpretation. Prerequisite: GL 311.

421-3 Ground Water Law and Regulatory Principles
Case study approach to understanding current federal, state, and local ground water law and regulations.

422-5 Introduction to Geophysical Prospecting
(Also listed as PHY 422.) Introduction to principles of gravity, magnetic, seismic, electrical, and radioactive prospecting. 3 hours lecture, 4 hours lab. Prerequisite: MTH 229 or permission of instructor.

423-4 Seismic Exploration
Study of the theory, observation, and analysis of seismic phenomena as applied to geologic exploration. 3 hours lecture, 2 hours lab. Prerequisite: GL 422 or permission of instructor.

424-4 Gravity and Magnetic Exploration
(Also listed as PHY 424.) Study of the theory of earth's gravitational and magnetic fields and the application of these principles to resource exploration. 3 hours lecture, 2 hours lab.

426-1 Geophysics Seminar
Literature survey and presentations by students on selected topics in geophysics. Prerequisite: GL 400 or 422.

427-4 Regional Structural Synthesis
Synthesis of diverse structural, geophysical, and remote sensing data and their application to regional tectonic interpretation and natural resource evaluation. Prerequisite: GL 311 (511), 312 (693).

428-0.5 to 2 Geology Colloquium
Selected geological topics discussed by students, guest speakers, and faculty. May be taken for letter grade or pass/unsatisfactory.

429-4 Sedimentology
Clastic rocks, their mineralogy, texture, provenance, and classification. Nonclastic carbonates and other nonclastic rocks. Depositional environments; sedimentary structures. 3 hours lecture, 2 hours lab. Prerequisite: GL 333.

432-4.5 Carbonate Petrology
Character, composition, origin, and diagenesis of carbonate rocks are examined using ancient and modern examples. 3 hours lecture, 3 hours lab.

434-9 Field Geology
Geologic phenomena illustrated in the field. Introduction of mapping techniques and application of many geological disciplines to geologic analysis.

437-4 Seismic Data Processing
Digital filtering, deconvolution, and migration of seismic data. Prerequisite: GL 423.

438-3 Seismic Interpretation
Interpretation methods for seismic reflection data are studied with emphasis on structural and stratigraphic interpretation for petroleum traps. Prerequisite: GL 423 or permission of instructor.

439-1 to 6 Applied Geophysics for Hydrology and Engineering
Geophysical principles, field techniques, and interpretation methods are applied to geological problems in hydrology and engineering. Emphasizes electrical resistivity and seismic refraction methods.

440-3 Economic Geology
Genesis, classification, and description of economic metal-bearing mineral deposits.

444-4 Formation Analysis
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. 3 hours lecture, 2 hours lab.

445-4 Petroleum Geology
Hydrocarbon source rocks, maturation, and migration. Reservoir rocks and traps. Fluids in the reservoir: gas, oil, water, and relationships. Exploration for and production of hydrocarbons. Review of major petroleum basins and deposits.
450-4 Hydrogeology
Provides a fundamental understanding of basic hydrological principles including ground water flow and chemistry, surface water hydrology, unsaturated flow, and meteorology. Students are expected to understand basic physics and calculus.

451-3 Regional Hydrogeology
Study of hydrogeology in the United States including water balance, budget, and yield.

452-3 Advanced Hydrogeology
Second-level course in hydrogeology that provides the theoretical background necessary to solve real-life problems involving ground water flow, well hydraulics, aquifer characterization, and contaminant transport. Completion of a calculus course required. Prerequisite: GL 450 (650).

453-3 Hydrogeochemistry
Lectures focus on the types of chemical reactions that control the composition of ground water. Included are solubility, adsorption and ion exchange, redox reactions, and complexing. Computer programs for geochemical modeling are introduced. Prerequisite: GL 410, CHM 121, 122, 123.

458-3 Ground Water Management
Introduction to the basic principles of ground water management including case studies.

215-4 Scientific German
Intensive reading in all areas of expository and technical German. Prerequisite: GER 103 or equivalent.

Advanced Courses
311-4, 312-4 German Conversation
Emphasis on the culture of the German-speaking world. Prerequisite: GER 203 or equivalent.

321-4, 322-4 German Composition
Oral and written composition in German; translations from English into German. Further grammar study. Prerequisite: GER 203 or equivalent.

331-4, 332-4 Survey of German Literature
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. Prerequisite: GER 312 and 322 or permission of instructor.

GER 312, 322, and 332 or permission of instructor are prerequisites for the following advanced courses:

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of German. Topics vary.

403-4 Advanced Studies: Language/Civilization
Topics vary. Conducted in German.

425-4 German Literature of the Nineteenth Century
Readings and reports in nineteenth-century literature. Representative works of Eichendorff, Hoffmann, Keller, Meyer, Storm, Fontane, and others.

431-4, 432-4 German Literature of the Twentieth Century
Readings and reports in twentieth-century literature. 431: prose. Representative works of Hesse, Mann, Kafka, and others. 432: drama. Representative works of Schnitzler, Hofmannsthal, Kaiser, Toller, Brecht, and others.

450-1 to 4 Undergraduate Research in German
Topics vary.

481-4, 482-4 Independent Reading for Advanced Students
Topics vary.

German/GER
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-4, 102-4, 103-4 First-Year German
Study of the vocabulary and structure of the German language; practice in conversation, reading, and writing.

201-4, 202-4, 203-4 Second-Year German
Grammar review, reading, and discussion of selected texts with practice speaking and writing the language. Prerequisite: GER 103 or equivalent.

261 Courses

Greek

Greek/GR
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Students who have studied Greek elsewhere should consult the Department of Classics for appropriate course level. Placement and proficiency tests can be given.

101-4, 102-4, 103-4 Beginning Greek
Essentials of the Greek language.
Health, Physical Education, and Recreation/HPR

**100-1 to 2 Physical Education—Beginning**
Fundamental skills and knowledge of one particular activity. Competency-based approach. Includes courses for disabled students. Students should check competency levels posted in Physical Education Building before enrolling.

**101-2 Physical Education—Intermediate**
Intermediate level of skills and knowledge in one particular activity. Competency-based approach. Students should check competency levels posted in Physical Education Building before enrolling.

**102-3 Physical Education—Advanced**
Advanced level of skills and knowledge in one particular activity. Competency-based approach. Includes courses in life saving and water safety instruction. Students should check competency levels posted in Physical Education Building before enrolling.

**151-4 Total Fitness Lifestyle (TFL)**
Assessment, prescription, participation, and reassessment of fitness variables including cardiovascular fitness, strength, blood lipids, and body composition.

**170-3 Principles of Physical Fitness**
Instruction concerning principles of physical fitness including aerobic fitness, muscular fitness, and evaluation of current concepts regarding diet and exercise. Demonstrations of measuring aerobic and muscular fitness, body composition determination, and graded exercise testing. Must have attended TFL orientation to enroll.

**211-3 Motor Skills of Young Children**
Examination of motor skills used by young children to develop a foundation of fundamental movement patterns and skills. Several basic skills are defined and illustrated.

**212-3 Adapted Physical Education and Recreation**
Physical and psychological considerations and problems in adapting physical activities to individual needs of handicapped people; standard classifications; exercises and adaptations appropriate for each classification.

**213-3 Teaching Adapted Aquatics**
Red Cross certification course in adapted aquatics. Concepts are given regarding teaching techniques, disabilities, and basic rescues specific to the population involved. Prerequisite: HPR 212.

**214-3 Physical Education for the Orthopedically and Sensory Impaired**
Rules and certification requirements of the various athletic opportunities for exceptional populations. Includes discussions of adaptive devices and special facilities used for these programs. Prerequisite: HPR 212.
220-3 **Fundamental Movement**
Examination of basic content areas of physical education for grades K-6. Includes motor activities that aid the elementary-age child in developing fundamental movements and sports skills. Students must demonstrate cognitive and psychomotor abilities.

221-3 **Motor Development**
Influence of growth and development on movement acquisition. Performance implications for the teaching of physical education is stressed.

230-4 **Personal Health**
Discussions of personal health problems including basis for mental health, maintenance of health and selection of health services, physical fitness, nutrition, quackery, industrial and home safety, and health of the preschool child.

240-2 **Problems in Health Education**
Discussion of problems related to health education. Much of the course content is determined by students enrolled through individualized assignments.

241-3 **Introduction to Health, Physical Education, and Recreation**
Nature and scope of health, physical education, and recreation from past to present, with emphasis on the present and future.

242-2 **Problems in Health, Physical Education, and Recreation**
Current issues in health, physical education, and recreation. Students work on individual problems related to the health, physical education, and recreation program at Wright State.

250-4 **Basics of Anatomy and Physiology I**
A study of anatomy and physiology correlating both structure and function of the human body. Topics include organization, skeletal system, muscular system, nervous system, circulatory system, and endocrine system. 3 hours lecture, 2 hours lab.

251-4 **Basics of Anatomy and Physiology II**
A continuation of HPR 250. Topics include respiration, exercise, digestion, metabolism, urinary system, acid base balance, reproduction, and immune system. Prerequisite: HPR 250.

260-3 **First Aid**

261-4 **Athletic Training I**
Introductory course to the field of athletic training. 3 hours lecture, 2 hours lab. Prerequisite: HPR 260.

281-3 **Physical Education for the Elementary School**
Curriculum and materials for elementary school physical education; emphasis on objectives, evaluation, planning, resources, facilities, and curricular trends. Students must demonstrate cognitive and psychomotor abilities. For nonmajors only.

284-3 to 15 **Practicum in Health, Physical Education, and Recreation**
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 letter grade or pass/unsatisfactory. Practicum must be in area of physical education concentration.

303-3 **Therapeutic Exercise**
Methods of evaluating students and design of individual exercise programs for students with temporary or permanent physical limitations. Prerequisite: HPR 212.

310-4 **Developmental Activities for Children**
Movement activities that aid the developmentally delayed as well as the normal child in developing motor skills. Equipment and materials necessary to provide appropriate movement activities.

312-3 **Movement and Motor Skills for Multiply Disabled Students**
Sensory-motor skill development of individuals as it relates to perceptual enhancement, IEP and IHP development, mobility skills, and vocational fitness. Course is intended for students in early childhood education, special education, and related disciplines.

330-4 **Community Health**
In-depth treatment of public health problems including study of agencies, diseases, food inspection, safety, and ecology.

331-4 **Health and First Aid for the Classroom Teacher**
Discussions of health-related issues for elementary school-age children, and a comprehensive study of first aid techniques and procedures in emergency treatment for the elementary classroom teacher.

340-3 **Organization and Administration of Health, Physical Education, Recreation, and Athletic Programs**
Organizational techniques, administrative procedures, and principles of managing school health education, physical education, recreation, and athletic programs. Includes scheduling, facilities, personnel, programs of instruction, and public relations. Prerequisite: HPR 241.

350-4 **Kinesiology**
Analysis of muscular interrelationships in basic body movements; analysis of principles of mechanics as they relate to fundamental and complex motor skills in physical education activities. Prerequisite: BIO 208, 209 or ANT 201, 202 or equivalent.
Courses

**Health, Physical Education, and Recreation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>351-4</td>
<td>Exercise Physiology</td>
<td>Physiological adjustments and changes occurring in the human organism as a result of physical activity. Prerequisite: BIO 208, 209 or P&amp;B 301, 302 or equivalent.</td>
</tr>
<tr>
<td>354-3</td>
<td>Psychology of Coaching</td>
<td>Study of the role of psychology in the total athletic spectrum.</td>
</tr>
<tr>
<td>355-4</td>
<td>Applied Exercise Physiology</td>
<td>Practical applications in exercise physiology for the physical educator, coach, and athletic trainer. Methods of conditioning, implementation, and other special considerations included.</td>
</tr>
<tr>
<td>360-3</td>
<td>Therapeutic Modalities in Athletic Training</td>
<td>The study and practical application of therapeutic modalities for the treatment of athletic injuries. Modalities may include superficial heat and cold, hydrotherapy, massage, traction, intermittent compression units, ultrasound, electrostimulation, and microwave and shortwave diathermy. Prerequisite: HPR 261.</td>
</tr>
<tr>
<td>362-3</td>
<td>Nutrition for Fitness and Sport</td>
<td>Nutrient and food energy needs of the individual who is physically active and for the individual who works with the physically active, such as athletes.</td>
</tr>
<tr>
<td>380-2</td>
<td>Health Instruction</td>
<td>Theory and application of health instruction including materials, curriculum development, and discussions of a variety of teaching methods. Prerequisite: HPR 230, 330; ED 214, 216, 218, 220, 221, 223, 327 (ED 327 may be taken concurrently).</td>
</tr>
<tr>
<td>381-3</td>
<td>Methods of Teaching Individual Sports</td>
<td>Variety of teaching techniques to be used when teaching individual sports. Prerequisite: ED 214, 216, 218, 220, 221, 223, 327 (ED 327 may be taken concurrently).</td>
</tr>
<tr>
<td>382-3</td>
<td>Methods of Teaching Health and Physical Education</td>
<td>Theory and application of health and physical education instruction including materials, curriculum development, and discussion of a variety of teaching methods. Prerequisite: ED 214, 216, 218, 220, 221, 223, 327 (ED 327 may be taken concurrently). Corequisite: ED 323.</td>
</tr>
<tr>
<td>383-3</td>
<td>Methods of Teaching Outdoor Activities</td>
<td>Designed to provide knowledge and practical application of teaching and leading outdoor activities relating to the field of physical education and recreation. Prerequisite: ED 214, 216, 218, 220, 221, 223, 327 (ED 327 may be taken concurrently).</td>
</tr>
<tr>
<td>384-3 to 5</td>
<td>Practicum in Health, Physical Education, and Recreation</td>
<td>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 letter grade or pass/unsatisfactory. Practicum must be in area of physical education concentration.</td>
</tr>
<tr>
<td>410-4</td>
<td>Psychomotor Assessment of Exceptional Children</td>
<td>Emphasis on developing knowledge and skill in diagnosing motor, physical, and sensory deficiencies in exceptional children. Administrative procedures and interpretation of numerous assessment instruments are covered. Prerequisite: HPR 212.</td>
</tr>
<tr>
<td>419-5 to 15</td>
<td>School Nursing Practicum</td>
<td>Supervised experiences in the public school. Prerequisite: HPR 440.</td>
</tr>
<tr>
<td>430-1 to 3</td>
<td>Coaching Theory</td>
<td>Theory, skills, strategies, and organization principles of coaching a particular sport. Typical sports covered include baseball, basketball, football, soccer, swimming, track and field, tennis, and volleyball. Prerequisite: HPR 101 in same sport.</td>
</tr>
<tr>
<td>440-3</td>
<td>School Health Services</td>
<td>Study of health services provided by our public schools; techniques for increasing students' knowledge of healthful practices.</td>
</tr>
<tr>
<td>450-4</td>
<td>Motor Learning</td>
<td>Relationship of psychology to motor skill learning; application to teaching is stressed. Prerequisite: ED 214, 216, 218, 220.</td>
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<tr>
<td>460-3</td>
<td>Athletic Training II</td>
<td>Advanced problems found in the identification of injuries related to athletic participation. Prerequisite: HPR 261, 350.</td>
</tr>
<tr>
<td>481-3</td>
<td>Research Methods in Physical Education</td>
<td>Introduction to basic research procedures in health, physical education, and recreation including a review of the statistical procedures pertinent to physical education. The format for thesis writing is also discussed. Prerequisite: HPR 455.</td>
</tr>
<tr>
<td>484-3 to 15</td>
<td>Practicum in Health, Physical Education, and Recreation</td>
<td>Supervised field work for senior students seeking certification or a concentration in a specific area. Titles vary. Contact hours vary according to subject. May be taken for letter grade or pass/unsatisfactory. Practicum must be in area of physical education concentration.</td>
</tr>
<tr>
<td>488-1 to 6</td>
<td>Independent Study</td>
<td>Independent reading, writing, and/or reporting in areas related to health, physical education, or recreation. Topics vary.</td>
</tr>
</tbody>
</table>
489-1 to 6 Workshop in Health, Physical Education, and Recreation
Intensive study of content, curriculum, method, or materials designed to meet the needs of preservice and in-service professionals in health, physical education, and recreation. Titles vary.

History/HST
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses

101-3 The Western World: The Ancient and Medieval Eras
Examination of the character of the premodern world from prehistory through the fourteenth 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.

102-3 The Western World in Transition: The Fourteenth to Eighteenth Centuries
Examination of the roots of the modern Western world emphasizing the revolution in economic, political, religious, and demographic realities that occurred between the fourteenth and eighteenth centuries. Prerequisite: HST 101.

103-3 The Modern Western World: Nineteenth to Twentieth Centuries
Examination of the nature and consequences of modernization—its failures, accomplishments, and problems with special attention to the phenomena that shaped the Western world of the nineteenth and twentieth centuries. Prerequisite: HST 102.

Departmental Courses

Lower Division Courses

101-3 The Western World: The Ancient and Medieval Eras
Examination of the character of the premodern world from prehistory through the fourteenth 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.

102-3 The Western World in Transition: The Fourteenth to Eighteenth Centuries
Examination of the roots of the modern Western world emphasizing the revolution in economic, political, religious, and demographic realities that occurred between the fourteenth and eighteenth centuries. Prerequisite: HST 101.

103-3 The Modern Western World: The Nineteenth to Twentieth Centuries
Examination of the nature and consequences of modernization—its failures, accomplishments, and problems with special attention to the phenomena that shaped the Western world of the nineteenth and twentieth centuries. Prerequisite: HST 102.

Upper Division Courses

300-4 What Historians Do
Introduction to methods historians use to understand and interpret the past.

316-4 Introduction to Urban History: Sumeria to Suburbia
(Also listed as URS 316.) Urban history in its broadest sense from the ancient world to the present, providing historical perspective to the contemporary urban-metropolitan phenomenon and exploring how and why urban civilization came to be.

318-4 Modern Japan
Focuses on the phenomenal success of Japan's modernization since the imperial restoration in 1868, Japanese expansionism and imperialism, and Japan's power as an example for non-Western areas embarking on modernization.

321-4, 322-4 History of England
321: Romans through the Stuarts; from the beginning to 1714. 322: from Hanoverians to the present.

325-3 The Holocaust
An examination of the Holocaust in its cultural, social, and political context and an analysis of its consequences.

332-4 History of Canada
Challenges and survival. Problems of Canadian nationalism, 1867 to present.

361-4 War in the Western World
Evolution of warfare from 1789 to the present emphasizing the influence of war and the military on the development of Western history.
Courses

History

Human Factors Engineering

390-4, 391-4, 392-4 Medieval Western Europe
From the decline of the Western Roman Empire to ca. 1300. Primary emphasis on Italy, Germany, and France. 390: 285 to 814. 391: to 1100, 392: to 1300.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of history. Topics vary.

400-4 to 12 History Honors Project
May range from library research to field training. Prerequisite: HST 300.

405-4 Ancient History
Courses offered under this number examine selected problems in Roman history to the death of Constantine in A.D. 337. Topics vary.

415-4 Early Modern European History
Courses offered under this number examine selected problems in European history from the decline of the Roman Empire through the Renaissance and Reformation. Topics vary.

425-4 Modern European History
Courses offered under this number examine modern Europe from the Enlightenment to the present through a national (e.g., Germany), chronological (e.g., nineteenth century), or topical (e.g., Socialism) approach. Topics vary.

435-4 British History
Courses offered under this number examine particular periods of British history (e.g., modern Britain) or topics (e.g., British constitutional history). Topics vary.

445-4 Middle Eastern History
Courses offered under this number examine the Balkans and the Middle East from the Middle Ages to the present. Topics may include Byzantine history, the Crusades, and the Middle East today. Topics vary.

455-4 Latin American History
Courses offered under this number examine selected Latin American nations (e.g., Mexico), particular topics (e.g., the Age of Dictators), and regions of current historical interest (e.g., Central America). Topics vary.

465-4 Far Eastern History
Courses offered under this number examine various periods of Chinese history and the modern histories of other Asian nations (e.g., India) or regions (e.g., Southeast Asia). Topics vary.

470-4 Colonial American History
Courses offered under this number examine the colonial, revolutionary, and early national periods of American history, and topics such as Puritanism or the origins of early American political thought. Topics vary.

475-4 Nineteenth-Century United States History
Courses offered under this number examine distinct periods in the nineteenth century (e.g., Civil War and Reconstruction) and major topics such as slavery. Topics vary.

306-4 Engineering Psychology
(Also listed as PSY 306.) Introduction to the study of human factors in the design and operation of machine systems. Prerequisite: PSY 111, 112.

450-4 Human Factors Engineering Analysis Methods
Provides human factors engineering students access to a variety of engineering and behavioral analytic techniques critical to the study of work performance. Prerequisite: HFE 306 (506).

431-3 Human Factors Engineering of Visual Displays
Introduction to the design of visual display systems. Topics include display technologies, human visual capacities, design of display parameters, and image quality metrics. Prerequisite: HFE 306.
451-4 Human Factors Engineering in Computer Systems Design
Theoretical paradigms in human-computer interaction and their application to interface design are examined. Emphasis is on advanced interface technologies, such as Multimodal input/output, hypertext, and knowledge-based systems. Prerequisite: CS 142 or equivalent.

456-2 Human Factors Engineering Laboratory
A stand alone laboratory course structured to expose students to equipment and procedures used in human factors engineering research and design. Prerequisite: HFE 306.

471-4 Systems Models in Human Factors Engineering
Study of quantitative means of analyzing and predicting human performance, particularly for human/machine interactions. Topics include estimation theory, control theory, queuing theory, and fuzzy set theory. Prerequisite: PSY 400 or STT 363.

472-1 to 4 Human Factors Engineering Design I
Segment one of the HFE senior design sequence. Practicum results in a conceptual design for the senior design project. The tutorial stresses human centered design principles.

473-3 Human Factors Engineering Design II
Segment two of the HFE senior design sequence. Practicum results in a preliminary engineering design for the senior design project. The tutorial stresses principles of systems analysis and engineering.

474-2 Human Factors Engineering Design III
Segment three of the HFE senior design sequence. Practicum results in the final engineering design and completion of the design project. The tutorial stresses application of HFE to systems design and industrial processes.

476-4 Human Factors Engineering in Aerospace System Design
Application of human factors engineering concepts to aerospace systems design. Develops human factors engineering influence on aerospace system dynamics, structure, and control as well as impact on reliability and maintainability. Prerequisite: HFE 471.

499-1 to 5 Special Problems in Human Factors Engineering
Special topics in human factors engineering. Topics vary.

Italian/ITA

Japanese/JPN

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-4, 102-4, 103-4 First-Year Japanese
Study of the vocabulary and structure of the Japanese language; practice in conversation, reading, and writing. Must be taken in sequence.

111-4 Essentials of Japanese
Introduction to Japanese with emphasis on speaking the language.

201-4, 202-4 Second-Year Japanese
Continued study of the Japanese language with practice in speaking, reading, and writing. Must be taken in sequence.

Latin/LAT

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Students who have studied Latin elsewhere should consult the Department of Classics for the appropriate course level. Placement and proficiency tests can be given.

101-4, 102-4, 103-4 Beginning Latin
Essentials of the Latin language.

201-4, 202-4 Intermediate Latin
Review of essentials and reading for comprehension in selected authors. Prerequisite: LAT 103 or equivalent.

Reading Courses
The following courses offer a wide variety of authors and topics; they may be repeated for credit by number, although not by content. Students should consult the department for the scheduled subjects and authors. LAT 202 or equivalent is prerequisite for all 300- and 400-level language courses.

351-4 Readings in Roman Drama
Plautus, Terence, and Seneca. Study of at least one play in Latin. Topics include importance of Plautus and Terence for the reconstruction of Greek New Comedy, architecture of the Roman theatre, history of Roman tragedy, and the relationship of Seneca's tragedies to his Stoic philosophy.

353-4 Readings in Roman Epic
Virgil's Aeneid, Ovid's Metamorphoses, Lucan, Statius, Valerius Flaccus, and Silius. Topics include intent and structure of the Aeneid, history and development of Roman epic, structure and transitional devices in the Metamorphoses, and the nature of rhetorical epic.

355-4 Readings in Roman Poetry
Roman lyric and elegiac poetry: Virgil's Eclogues; Catullus, Horace, Propertius, Tibullus, and Ovid. Topics include meters and style of Latin lyric, amatory tradition, and the influence of Hellenistic poetry.
357-4 Readings in Roman Satire
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.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of Latin. Topics vary.

451-4 Readings in Roman Didactic Literature
Study of Roman philosophical and didactic literature: Lucretius, Virgil's Georgics, Cicero's philosophical essays, and Quintilian. Topics include Roman attitudes toward Epicureanism, farming as a symbol of contemporary Roman politics, Cicero's synthesis of Greek philosophy, Quintilian, and a gentleman's education.

453-4 Readings in Roman History and Biography
Sallust, Livy, Tacitus, and Suetonius. Topics include Roman historiographical tradition, family and political influences, evidence from nonliterary sources, and influence from Greek historiography.

455-4 Readings in Roman Politics and Government
Cicero's political essays and speeches; the letters of Cicero and Pliny. Topics include the nature of Roman political campaigns, selections from Roman constitutional law, information from inscriptions, and Augustus' Res Gestae.

481-1 to 4 Independent Reading

Law/LAW

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

350-3 The Legal Environment of Business
Legal environment in which business functions. Introduction to law and legal systems, civil law, and white-collar crime. Public law topics include government regulation. Private law topics include torts and contracts.

360-3 Legal Aspects of Business Organizations

370-3 Legal Aspects of Commercial Transactions
Legal environment in which commercial transactions are conducted. Sale of goods, commercial paper, and financing the sale in secured transactions. Personal property and consumer protection. International sales transactions. Prerequisite: LAW 350.

477-1 to 4 Special Studies in Business Law
Reading or research in selected area of business law.

480-1 to 4 Special Topics in Law
Topics vary.

Liberal Arts/LA

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

199-1 to 2 Great Decisions
Faculty-led reading and discussion group centering on major foreign policy issues facing the United States. Topics vary.

203-2, 205-4 Sophomore Cooperative Education
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. 203 may be repeated three times; 205 may be repeated twice. Prerequisite: for 203, part-time work experience; for 205, full-time work experience.

303-2, 305-4 Junior Cooperative Education
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. 303 may be repeated three times; 305 may be repeated twice. Prerequisite: for 303, part-time work experience; for 305, full-time work experience.

314-4 Research Methods in the Social Sciences
Develops skills in creating, manipulating, documenting, and analyzing data bases using SAS. Includes planning for and acquiring computer-compatible data and practical applications in social science disciplines. Prerequisite: CS 141 or MIS 100 or equivalent.

403-2, 405-4 Senior Cooperative Education
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. 403 may be repeated three times; 405 may be repeated twice. Prerequisite: for 403, part-time work experience; for 405, full-time work experience.

Linguistics/LI

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

371-4 Introduction to Historical and Comparative Linguistics
Principles of historical and comparative study of languages; introduction to Indo-European, Germanic, Romance, and Slavic philology.
399-1 to 4 Studies in Selected Subjects
Deals with problems, approaches, and topics in the field of linguistics. Topics vary.

Management/MGT
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

100-3 The World of Business and Administration
An introduction to the elements of the business environment and the major functions of business: management, marketing, manufacturing, human resources, finance, and accounting.

200-3 Elements of Management and Supervision
For undergraduate, nonbusiness students to acquire a basic understanding of the history, practices, and roles of managers in work organizations.

280-3 Special Topics in Management
Provides students in disciplines outside the College of Business with an understanding of selected topics in management. Topics and prerequisites vary.

Advanced Courses
All of the following courses require junior standing in addition to the listed prerequisites.

301-3 Functions of Management
Essential functions and practices of management in organizations. Topics discussed include planning, organizing, leading, and controlling. Prerequisite: ACC 203; EC 202, 203.

302-3 Introduction to Organizational Behavior
Develops an understanding of behavior within a modern organization. Includes motivation, leadership, perception, groups, and conflict management. Prerequisite: MGT 301.

321-3 Human Resource Management
Analysis of the human resources system; interrelationship of policy areas such as staffing, development, and utilization. Prerequisite: MGT 302. (Previously listed as MGT 421.)

410-3 Human Resources Development
Topic is presented as an on-going process designed to improve organizational effectiveness. Typical interventions are analyzed for appropriateness in a variety of situations. Prerequisite: MGT 321. (Previously listed as MGT 310.)

411-3 Concepts and Techniques of Supervision
Focuses on the concepts and techniques of effective supervision as they relate to productivity and achievement of organizational and personal objectives. Prerequisite: MGT 302.

412-3 Labor Relations
A comprehensive course that includes the following topics: the historical foundations of the American labor movement and contemporary industrial relations; the legal framework for industrial relations; and collective bargaining relationships—the players, structure, negotiations, contract administration, and conflict management. Prerequisite: MGT 321.

415-3 Labor-Management Relations in Government
Analytical study of the development of collective bargaining at all levels of government; topical areas include history, present environment, union structure, law, approaches to negotiation, tactics, and trends. Prerequisite: MGT 321 or permission of instructor.

422-3 Compensation Administration
A comprehensive analysis of the purpose, structure, and effectiveness of organizational compensation systems. Topics include: legal issues, job design, job analysis, job evaluation, direct pay systems, indirect pay systems, incentive pay systems, and compensation plan administration. Students develop a compensation plan for a simulated organization. Prerequisite: MGT 321.

423-3 Seminar in Human Resource Management
Research, analysis, and discussion of contemporary issues involving the management of personnel. Prerequisite: MGT 321.

477-1 to 3 Special Studies in Management
Reading or research in a selected field of management. Topics vary.

478-3 Honors: Independent Study in Management
Research in management for fulfillment of the Honors Program project requirement.

480-1 to 4 Special Topics in Management
Topics as listed: 480-A Small Business Consulting; 480-B Topics in International Management; 480-C Topics in Personnel Administration; 480-D Topics in Industrial Relations; 480-E Topics in Systems Management; 480-F Topics in Organizational Development.

491-3 Public Policy in the Business Environment
Relationship between business and government; the business environment and public policy, the corporate role in American society, and business social responsibility. Prerequisite: PHL 371.

492-4 Business Policy and Administration
Integrative course requiring application of all functional areas of business in the analysis and solution of business problems. Strategic management is the core synthesizing concept of study. Students are required to work in teams inside and outside the classroom for simulation gaming and case analyses. Prerequisite: MGT 491.
495-3 Strategies for Human Resource Management
Integrated human resource management strategies. Students will work in groups to analyze human resource structures, policies, and programs in field situations. Prerequisite: MGT 423.

Management Information Systems/MIS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

100-3 Introduction to Data Processing
Data processing fundamentals and terminology pertinent to programming business systems. Students are required to write and test programs.

210-3 Business Data Structures
Introduces data structures for MIS majors. Covers structures such as linked lists and binary trees needed to support business file and database processing. Continues skill development of program design and testing. Prerequisite: CS 142, MTH 228.

280-3 Special Topics in Management Information Systems
Provides students in disciplines outside the College of Business with an understanding of selected topics in management information systems. Topics and prerequisites vary.

Advanced Courses
All of the following courses require junior standing in addition to the listed prerequisites.

300-4 Introduction to Management Information Systems
Examination of management information systems from a user perspective. Emphasis on the system life cycle including computer system analysis and design and the software development life cycle. 3 hours lecture, 2 hours lab. Prerequisite: CS 205.

321-3 System Analysis Methodologies
Overview of the system analysis process. System analysis methodologies are presented through techniques that describe planning, process and data flow, data structure, and documentation techniques. Information gathering is explored. Prerequisite: CS 142, 205.

322-3 Systems Design and Implementation
Concentrates on strategies and techniques for design and implementation of an information system. Students learn to develop design and implementation specifications and test plans for information systems. Prerequisite: MIS 321.

323-3 Systems Development: The Information Center Approach
Stresses modular programming techniques and information center methods for building systems. Prototyping fourth-generation languages and data-base systems discussed and used. Prerequisite: MIS 322.

400-3 Business Operating Systems
A functional, systems-level review of computing equipment; the organization of components and devices into architectural configurations is discussed. Topics include the principles of system software and hardware, and software configurations and data pathing within architectural designs. Prerequisite: CS 142 or equivalent, MIS 210.

410-3 Business Database Processing
Provides a broad introduction to database technology. Topics include object orientation, normalization, DBMS components/functions, and distributed processing and data models. Exposure to both micro- and mainframe computer database management systems. Prerequisite: MIS 210.

420-3 Data Communications, Networks, and Distributed Processing
Familiarizes students with the background, concepts, proper application, and components of data communications, network design, and distributed information systems. Emphasis on the impact of communications technology on information systems. Prerequisite: CS 205.

430-3 Decision Support Systems
Concentrates on the adaptive design process of building decision support systems (DDS) through integration of data and model bases for individual and organizational decision making. Emphasis is on requirements determination and evaluation phases. Prerequisite: MIS 321, MS 203.

477-1 to 4 Special Studies in Management Information Systems
Research in selected fields of management information systems. Topics vary.

480-3 Special Topics in Management Information Systems
480-A AI/Expert Systems; 480-B Data Communications; 480-C Office Automation; 480-D Graphics; 480-E Distributed Processing; 480-F Management of IS; 480-G Database.

490-3 Information Systems Development Project
Provides students with experience in analyzing, designing, implementing, and evaluating information systems. Students work in teams to acquire practical experience with information systems development projects. Prerequisite: MIS 322, 410.
Management Science/MS

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-3 Introduction to Data Analysis
Statistical methods used in analysis of business problems. Theory and application of frequency distributions; measures of location; and variation and further descriptions. Introduction to probability; expectations; theoretical probability distributions; sampling and sampling distributions. Prerequisite: MTH 127.

202-3 Introduction to Statistical Inference
Topics covered include statistical estimation, hypothesis testing, ANOVA, and regression as applied to areas including quality control, work standards, and forecasting. Prerequisite: MS 201.

203-3 Analytical Problem Solving
Use of analytical techniques to aid in problem solving. Techniques may include linear, goal, dynamic programming models, and classical optimization. Prerequisite: MS 202, MTH 228.

280-3 Special Topics in Management Science
Selected topics in management science. Topics and prerequisites vary.

Advanced Courses
All of the following courses require junior standing in addition to the listed prerequisites.

306-3 Introduction to Operations Management
Survey of functions making up the production system. Includes product design, process design, production standards, work measurement, design of jobs and work methods, forecasting, scheduling, quality control, and inventory control. Prerequisite: CS 205, MGT 301, MS 203, MTH 228.

331-3 Quantitative Methods for Business Decisions I
Study of several statistical methodologies that transform past business experience variables into forecasts of future events. A practical research project that uses these methodologies is required. Prerequisite: MS 203.

332-3 Quantitative Methods for Business Decisions II
Topics include multiple regression and discriminant analysis (MDA) with associated theory, analytical procedures, computer programs, and business applications. Prerequisite: MS 331 or permission of instructor.

341-3 Probabilistic Models
Use of probability in modeling basic decision-making situations. Applications in the areas of queuing, simulation decision analysis, and Markov chains. Basic probability is reviewed. Prerequisite: MS 202, MTH 228.

430-3 Advanced Quantitative Methods
Examines stratified and cluster sampling procedures as used in marketing, economics, and management; single and multifactored ANOVA as applied in business, government, and industry. Factor analysis is explored, time permitting. Prerequisite: MS 203 or permission of instructor.

435-3 Quality Management
Concepts, objectives, and application of management of quality in production systems. Emphasis on techniques and methods used to control operating processes. Prerequisite: MS 306. (Previously listed as MGT 335.)

437-3 Production and Inventory Control
Advanced course in techniques for production and inventory management. Major topics include production planning, material requirements planning, capacity planning, and just-in-time production systems. Prerequisite: MS 306. (Previously listed as MGT 347.)

439-3 Purchasing Management
Emphasis is on the techniques used in the management of the purchasing process for evaluating and selecting suppliers, determining the quantities to order, and selecting the type of contract. Prerequisite: MGT 306. (Previously listed as MGT 439.)

450-3 Systems Simulation in Business and Economics
Introduction to simulation techniques as applied to business and economic systems. Topics include basic concepts, applications, and technical problems associated with use of systems simulation. Design and operation of computer models emphasized. Prerequisite: CS 142 or permission of instructor.

477-1 to 4 Special Studies in Management Science
Topics vary.

478-3 Honors: Independent Study in Management Science
Research in management science for fulfillment of the Honors Program project requirement.

480-3 Special Topics in Management Science

481-1 to 6 Internship in Management Science
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.

490-3 Senior Seminar in Management Science
Entails the investigation of an existing quantitative business problem in a firm or organization in the Dayton metropolitan area. The seminar participants, working in groups of three or four, are expected to initiate a research proposal, perform a field research investigation, and present findings orally and in writing to management.
**Marketing/MKT**

**Note:** See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

All of the following courses require junior standing in addition to the listed prerequisites.

280-1 to 3 **Special Topics in Marketing**
Provides students in various disciplines with an understanding of selected topics in marketing. For nonbusiness students interested in the selected topic. Topics and prerequisites vary.

301-3 **Principles of Marketing**
Explores the structure and functioning of the American marketing system; emphasis on its economic and social determinants, cost, productivity, and efficiency. Prerequisite: EC 201, 202, 203; or permission of department chair.

302-3 **Marketing Management**
Factors involved in the management of the marketing function relative to product development, promotion, pricing, physical distribution, and determination of marketing objectives within the framework of the environment. Prerequisite: MKT 301.

303-3 **Consumer Behavior**
Behavior content of marketing in consumer, industrial, and international fields. Examination of applicable theory, research findings, and concepts that are provided by psychology, sociology, anthropology, and marketing. Stressing conceptual models of buyer behavior based on sources of influence: individual, group, culture, and environment. Prerequisite: MKT 302.

336-3 **Fundamentals of Personal Selling**
Nature of personal selling in the marketing environment; emphasis on personal selling—marketing relationships, buyer motivation and behavior, selling strategy, and techniques of selling. Prerequisite: MKT 302.

401-3 **Sales Management**
Objectives, policies, and techniques of sales force management. Special role of the sales manager in marketing, selling, personnel, and financial responsibilities and opportunities. Prerequisite: MKT 302, 336.

411-3 **Credit Management**
Use of credit as a tool of marketing management. Includes the basic concept of credit, social influences of credit, production of the credit service, agencies and institutions involved in the performance of credit functions, and technology of credit management. Prerequisite: MKT 302, FIN 302.

416-3 **Product Management**
Intensive study of the product development and management process with emphasis on technique, procedure, concept, and theory applications. Prerequisite: MKT 301, 302.

418-3 **Price Management**
Evaluation and application of existing and developing pricing techniques, procedures, concepts, and theories to simulated and real price management problems. Prerequisite: MKT 302, FIN 302.

421-3 **International Marketing**
Analysis of managerial and operational problems of the multinational business organization. Emphasis on the role of environmental differences in influencing marketing strategy. Prerequisite: MKT 302.

431-3 **Physical Distribution**
Overview of logistics as a part of the firm’s marketing program. Analysis of physical facilities, transportation, and alternative channels of distribution. Qualifies as distribution option for marketing majors. Prerequisite: MKT 302.

435-3 **Starting New Ventures**
Concepts and techniques of how to start your own business. Development of a business plan to encompass opportunity assessment, market analysis, financing, staffing, production, tax accounting, and legal, insurance, and marketing aspects. For nonbusiness majors only.

441-3 **Advertising**
Advertising as a communication tool in marketing management. Emphasis on decision making relative to message strategy, media selection, creativity, budgets, and appraisal of advertising effectiveness. Prerequisite: MKT 302.

442-3 **Direct Marketing**
Introduction to the theories, concepts, and techniques of modern direct marketing. Covers direct response methods in consumer and industrial marketing and in nonprofit organization marketing. Prerequisite: MKT 302.

444-3 **Telemarketing**
Strategic applications of the telephone in all facets of marketing with specific reference to its role in industrial and consumer direct response marketing. Legal environment and ethics of marketing by phone explored in depth. Prerequisite: MKT 302.

451-3 **Marketing Research**
Examination of the marketing research process in both a basic and an applied sense; focus on concepts and techniques currently employed in behavioral research. Prerequisite: MKT 301, 302, MS 201, 202.

461-3 **Principles of Retailing**
Analysis of the performance of marketing functions at the retail level. Emphasis on institutional compositions, competitive factors, and management of the marketing mix as it relates to retail market segments. Prerequisite: MKT 302.
Industrial Marketing
Marketing of goods and services to industrial/commercial enterprises, governments, and other nonprofit institutions. Legal, ethical, and international issues are included. Prerequisite: MKT 302, 336.

Entrepreneurship
How to start your own business. Concepts and techniques of planning to initiate or purchase a company. Students develop a written business plan for a new venture. Prerequisite: MKT 302, LAW 350, FIN 302.

Independent Studies in Marketing
Readings or research in a selected field of marketing.

Honors: Independent Study in Marketing
Research in marketing for fulfillment of the Honors Program project requirement.

Special Topics in Marketing
Seminar in special topics such as consumerism and social issues, nonprofit organization marketing, advanced retailing management, channels of distribution, and forecasting. Topics vary.

Internship in Marketing
Faculty-supervised internship in retailing, marketing research, advertising, industrial selling, nonprofit sector marketing, or other areas of marketing. Requires monthly seminars and reports.

Marketing Policy
Final course to integrate the students' work in marketing and to promote marketing problem-solving capabilities. Involves group preparation of a marketing plan.

Mathematics/MTH
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course
Mathematics and the Modern World
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. Prerequisite: Three years of college preparatory mathematics including Algebra II and at least Level 4 on the math placement test; or equivalent.

Intermediate Algebra
For students with little or no recent experience with topics beyond elementary algebra. Topics include factoring, algebraic fractions, linear equations and word problems, equations involving fractions, laws of exponents, radicals and principal roots, quadratic equations, equations involving radicals or exponents, and line graphs. Topics covered are the same as in MTH 127, but involve more practice of necessary skills. Prerequisite: MTH 102 or equivalent or at least Level 3 on math placement test.

Accelerated Intermediate Algebra
Best suited for students who have recent experience with intermediate algebra, but require a review. Topics covered are the same as in MTH 126, but the pace is much faster. Prerequisite: Two units of high school algebra and at least Level 3 on math placement test.

College Algebra I
Best suited for students having little recent experience with topics beyond intermediate algebra or whose mastery of intermediate algebra is less than perfect. Topics covered are the same as in MTH 129 but are accompanied by more practice of necessary skills. In addition, skills learned in intermediate algebra are reinforced and clarified in the context of these more advanced topics. Prerequisite: MTH 126 or 127 or equivalent or at least Level 4 on math placement test.
129-3 Accelerated College Algebra I
Best suited for students who have previous experience with advanced algebra but require a review or who have excellent mastery of intermediate algebra. Topics include order, absolute value, linear and factored quadratic inequalities, equations and inequalities in two variables, simultaneous solutions, graphs of lines, circles, parabolas, and factored polynomials, functions, functional notation, exponential and logarithmic functions, and applications. Prerequisite: MTH 126 or 127 or equivalent or at least Level 4 on math placement test.

130-3 College Algebra II
Complex numbers, synthetic division, remainder and factor theorem, fundamental theorem of algebra, depressed equations, sequences and series, matrices, Gauss-Jordan, determinants, and Cramer’s Rule. Not for credit to students with credit for MTH 134. Prerequisite: MTH 128 or 129 or equivalent or at least Level 5 on math placement test.

131-3 Trigonometry
Trigonometric and inverse trigonometric functions. Not for credit to students with credit for MTH 134. Prerequisite: MTH 128 or 129 or equivalent or at least Level 6 on math placement test.

134-5 College Algebra II and Trigonometry
Combines the material of MTH 130 and 131 into a single course. Topics covered are the same as in those two courses. Not for credit to students with credit for MTH 130 and/or MTH 131. Prerequisite: MTH 128, 129, or at least Level 5 on math placement test.

200-3 Accelerated Calculus I
This course and MTH 300 cover the material of MTH 229, 230, and 231 at an accelerated pace. Graded pass/unsatisfactory.

228-5 Calculus for the Management, Life, and Social Sciences
Functions, rates of change, limits, derivatives of algebraic functions, applications including maxima and minima, exponential and logarithmic functions, and indefinite and definite integrals with applications. Not for credit to students with credit for MTH 229 and 230. Prerequisite: MTH 128 or 129 or equivalent or at least Level 5 on math placement test.

229-5 Calculus I
Conic sections, functions, limits, continuity, the derivative, derivatives of algebraic and trigonometric functions, and applications of the derivative. Prerequisite: MTH 130 and 131; or MTH 134; or Level 7 on math placement test. (Previously listed as MTH 132.)

230-5 Calculus II
Definite integral, antiderivatives, fundamental theorem of calculus. Derivatives of logarithmic, exponential, and inverse trigonometric functions. L'Hôpital's rule. Integration techniques. Applications of the definite integral. Prerequisite: MTH 229. (Previously listed as MTH 133.)

231-5 Calculus III
Applications of the definite integral, polar coordinates, and parametric equations. Infinite series, power series, and vector algebra in the plane and space. Prerequisite: MTH 230.

232-5 Calculus IV
Partial derivatives and definite integrals in the plane and space. Vector functions and their derivatives, motion in space, vector fields, line and surface integrals, Green's theorem, divergence theorem, and Stoke's theorem. Prerequisite: MTH 231.

233-5 Differential Equations
Elementary first order equations, linear equations, linear systems, series solutions, Laplace transform, and applications. Uniqueness and existence theorems for solutions. Prerequisite: MTH 231.

243-4 Fundamental Mathematical Concepts I
Overview of mathematical topics covered in grades K–8 from a perspective appropriate to a prospective teacher. Covers sets, functions, prenumeration and numeration concepts, properties of whole numbers, integers, and rational numbers. For elementary education majors only. 3 hours lecture, 1 hour lab. Prerequisite: MTH 105.

244-4 Fundamental Mathematical Concepts II
Overview of mathematical topics covered in grades K–8 from a perspective appropriate to a prospective teacher. Covers irrational numbers, proportions, introductory geometry, constructions, congruence and similarity, and concepts of measurement. For elementary education majors only. 3 hours lecture, 1 hour lab. Prerequisite: MTH 243.

253-3 Elementary Matrix Algebra
Elementary course in matrix theory covering matrices, linear equations, determinants, linear transformations, eigenvalues, and eigenvectors. Prerequisite: MTH 230 or equivalent.

257-3 Discrete Mathematics for Computing
Discrete mathematics useful in computing. Emphasis on mathematical induction, recurrence relations, asymptotic behavior of functions, and algorithm analysis. Prerequisite: MTH 230, CS 142 or 241.

280-3 Introduction to Mathematical Proof
Basic notions of logic and techniques used in mathematical proof. Students gain experience in constructing proofs as they study basic notions from sets, relations, functions, algebraic structures, and the properties of real numbers. Prerequisite: MTH 231.

300-3 Accelerated Calculus II
Continuation of MTH 200. Graded pass/unsatisfactory. Prerequisite: MTH 200.
303-3 Differential Equations II
Examples of systems of differential equations, complex and repeated eigenvalues, solutions of systems, matrix exponential, qualitative behavior of first order equations, planar systems and stability, almost linear systems, and energy method. Prerequisite: MTH 233, 253.

306-3 Mathematical Modeling
Structure and properties of mathematical models. Size effects, dimensional analysis, graphical methods, comparative statics, stability, optimization techniques, probabilistic models, and Monte Carlo simulation. Prerequisite: MTH 233, 253 or 355, or permission of instructor.

310-3 Issues in Science
(Also listed as BIO 310, CHM 310, GL 310, and PHY 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.

316-4, 317-4 Numerical Methods for Digital Computers
Introduction to numerical methods used in the sciences. Methods of interpolation, data smoothing, functional approximation, integration, solutions of systems of equations, and solutions of ordinary differential equations. 3 hours lecture, 2 hours lab. Prerequisite: for 316, MTH 231, 253 or 355, CS 142 or EGR 153, or permission of instructor; for 317, MTH 233, 316.

332-3 Complex Variables
Topics discussed include power series expansion, the formula of Cauchy, residues, conformal mappings, and elementary functions in the complex domain. Prerequisite: MTH 232.

333-3 Partial Differential Equations and Boundary Value Problems

345-4 Geometry for Elementary School Teachers
Axioms, finite geometries, nonmetric and metric lengths, angles, area, volume, polygonal figures, and elementary curves. Prerequisite: MTH 244.

355-5 Matrix Algebra
Matrices, systems of equations, vector spaces, inner products, linear transformations, determinants, eigenvalues, eigenvectors, quadratic forms, and symmetric matrices. Prerequisite: MTH 231.

399-1 to 5 Selected Topics
Selected topics in mathematics. May be taken for letter grade or pass/unsatisfactory.

407-3 Optimization Techniques

410-4 Theoretical Foundations of Computing
(Also listed as CS 410.) Turing machines, recursive functions; equivalence of computing paradigms; Church-Turing thesis; undecidability; intractability. Prerequisite: CS 466.

414-4 Matrix Computations
(Also listed as CEG 416.) Survey of numerical methods in linear algebra, emphasizing practice with high-level computer tools. Topics include Gaussian elimination, LU decomposition, numerical eigenvalue problems, QR factorization, least squares, singular value decompositions, and iterative methods. Prerequisite: MTH 253 or 355; and CS 142 or 241.

419-3 Cryptography and Data Security
(Also listed as CS 419.) Introduction to the mathematical principles of data security. Various developments in cryptography will be discussed, including public-key encryption, digital signatures, the data encryption standard (DES), and key safeguarding schemes. Prerequisite: MTH 253 or 355.

431-3 Real Variables I
Functions, sequences, limits, continuity, differentiability, integration, and mean-value theorems. Prerequisite: MTH 280.

432-3 Real Variables II
Infinite series, uniform convergence. Taylor series, improper integrals, special functions, and Fourier series. Prerequisite: MTH 431.

433-3 Real Variables III
Theory of functions of several variables, vector-valued functions. Prerequisite: MTH 432.

440-3 History of Mathematics
Development of calculus from antiquity through Newton, Leibnitz, development of classical analysis; the rise of abstraction; set theory, algebra, and topology; modern analysis. Prerequisite: MTH 231, 451, 471.

450-3 Discrete Algebraic Structures
Introduction to several abstract algebraic structures and their models that are used in computer science. Examples include semigroups and finite-state machines, and groups and codes. Prerequisite: MTH 253 or 355 or equivalent.

451-3, 452-3 Introduction to Modern Algebra I, II
Introduction to abstract algebraic structures including groups, rings, integral domains, and fields. Prerequisite: for 451, MTH 280 or 450; for 452, MTH 451.

457-3 Combinatorics
Topics are permutations, combinatorics, generating functions, recurrence relations, and Polya's theory of counting. Prerequisite: MTH 231.
276

Courses

Mathematics

Mechanical and Materials Engineering

458-3 Applied Graph Theory
(Also listed as CS 458.) Introduction to methods, results, and algorithms of graph theory. Emphasis on graphs as mathematical models applicable to organizational and industrial situations. Prerequisite: MTH 231, CS 142.

459-3 Combinatorial Tools for Computer Science
(Also listed as CS 459.) Introduction to some of the mathematical tools needed for an understanding of computer programming. The topics covered are summations, elementary number theory, combinatorial identities, generating functions, and asymptotics. Credit for MTH 457 recommended. Prerequisite: MTH 280.

461-3 Geometry
Topics in foundations of Euclidean geometry, introduction to non-Euclidean and other geometries. Prerequisite: MTH 280.

462-3 Projective Geometry
Projective and affine planes and spaces; change of coordinates; projective transformations; and conics. Prerequisite: MTH 231.

474-3 Calculus on Manifolds
Rapid treatment of those topics in analysis and topology necessary to develop the notions of manifold, Gaussian and Riemannian sectional curvature. Prerequisite: MTH 232 or equivalent.

475-4 Differential Geometry
Calculus on Euclidean space frame fields, calculus on a surface, shape operators, and geometry of surfaces in Euclidean 3 space. Prerequisite: MTH 232.

476-4 Computer Graphics I
(Also listed as CEG 476.) The principles of the design, use, and understanding of computer graphics systems. Covers basic drawing techniques, line and polygon clipping, two- and three-dimensional transformations, segmentation, projections, and three-dimensional viewing. Prerequisite: MTH 253, CS 400, or permission of instructor.

477-4 Computer Graphics II
(Also listed as CEG 477.) Continuation of MTH 476. Covers selected topics in detail including hidden line and surface removal, shading models, curved surface generation, and color models. Students are expected to understand and implement sophisticated algorithms in these areas. Projects are individualized and creative. Selected papers are used for in-depth material. 3 hours lecture, 2 hours lab. Prerequisite: MTH 476.

480-1 Methods of Applied Mathematics: Geometric Methods
Basic mathematical tools for the description of physical systems in three-dimensional space: vector and tensor analysis, matrices, and curvilinear coordinate systems. Prerequisite: MTH 232, 253 or 355.

481-3 Methods of Applied Mathematics: Differential Equations
Solution methods for ordinary differential equations commonly arising in physics and engineering. Systems of equations, linear spaces, eigenvalue problems, Sturm-Liouville theory, and orthogonal functions. Additional topics selected from Bessel, Legendre functions, stability theory, Lyapunov's methods, autonomous systems and the Poincare phase plane, and existence and uniqueness theorems. Prerequisite: MTH 233; MTH 355 or 480.

482-3 Methods of Applied Mathematics: Integral Methods
Use of integral transforms in the solution of differential and integral equations. Fourier series, Fourier and Laplace transforms and inverses, integral equations, and Green's functions. Prerequisite: MTH 332 or 434; MTH 355 or 480.

488-1 to 5 Independent Reading
Topics vary.

492-1 to 5 Undergraduate Seminar

499-1 to 5 Selected Topics
Selected topics in mathematics.

Mechanical and Materials Engineering/ME

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-2 Computer-Aided Drafting
Basic techniques of computer-aided engineering drafting. Graphic primitives, drawing, editing, dimensioning, multiple views, hatching, drawing intelligence, and three-dimensional modeling. 1 hour lecture, 2 hours lab. Prerequisite: Completion of fundamental course in engineering drawing.

202-4 Engineering Graphics
Basic concepts of engineering drawing with applications to manual and computer-aided drafting: Multiview projections; sectional, auxiliary, and pictorial views; dimensioning; and intersections and developments.

212-4 Statics
Forces, resultants, components, equilibrium of particles, equilibrium of rigid bodies, centroids and centers of gravity, analysis of structures, friction, and moments of inertia. Prerequisite: MTH 231.
213-4 Dynamics
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. Prerequisite: ME 212, PHY 250, EGR 153 or CS 141.

313-4 Strength of Materials
Axial and shear stresses and strains; biaxial loading; torsion of circular shafts; shear and bending moment diagrams; deflection of beams; and column theory. 3 hours lecture, 2 hours lab. Prerequisite: ME 212, PHY 250, EGR 153.

315-4 Thermodynamics I
Classical thermodynamics with applications of the first and second laws to engineering systems. Prerequisite: PHY 251, MTH 232.

316-4 Thermodynamics II
Concepts of availability and irreversibility; power and refrigeration cycles; thermodynamic relations; compressible flow; and mixtures and combustion. 3 hours lecture, 2 hours lab. Prerequisite: ME 315.

317-4 Fluid Dynamics
Study of fluid properties; fluid statics, one-dimensional compressible and incompressible flows; and flow of real fluids, flow measurement. 3 hours lecture, 2 hours lab. Prerequisite: ME 213, 315.

318-4 Heat Transfer
Principles that govern heat transfer in solids, fluids, vacuum, and at interfaces of solids and fluids. Laboratory experiments to illustrate these phenomena. 3 hours lecture, 2 hours lab. Prerequisite: ME 317.

370-4 Materials Engineering Science
Effect of atomic, molecular, and crystalline structure on the properties of materials with emphasis on electronic materials and ceramics; characterization of materials; and device fabrication. Prerequisite: CHM 122, PHY 252.

371-3 Structure and Properties of Engineering Materials
Effect of microstructure, phase equilibrium, and processing on properties of structural materials including metallic alloys, polymers, and composites. Prerequisite: ME 313, 370.

375-3 Thermodynamics of Materials
Application of classical thermodynamics to engineering materials. Heats of formation and reaction; behavior of solutions; free energy concepts; thermodynamic fundamentals of phase equilibria. Prerequisite: ME 315. Corequisite: ME 371.

376-3 Physical Metallurgy
Fundamentals of structure property relations in metals and alloys related to transformations and kinetics. Application to recovery and recrystallization, solidification, precipitation strengthening, and displacive transformations. Prerequisite: ME 375.

385-2 Metallography Laboratory
Preparation of metallographic specimens; use of the metallurgical microscope including the preparation of photomicrographs. Corequisite: ME 370.

386-2 Materials Testing Laboratory
Fundamentals of mechanical testing instrumentation and techniques including the tensile test, hardness tests, effect of heat treatment on strength, and correlation of microstructure, composition, and properties. Prerequisite: ME 385. Corequisite: ME 371.

408-3 Design Optimization
Concepts of minima and maxima; linear, dynamic, integer, and nonlinear programming; variational methods. Engineering applications are emphasized. Prerequisite: ME 213, MTH 253.

409-4 Aerospace Structures
Stress, deformation, and stability analysis of aerospace structures. Thin-walled members bending, torsion, and shear stresses calculation in multicell structures. Buckling of thin plates. Prerequisite: ME 313.

412-4 Finite Element Analysis
Finite element formulations for line, surface, bending, torsion, and three dimensional elements. Numerical methods and application of FEM programs in structural design and solid mechanics. Prerequisite: ME 313, MTH 233.

414-4 Mechanical Design I
Fundamental concepts in design for static strength, fatigue, and impact loading; application to selected mechanical components and systems. Prerequisite: ME 313.

415-4 Mechanical Design II
Design of mechanical elements such as springs, bearings, shafts, gears, clutches, brakes, and flywheels. Students conduct an individual design project. Prerequisite: ME 414.

417-3 Mechanics of Viscous Fluids
Fundamental equations of viscous flow for laminar and turbulent flows. Boundary layer analysis. Analytical and numerical solutions of the equation of motion. Prerequisite: ME 317.

418-3 Heat Conduction in Solids
Analytical and numerical techniques for heat conduction problems in one, two, and three dimensions for steady and transient cases. Phase-change problems. Prerequisite: ME 318.

423-4 Energy Conversion
Important new developments in energy conversion. Thermoelectric, photoelectric, thermionic, and electromechanical systems are studied. Prerequisite: ME 315.

430-4 Aeronautics
Aviation history. Standard atmosphere, basic aerodynamics, theory of lift, airplane performance, principles of stability and control, and astronautics and propulsion concepts. Prerequisite: ME 213, 315.
431-4 AEROSPACE PROPULSION
Engine cycle analysis; combustion fundamentals; reciprocating engines, propellers; applications to turbojet, turbofan, turboprop, ramjet, SCRAM jet, and rocket engines. Prerequisite: ME 317.

432-4 FLIGHT CONTROL SYSTEMS

456-4 INTRODUCTION TO ROBOTICS
(Also listed as CEG 456, EE 456.) Introduction to the mathematics, programming, and control of robots. Topics include coordinate systems and transformations, manipulator kinematics and inverse kinematics, trajectory planning, Jacobians and control. Prerequisite: Senior standing and MTH 253; proficiency in Pascal, C, or FORTRAN programming.

460-4 MECHANICAL VIBRATIONS
Modeling and analysis of single and multidegree of freedom systems under free and forced vibration and impact, Lagrangian and matrix formulations, energy methods, and introduction to random vibrations. Prerequisite: ME 213, EE 321. (Previously listed as ME 360.)

470-3 FAILURE ANALYSIS
Engineering aspects of failure analysis, failure mechanisms and related environmental factors, and analysis of actual service failure. Prerequisite: ME 313, 371.

475-3 HIGH TEMPERATURE MATERIALS
The design and use of high temperature superalloys, strengthening mechanisms, creep and fatigue, corrosion and oxidation, protective coatings, and alternative materials. Prerequisite: ME 376. Corequisite: ME 477.

477-4 MECHANICAL BEHAVIOR OF MATERIALS
Crystal plasticity and single crystal behavior. Introduction to dislocation theory. Strengthening mechanisms and polycrystalline behavior. Introduction to viscoelasticity. Fracture, fatigue, and creep of materials. Prerequisite: ME 313, 371.

478-3 X-RAY SPECTRAL ANALYSIS
(Also listed as GL 474.) Electron microprobe and X-ray fluorescence for analysis of alloys and other materials explained and demonstrated on examples. 2 hours lecture, 1 hour lab. Prerequisite: ME 482.

479-4 MATERIALS CORROSION
(Also listed as CHM 479.) Survey of principles of corrosion processes with application to metallic and nonmetallic materials. Principles of electrochemistry are included. Prerequisite: ME 315, 371, or corequisite CHM 453.

482-4 X-RAY METHODS IN MATERIALS SCIENCE
Introduction to the theory and practice of diffraction methods in the study of alloys, refractory materials, and polymers. 2 hours lecture, 4 hours lab. Prerequisite: ME 376.

483-3 INTRODUCTION TO CERAMICS
Ceramic and refractory raw materials and products; atomic structure and bonding; structure of crystalline phases and glasses; structural imperfections; diffusion in oxides; phase equilibria; and processing of ceramics. Prerequisite: ME 375.

484-4 PHYSICAL CERAMICS
Processing, microstructure, and properties of ceramics; defect equilibria in oxides; thermal, optical, electrical, and mechanical properties of ceramic materials; ceramics for special applications. 3 hours lecture, 2 hours lab. Prerequisite: ME 483.

485-4 SOLIDIFICATION PROCESSING
Fundamentals of melt solidification, application to metals casting technology, and an introduction to powder metallurgy. 3 hours lecture, 2 hours lab. Prerequisite: ME 375.

486-4 DEFORMATION PROCESSING
Fundamentals of principal deformation processing systems including forging, extrusion, rolling, and sheet forming; material response and formability; and mechanics and analysis of selected processes. 3 hours lecture, 2 hours lab. Prerequisite: ME 313, 371.

487-4 MACHINING
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 hours lecture, 2 hours lab. Prerequisite: ME 371.

488-4 POWDER PROCESSING

489-4 ENGINEERING PLASTICS: MATERIALS, PROCESSES, AND DESIGN
(Also listed as CHM 465.) Properties and manufacturing processes of engineering plastics and effect of these factors on plastics design. Illustrative laboratory projects included. 2 hours lecture, 4 hours lab. Prerequisite: CHM 465.

490-0, 491-0 ENGINEERING DESIGN I, II
Independent investigation of contemporary engineering problems under the guidance of an instructor. Topics selected to meet the needs and interests of students. Research of professional literature and submission of an engineering report required. 2 hours lecture, 2 hours lab, 1 hour recitation.

492-4 MATERIALS ENGINEERING DESIGN
Independent investigation of a contemporary problem in materials science and engineering under faculty guidance. Project design and reporting are emphasized along with analysis, synthesis, and testing.

499-1 TO 5 SPECIAL PROBLEMS IN MECHANICAL AND MATERIALS ENGINEERING
Special problems in advanced engineering topics. Topics vary.
Medical Technology/MT

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Enrollment in the following courses is limited to medical technology interns.

434-3 Introduction to Clinical Laboratory Science
Introduction to procedures and techniques related to clinical laboratory function.

435-2 Advanced Clinical Laboratory Science
Study of advanced methodology and instrumentation that may include computer applications, data management, research data collection, and statistical analysis.

437-5 Methods of Diagnostic Microbiology
Laboratory experiments in diagnostic microbiology. Corequisite: MT 436.

438-5 Clinical Chemistry
Application of principles of biochemistry to the analysis of human tissues and fluids.

439-5 Clinical Laboratory: Biochemistry
Laboratory course using current clinical chemistry techniques for the analysis of human tissues and fluids.

440-4 Body Fluid Analysis
Study of body fluids covering the pathophysiology of their formation and nature, as well as the techniques of examination for diagnostic information.

441-5 Hematology
Study of hemopoiesis, blood cell cytology, and clotting mechanisms of human blood.

444-3 Immunohematology Laboratory
Study of immunohematology as applied to human blood isoantigens and isoantibodies. Corequisite: MT 442.

444-5 Immunohematology
Immunology and genetics of human blood groups and types.

445-3 Immunohematology Laboratory
Study of immunology as applied to human blood isoantigens and isoantibodies. Corequisite: MT 444.

446-2 Immunology
Study of antigens and antibodies with emphasis on in vivo and in vitro systems.

447-3 Laboratory Immunology: Serology
Study of detection and measurement of antigens or antibodies using in vitro systems.

448-2 Clinical Pathology Correlation
Correlation of clinical laboratory findings with different human physiological states.

449-2 Clinical Pathology Seminar
Presentation and discussion of topics in clinical laboratory medicine.

450-1.5 Pediatric Clinical Laboratory
Study of basic analytical techniques applicable to the examination of pediatric body fluids and tissues.

Microbiology and Immunology/M&I

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

220-5 Microbiology of the Human Environment
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. 4 hours lecture, 2 hours lab. Prerequisite: CHM 101 or 102.

426-3 Immunology and Basic Virology
Study of the 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. Prerequisite: BIO 202, CHM 216, or departmental approval.

427-3 Pathogenic Microbiology
Study of microorganisms pathogenic for humans and animals using the organ system approach with emphasis on mechanisms of pathogenesis and host resistance. Prerequisite: M&I 426, BIO 202 or 402, CHM 216, or departmental approval.

428-3 Principles of Laboratory Medical Microbiology and Immunology

431-3 Basic Virology
Introduction to the field of virology; plant, animal, and bacterial viruses. Emphasis on the intrinsic properties of viruses and their interaction with cells, multiplication, genetics, and tumor induction. Prerequisite: BCH 421, BIO 402, or permission of instructor.

445-5 Immunobiology
Study of biology of the immune system in terms of current concepts of antibody formation and function. Acquired, delayed, and immediate hypersensitivities are studied with respect to immunological deficiencies, malignancy, tolerance, graft rejection, infection, and acquired resistance. 4 hours lecture, 1 hour recitation. Prerequisite: M&I 426, BIO 402, or permission of instructor.

462-3 Immunology
Study of the immune system with emphasis on basic molecular and cellular mechanisms and applications to human disease. Prerequisite: BIO 112, 114, 115, or permission of instructor.

488-1 to 4 Independent Reading

499-1 to 4 Special Problems in Microbiology
Military Science/MIL

**Courses**

### Military Science

111-1 **Leadership I**
Introduction to leadership emphasizing fundamentals and principles of leadership, characteristics of a group, and traits of a leader.

112-1 **Leadership II**
Analysis of leadership theories and management tasks including analysis of organizational structures, planning and organizing, and controlling rewards and punishments. Extensive use of case studies in leadership and management.

113-1 **Introduction to Military Science**
Introduction to customs, courtesies, doctrine, and organization of the U.S. Army, and policies affecting deployment of land forces.

211-2 **Squad Tactics**
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. 2 hours lecture, 1 hour lab.

212-2 **Map Reading**
Hands-on approach to the fundamentals of military map reading. Emphasis on identification of terrain features, using grid systems, plotting locations, measuring distances, intersection, resection, and graphic representation.

213-2 **First Aid**
Instruction and practical experience in the treatment of casualties including CPR. Analysis of the leader's role in establishing preventive medicine and physical readiness programs. 2 hours lecture and physical education, 1 hour lab.

311-2 **Advanced Tactics I**
Analysis of the small unit leader's role in the execution of tactical missions. Requires weekend training exercises and participation in a physical fitness program. 2 hours conference, 1 hour lab. Prerequisite: MIL 111, 112, 113, 211, 212, 213 or equivalent.

312-2 **Advanced Tactics II**
Study of military weapons and equipment and analysis of geography as it pertains to military operations. Requires participation in weekend exercises and physical training program. 2 hours conference, 1 hour lab. Prerequisite: MIL 311.

313-2 **Military Instruction**
Development of ability to express oneself clearly and accurately with emphasis on analysis of military problems, evaluation of situations, and preparation and delivery of logical solutions. Requires participation in weekend training exercises and physical training program. 2 hours conference, 1 hour lab. Prerequisite: MIL 312 or departmental approval.

### Modern Language Humanities

211-4, 212-4, 213-4, 214-4, 215-4, 216-4 **Modern Languages—Humanities**
Study of selected cultures according to language distinctions with emphasis on their uniqueness within the family of nations.


311-4, 312-4, 313-4, 314-4, 315-4, 316-4 **Literature in Translation**

369-3 **Children’s Literature for Teachers of Foreign Languages**
(Also listed as ED 369.) Reading and discussion of children’s books in modern languages (French, Spanish, German, and Russian) and reading informational books about the countries where the languages are spoken. Prerequisite: SPN 202 or FR 202 or RUS 202 or GER 202.

399-1 to 4 **Studies in Selected Subjects**
Problems, approaches, and topics in the field of modern languages. Topics vary.
334-3 History and Theory of the Documentary Film
Comprehensive survey of the history of documentary film and an introduction to the theories and approaches used by documentary filmmakers throughout this century. Prerequisite: TH 131.

381-5, 382-5, 383-5 16mm Film Production
Production of 16mm film projects under faculty supervision including budgeting, financing, and production. Emphasis on the documentary, business, and industrial film within the freelance 16mm market. Prerequisite: for 381, TH 283; for 382, TH 381; for 383, TH 382.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of motion pictures. Topics vary.

435-3 Studies in Film Criticism
Intensive examination of a selected area of film criticism. Titles vary.

436-3 Studies in Film Production
Provides an intensive study of a selected area of film production. Titles vary. Prerequisite: TH 180.

481-3 Senior Practicum in Filmmaking
Requires production of a 16mm sound film to answer print stage with optical soundtrack, and the organization of a cumulative senior screening including the practicum films. Prerequisite: TH 381.

490-3 Independent Screening
Independent screenings of twenty-five films chosen by the student to comprise an integrated program of historical/theoretical focus. Screenings to be accompanied by the reading of appropriate analytical commentary under the direction of faculty member. Prerequisite: TH 231, 232, 233, two 300-level film theory courses.

499-1 to 4 Independent Study in Film History, Theory, Criticism, and Practice
Independent work to culminate in thesis and/or film. Prerequisite: TH 332, 333.

Music/MUS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course
214-3 Music in Western Culture
Introduction to the music of Western culture from the Middle Ages to the present. Emphasis on listening skills; elements of music; major styles, genres, and composers; and cultural context. Substitutions: MUS 121 and 122.
Departmental Courses

Applied Music
Private instruction is offered in the following fields of concentration. Subject to the regulations of the college in which the student is registered, each half-hour lesson per week may carry 1 or 2 credit hours per quarter at the undergraduate level, depending on the level of proficiency demonstrated by the student. All students must receive departmental approval before registering in applied music.

100-1, 2, or 4 Piano
110-1, 2, or 4 Voice
120-1, 2, or 4 Clarinet
130-1, 2, or 4 Flute
140-1, 2, or 4 Trumpet
150-1, 2, or 4 Trombone
160-1, 2, or 4 Organ
170-1, 2, or 4 French Horn
180-1, 2, or 4 Violin
190-1, 2, or 4 Viola
200-1, 2, or 4 Cello
210-1, 2, or 4 String Bass
220-1, 2, or 4 Oboe
230-1, 2, or 4 Bassoon
240-1, 2, or 4 Saxophone
250-1, 2, or 4 Baritone Horn
260-1, 2, or 4 Tuba
270-1, 2, or 4 Percussion
280-1, 2, or 4 Harpsichord
290-1, 2, or 4 Classical Guitar
300-1 to 2 Viola da Gamba

106-1 WSU Gospel Choir
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.

131-1 Beginning Guitar Class I
Focuses on the development of good playing habits through melody and chord playing. Tuning, care of the guitar, and tablature reading covered, various guitar styles demonstrated. Students provide own instruments. Electric guitars not suitable.

132-1 Beginning Guitar Class II
Based on technique covered in MUS 131, this class concentrates on note-reading, more chords, and accompaniment styles. Prerequisite: MUS 131 or permission of instructor.

133-1 Beginning Guitar Class III
Based on technique covered in MUS 132, this class concentrates on note-reading, more chords, and accompaniment styles, and some aspects of theory. Prerequisite: MUS 132 or permission of instructor.

155-1, 156-1, 157-1 Keyboard Musicianship
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. Prerequisite: for 156, MUS 101, 155; for 157, MUS 102, 156. Corequisite: for 155, MUS 101; for 156, MUS 102; for 157, MUS 103.

214-3 Music in Western Culture
Introduction to the music of Western culture from the Middle Ages to the present. Emphasis on listening skills; elements of music; major styles, genres, and composers; and cultural context.

255-1, 256-1, 257-1 Keyboard Musicianship

261-2, 262-2 Pronunciation of Foreign Languages
For students of singing. Application of the International Phonetic Alphabet to Italian, French, and German. Includes intensive readings of song lyrics.

316-3 Piano Pedagogy I
Overview of the teaching/learning process. Study of basic teaching competencies (e.g., sequencing instruction, questioning skills), and of the application of these competencies in piano teaching. Prerequisite: MUS 103, 122, 153 or permission of instructor.

317-3 Piano Pedagogy II
Study of methods and materials for use with students of various age groups during their first years of piano study. Observation of teaching. Peer-teaching experience. Prerequisite: MUS 316 or permission of instructor.

318-3 Piano Pedagogy III
Investigation of individual and group procedures for teaching rhythm, music reading, pianistic technique, elementary improvisation, and artistic expression. Ways of working with transfer students and intermediate level precocile students. Continued observation and peer teaching. Prerequisite: MUS 317 or permission of instructor.

416-3 Practicum in Piano Pedagogy I
Supervised teaching of elementary-level piano students accompanied by a problem-solving seminar to help students react constructively to day-to-day teaching experiences. Analysis of tapes of piano teaching. Prerequisite: MUS 318 or permission of instructor.

417-3 Practicum in Piano Pedagogy II
Supervised teaching of elementary or intermediate piano students accompanied by a problem-solving seminar to help students react constructively to day-to-day teaching experiences. Discussion of business aspects of piano teaching. Prerequisite: MUS 318 or permission of instructor.
418-3 Practicum in Piano Pedagogy III
Supervised teaching of students of various age groups accompanied by a problem-solving seminar to help students react constructively to day-to-day teaching experiences. Development of a personal philosophy of education and teaching. Prerequisite: MUS 318 or permission of instructor.

420-3 Opera Production and Coaching
For advanced singers in the production of opera; culminates in public performance. Individual coaching for major role assignments. Course requirements may include participation in Dayton Opera productions.

441-1, 442-1 Pedagogy

Ensembles
Wright State staff and students not majoring in music may enroll with or without credit. Enrollment open to all students in the university.

105-1 University Chorus
Audition required.

115-1 University Band
Audition required.

125-1 University Jazz Ensemble
Audition required.

135-1 University Orchestra
Audition required.

195-1 University Chamber Singers
Audition required.

205-1 Chamber Music
Audition required.

235-1 University Brass Choir
Audition required.

265-1 Vocal Jazz Ensemble
Development of performance skills in vocal jazz; emphasis on jazz style and technique, improvisation, and jazz theory. Previous enrollment in university chorus or permission of instructor required.

275-1 Chamber Orchestra
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.

Theory of Music
101-3, 102-3, 103-3 Theory of Music
Theoretical study of music including written exercises, form and analysis, and harmony. Corequisite: MUS 151, 152, 153.

116-0 Conducting Laboratory Ensemble
A working ensemble that serves as the laboratory performance group for advanced conducting students enrolled in MUS 337 and 338.

151-1, 152-1, 153-1 Sight Singing and Dictation
Corequisite: MUS 101, 102, 103.

201-3, 202-3, 203-3 Music Theory
Continuation of MUS 101, 102, 103. Part-writing, analysis, and harmony on a more advanced level. Prerequisite: MUS 103, 153. Corequisite: MUS 251, 252, 253.

251-1, 252-1, 253-1 Sight Singing and Dictation
Continuation of MUS 151, 152, 153. Prerequisite: MUS 103, 153. Corequisite: MUS 201, 202, 203.

301-3 Baroque Counterpoint
Prerequisite: MUS 203, 253.

302-3 Renaissance Counterpoint
Prerequisite: MUS 203, 253.

371-3, 372-3, 373-3 Composition
Creative writing in smaller forms for a variety of media. Includes the exploration of various composition styles. Prerequisite: for 371, MUS 203.

381-3, 382-3, 383-3 Electronic Music Composition
Composition using electronically generated and manipulated sounds. Includes a historical survey of styles and an exploration of tape and synthesizer techniques. Prerequisite: for 381, MUS 373.

401-3 Form and Analysis
Harmonic and formal analysis: motive, phrase, periods, and binary and ternary forms. Prerequisite: MUS 203, 253, 313.

402-3 Form and Analysis
Contrapuntal techniques, rondo, sonata-allegro forms. Prerequisite: MUS 401.

403-3 Form and Analysis
Contrapuntal techniques and analysis of twentieth-century music. Prerequisite: MUS 203, 253.

421-2, 422-2 Orchestration
Tone quality and ranges of orchestral instruments; voice qualities and ranges of choral ensembles; and written assignments in each area. Prerequisite: MUS 203, 253.

424-3 History of Music Theory
Survey of music theory from Jean Phillippe Rameau to the present. Traces lines of thought that have had significant influence on musical study in the twentieth century. Prerequisite: MUS 203, 313.

471-3, 473-3 Advanced Composition
Creative writing that encompasses a variety of media and forms. Includes style exploration and the development of a personal style. Prerequisite: for 471, MUS 373.

Music History and Literature
121-3 Foundations of Analytical Listening
Aural analysis taught via musical examples from various periods and cultures including non-Western and popular music.

122-3 Survey of Musical Styles
Principle types of Western music from ca. A.D. 500 to the present. Aural analysis; forms and styles. Prerequisite: MUS 121.
Courses

Music

311-3, 312-3, 313-3 History of Music
From ancient and medieval periods through the twentieth century. Prerequisite: MUS 103, 122, 153.

314-3 Introduction to Research in Music
Methods of scholarly investigation in music history, theory, and education; music bibliography; emphasis on individual projects and reports. Prerequisite: MUS 122.

411-3 Music Literature: Classical
Historical study of music from 1730 to 1830. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

412-3 Music Literature: Nineteenth Century
Historical study of music from 1820 to 1900. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

451-3, 452-3, 453-3 Piano Literature
Historical survey of music for piano from origins in clavichord and harpsichord in the Renaissance through the twentieth century.

455-3, 456-3, 457-3 Vocal Literature
Survey of vocal literature from the eighteenth through the twentieth century emphasizing German lieder, French melodie, English and American art songs, opera, and oratorio. For music majors only. Prerequisite: MUS 313.

322-3 Methods in Music: Choral Ensemble
Choral and ensemble literature. Materials, techniques, and curriculum. Prerequisite: MUS 203, 253.

323-3 Methods in Music: School Bands and Ensembles
Administration, techniques, materials, and problems; class instruction in the public school. Prerequisite: MUS 203, 253.

324-3 Methods in Music: School Orchestras and Ensembles
Administration, techniques, and problems; class instruction in the public school. Prerequisite: MUS 203.

328-3 Music in the Elementary School
Materials, techniques, organization, and administration of vocal and general music programs in the public school. Reading components and teaching strategies included. Prerequisite: MUS 203, 253.

329-3 Music in the Junior High School
Materials, techniques, general music program, curriculum, and changing voice. Reading components and teaching strategies included. Prerequisite: MUS 203, 253.

336-3 Conducting (Choral and Instrumental)
Basic baton technique for choral and instrumental conducting. Choral score and instrumental score reading. Completion of two quarters of laboratory ensemble required. Prerequisite: MUS 122, 203, 253. (Previously listed as MUS 335.)

337-3 Advanced Choral Conducting
Continuation of MUS 336. Emphasis on rehearsal techniques, comprehensive musicianship, and performance practices. For music majors only. Completion of choral laboratory ensemble required. Prerequisite: MUS 336, two terms of MUS 116.

338-3 Advanced Instrumental Conducting
Continuation of MUS 336. Emphasis on rehearsal techniques, comprehensive musicianship, and performance practices. For music majors only. Completion of instrumental laboratory ensemble required. Prerequisite: MUS 336, two terms of MUS 116.

Music for Nonmajors

114-3 Fundamentals of Music Theory
Study of basic materials, notation, and reading of music for students with little or no previous music training.

117-3 Music Listening IV: Jazz
Historical survey of jazz and related styles from the late nineteenth century to the present.

118-3 Popular Musical Theatre
Survey of popular musical theatre from its origin in classic comic opera to the present. Emphasis on the Broadway musical since the 1940s.

141-2, 142-2, 143-2 Singing in Musical Theatre
Basic music and interpretation of notation. Vocal training with emphasis on musical theatre. For theatre majors only.

165-3 Fundamentals of Music for the Classroom Teacher
Functional music emphasizing keyboard, recorder, and sight singing. For elementary education majors only.

365-4 Methods and Materials for Teaching General Music in Grades K–6
Materials and methods for teaching general music in grades K–6. Laboratory session required in addition to regular class meeting times for the purpose of developing skills in sight singing and in the use of traditional classroom instruments.

Special Studies in Music

480-1 to 4 Workshops in Music
Study of selected special topics or problems in music, or special areas of music teaching. Titles vary.
481-1 to 6 Advanced Studies in Special Subjects
Directed research.

Nursing/NUR
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.
All of the following courses require admission to the School of Nursing. Course levels must be taken in sequence.

114-2 Nursing Elective
Special topics.

209-5 Conceptual, Theoretical, and Professional Bases of Nursing Practice
Emphasizes concepts, models, theories, and methodologies consistent with health and wellness philosophy. Incorporates self-directive activities to promote maximum health in self and others.

212-3 Nursing for Health and Wellness Lifestyle
Emphasizes the past, present, and future roles of the professional nurse based on selected concepts, models, and theories. Introduction to nursing process, philosophy, and conceptual framework. The health care system is discussed historically and in regard to future trends.
Prerequisite: NUR 218 or 308.

217-5 Nursing Process I—Nursing Assessment to Nursing Diagnosis
Introduces the nursing process from assessment to diagnosis. Focus on biological, psychological, sociological, and spiritual components of client assessment, leading to a nursing diagnosis of a healthy individual.
Prerequisite: NUR 209.

218-5 Nursing Process I—Planning, Implementation, and Evaluation
Completes the initial study of the nursing process emphasizing planning, implementation, and evaluation. Focuses on teaching basic skills and related concepts underpinning the clinical nursing practice. Prerequisite: NUR 217.

304-3 Foundations of Nursing Research
Basic elements of the research process including aspects of statistics. Emphasis on the relation of research findings to professional nursing practice and the nursing process. Prerequisite: NUR 218.

308-5 Introduction to Professional Nursing
Introductory course oriented toward the role and function of the professional nurse. Emphasis is on concepts and theories within the sciences, humanities, and nursing that relate to the practice of professional nursing. For registered nurses only.

312-10, 313-10 Nursing Process: Human Existence and Health II, III
Clinical nursing courses. Focus on the nursing process and the human ability to adapt to one's environment in relation to an optimum state of health. Learning experiences include a variety of settings within and outside the health-care system. Prerequisite: for 313, NUR 312.

317-2 to 4 Selected Topics
Topics vary.

318-8 Transition: Nursing Process
Using the nursing process throughout the life span with health-impaired individuals and their families. Learning experiences are provided in acute and long-term care settings. Prerequisite: NUR 212, 308.

411-10 Nursing Process: Human Existence and Health IV
Uses the nursing process with individuals and families adapting to long-term health impairments. Emphasizes the effect of political, social, and environmental forces on accessing the health care system. Related clinical experiences are provided. Prerequisite: NUR 304 and 313.

412-10 Nursing Process: Human Existence and Health V
Uses the nursing process with individuals and families across the life span who are experiencing depleted health states with healthy and impaired communities. Learning opportunities emphasize interdependent and collaborative activities in a variety of settings.
Prerequisite: NUR 411 or 318.

413-10 Nursing Process: Human Existence and Health VI
Emphasizes leadership in caring for individuals, families, and communities with multiple health states. Learning opportunities focus on leadership in a variety of settings.
Prerequisite: NUR 412.

414-3 Nursing Elective
Topics vary. Prerequisite: NUR 313.

415-3 Independent Study
May be taken for letter grade or pass/unsatisfactory. Prerequisite: NUR 313.

498-3 Nursing Honors Seminar
Students discuss selected problems, issues, and special topics related to nursing that are not covered in depth during the usual curriculum. Students identify an area of interest and develop a project proposal for in-depth study. May be taken for letter grade or pass/unsatisfactory. Prerequisite: NUR 304, 312.

499-2 to 3 Nursing Honors Independent Study
Provides an opportunity for development and completion of an honors project using theories and concepts from the humanities, sciences, and nursing. With guidance of a faculty member, students focus on an area of individual study. May be taken for letter grade or pass/unsatisfactory. Prerequisite: NUR 498.

Office Administration/OA
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-3 Beginning Shorthand
Development of a vocabulary/writing skill in Gregg Series 90 shorthand.
Courses
Office Administration
Pharmacology
Philosophy

202-3 Intermediate Shorthand
Continued vocabulary and writing skill development in Gregg Series 90 shorthand. Emphasis on dictation and ability to transcribe accurately. Prerequisite: OA 201 or equivalent proficiency; OA 211 or equivalent.

203-3 Advanced Shorthand
Emphasis on dictation and speed building in Gregg Series 90 shorthand. Introduction to transcription. Prerequisite: OA 202 or equivalent proficiency and permission of adviser.

210-3 Keyboarding
Basic keyboarding instruction in touch typewriting on an alphanumeric keyboard.

211-3 Beginning Typewriting
Mastery of the basic skills in touch typewriting. Typing of letters, reports, short tabulations, themes, manuscripts, and office memoranda.

212-3 Intermediate Typewriting
Development of speed and accuracy. Introduction to production typewriting of letters, reports, tabulations, and manuscripts. 2 hours lab per week required. Prerequisite: OA 211.

213-3 Advanced Typewriting
Further development of speed and accuracy with emphasis on business letters, tabulation problems, business reports, and manuscripts. Introduction to typewritten transcription from office dictation equipment. 2 hours lab per week required. Prerequisite: OA 212.

220-3 Introduction to Word/Information Processing
Principles and operation of word/information processing installations, emphasizing basic office applications using word/information processing software and the human aspects of word/information processing. Prerequisite: OA 212.

221-3 Intermediate Word/Information Processing
Study of the document cycle (orientation, production, reproduction, storage and retrieval, and distribution) as it relates to the electronic office applications of word/information processors. Prerequisite: OA 220.

222-3 Advanced Word/Information Processing
Explores the change from the traditional office to one using the word/information processing concepts. Includes simulated applications on word/information processing equipment. Prerequisite: OA 221.

301-3 Beginning Transcription
Introduction to typewritten transcription from dictation. Prerequisite: OA 203, 212.

305-3 Office Machines
Introduction to adding machines, printing calculators, electronic calculators, duplicators, and their application to business problems. Teaching methods are also studied. For business education and office administration majors only.

306-3 Records Management
Procedures for control of business records. Analysis of the records cycle, retention programs, storage and retrieval processes and systems, micrographics, and data-base management.

401-1 to 4 Office Practicum
Gives students work experience in an actual office environment while being supervised/directed by a college coordinator of business education.

411-3 Office Management and Administration
Modern offices and their operating problems, principles, and procedures.

Pharmacology/PHR
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

340-3 Pharmacology
Introduction to general principles of pharmacology, drug classification, and the sites and mode of action of selected drug agents. Prerequisite: CHM 102; P&B 301, 302.

Philosophy/PHL
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course

204-3 Great Books: Philosophy
Introduction to selected great books in the history of Western philosophy chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined both within their respective historical frameworks and as an exercise in critical thinking.

Departmental Courses

124-3 Social Ethics and Values
Investigation of fundamental ethical issues in our society. Includes such issues as power, law, race, war, population, ecology, violence vs. pacifism, and punishment vs. rehabilitation.

204-3 Great Books: Philosophy
Introduction to selected great books in the history of Western philosophy chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined both within their respective historical frameworks and as an exercise in critical thinking.

211-3 Introduction to Ethics
Survey of the important theories concerning the nature of moral value and obligation. (Previously listed as PHL 113.)

212-3 Introduction to Metaphysics
Survey of the important theories concerning the nature of reality, mind and body, and freedom and determinism.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>213-3</td>
<td>Theories of Knowledge: Survey of the important theories concerning the origin, structure, methods, certainty, and validity of knowledge.</td>
</tr>
<tr>
<td>215-4</td>
<td>Inductive Logic: Introduction to the techniques of inductive and probabilistic reasoning with emphasis on the problems encountered in attempting to justify those techniques.</td>
</tr>
<tr>
<td>223-4</td>
<td>Symbolic Logic I: Introduction to the techniques of deductive logic including truth-table analysis, the propositional calculus, and predicate logic.</td>
</tr>
<tr>
<td>280-3</td>
<td>Philosophy of Religion: Faith and Reason: Judeo-Christian concept of God, grounds for belief and disbelief, revelation and faith, religious language, verification, immortality and resurrection, and karma and reincarnation. Issues are discussed on the basis of selected texts on faith and reason.</td>
</tr>
<tr>
<td>281-3</td>
<td>Philosophy of Religion: Contemporary Western Survey: Cross-disciplinary perspective on philosophical and religious schools of thought in the early twentieth century. Absolute and personal idealism, spirit, value, positivism and naturalism, history and culture, modernism and pragmatism, religious consciousness, and phenomenology.</td>
</tr>
<tr>
<td>301-4, 302-4, 303-4</td>
<td>History of Philosophy: pre-Socratic philosophers, Plato and Aristotle; Epicureanism, stoicism, skepticism, neo-Platonism, and early medieval philosophy; Descartes, Spinoza, and Leibniz; Locke, Berkeley, Hume, Kant, Hegel, Schopenhauer, Nietzsche, logical positivism, process philosophy, and existentialism.</td>
</tr>
<tr>
<td>323-4</td>
<td>Symbolic Logic II: Standard notations, principles of inference, formal systems, and methods of proof. Focus on first-order predicate logic.</td>
</tr>
<tr>
<td>341-4</td>
<td>Aesthetics: Study of theories concerning the nature of the work of art, aesthetic experience, the arts, and beauty.</td>
</tr>
<tr>
<td>371-4</td>
<td>Business Ethics: Case study and discussion of ethical issues involved in business transactions and management.</td>
</tr>
<tr>
<td>378-4</td>
<td>Ethics and Medicine: Examination of ethical issues confronting society in the areas of medicine and health care, from the perspective of philosophical and theological ethics. Examples include ethics of abortion, euthanasia, experimental medicine, and behavior control.</td>
</tr>
<tr>
<td>383-4</td>
<td>Philosophy of Religion: Secular: Cross-disciplinary analysis of modes of human awareness through which religious meaning is expressed (sensation, morality, beauty, reason, and human relations). Examination of presuppositions of contemporary secular religion in existentialism.</td>
</tr>
<tr>
<td>394-4</td>
<td>Existentialism: Representative writers of the existentialist movement.</td>
</tr>
<tr>
<td>399-1 to 4</td>
<td>Studies in Selected Subjects: Problems, approaches, and topics in the field of philosophy. Topics vary.</td>
</tr>
<tr>
<td>401-3</td>
<td>Major Philosophers: Introduction to the major writings of outstanding philosophers. Involves presentation and critical examination of the philosophers’ views.</td>
</tr>
<tr>
<td>415-4</td>
<td>Philosophical Problems: Detailed examination of one of the outstanding philosophical problems—ancient, medieval, and/or contemporary.</td>
</tr>
<tr>
<td>431-4</td>
<td>Classical and Medieval Political Philosophy: Critical examination of political ideas from 500 B.C. to A.D. 1500 with special attention to Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, Luther, Calvin, and Machiavelli.</td>
</tr>
<tr>
<td>432-4</td>
<td>Modern Political Philosophy: Critical examination of political ideas from 1600 to 1900, with special attention to Hobbes, Locke, Rousseau, Montesquieu, Hume, Burke, Hegel, Bentham, Marx, and Mill.</td>
</tr>
<tr>
<td>442-4</td>
<td>Philosophy and Literature: Examination of philosophical ideas found in literature, philosophical interpretations of literature, and evaluation of theories and aesthetics of literature.</td>
</tr>
<tr>
<td>443-4</td>
<td>Asian Religious Philosophy: Perennial themes in Asian cultures (such as individual, society, and cosmos; appearance and reality; time and history; and karma, freedom, and responsibility) as they have been treated in the philosophical traditions of these cultures.</td>
</tr>
<tr>
<td>471-4</td>
<td>Philosophy of Physical Science: Analysis of views concerning scientific explanation, the logic of theory testing, and the ontological status of theoretical entities; philosophical examination of the concepts of space, time, matter, and motion from classical physics to contemporary relativity. Prerequisite: PHL 215 or permission of instructor.</td>
</tr>
</tbody>
</table>
Courses

Philosophy

Philosophy of Social Science
Analysis of views concerning concept and theory formation in the social sciences, problems in objectivity and value, justification of Verstehen, mechanism vs. teleological explanations, and reductionism. Prerequisite: PHL 215 or permission of instructor.

481-3 to 4, 482-3 to 4 Independent Reading
Faculty-directed readings in philosophic literature.

Physics

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses

105-3 Sounds and Colors
Study of wave motion with an orientation toward phenomena experienced by our senses, such as musical sounds, noise, and the colors occurring in nature. Corequisite: PHY 115.

106-3 Revolutions in Physics
Study of the microscopic structure of matter; the search for the atom from molecules to fundamental particles; and quantum mechanics, relativity, and nuclear energy. Corequisite: PHY 116.

107-3 Stars, Galaxies, and the Cosmos
Introduction to astronomy with emphasis on the universe of stars and galaxies. Covers stellar evolution, astrophysics, and cosmology. Corequisite: PHY 117.

111-4, 112-4, 113-4 Principles of Physics
Introduction to fundamental phenomena, principles, and laws of physics. Prerequisite: for 111, MTH 128 or 129, or equivalent; for 112, PHY 111; for 113, PHY 112. Corequisite: for 111, PHY 101; for 112, PHY 102; for 113, PHY 103.

115-1 Sounds and Colors Laboratory
Experiments to illustrate the physical aspects of what we see and hear. Laboratory component of PHY 105 for students using the course to meet the General Education science requirement.

116-1 Revolutions in Physics Laboratory
Experiments to illustrate the phenomena and concepts of modern physics. Laboratory component of PHY 106 for students using the course to meet the General Education science requirement.

117-1 Stars, Galaxies, and the Cosmos Laboratory
Astronomical observations and measurements, laboratory experiments, and a visit to a planetarium. Laboratory component of PHY 107 for students using the course to meet the General Education science requirement.

122-3 Revolutions in Physics
Microscopic structure of matter from the atomistic theory applied to gases and crystals to the underlying structure. Topics include electricity—atomic glue, quantum theory and atoms, the nucleus and nuclear energy, and fundamental particles. Laboratory is listed as PHY 132.

123-3 Suns, Moons, and Planets
Introduction to astronomy with emphasis on the solar system. Topics include the earth-moon system, other planets and their satellites, space exploration, and theories for the origin of the solar system. Laboratory is listed as PHY 133.

125-3 Stars, Galaxies, and the Universe
Introduction to astronomy with emphasis on the universe of stars and galaxies. Topics include stellar evolution, galaxies, origin and evolution of the universe, and astrophysics. Laboratory is listed as PHY 135.
211-3 General Physics
Selected topics in electricity and magnetism; introduces use of calculus in interpretation of physical phenomena. Prerequisite: PHY 112, 113; MTH 230.

251-4 General Physics II
Introductory survey of electricity and magnetism. Uses calculus in interpreting physical phenomena. Topics include electric field and potential, currents, DC circuits, magnetic fields, Faraday's law, and AC circuits. 3 hours lecture, 1 hour recitation. Prerequisite: PHY 250, MTH 230. Corequisite: PHY 256. (Previously listed as PHY 241.)

252-4 General Physics III
Introductory survey of thermodynamics, waves, sound, electromagnetic waves, and optics. Uses calculus in interpreting physical phenomena. 3 hours lecture, 1 hour recitation. Prerequisite: PHY 250, MTH 230. Corequisite: PHY 257. (Previously listed as PHY 242.)

255-1 General Physics Laboratory I
Introductory physics laboratory problems in mechanics. Corequisite: PHY 250. (Previously listed as PHY 200.)

256-1 General Physics Laboratory II
Introductory physics laboratory problems in electricity, magnetism, and circuits. Corequisite: PHY 251. (Previously listed as PHY 201.)

257-1 General Physics Laboratory III
Introductory physics laboratory problems in heat, sound, and optics. Corequisite: PHY 252. (Previously listed as PHY 202.)

260-4 Introduction to Modern Physics
Introduces phenomenology and theoretical concepts of modern physics, such as special theory of relativity and quantum theory; atomic and molecular structure and spectra; x-rays and solid state physics; nuclear structure, reactions, and natural radioactivity; and instrumentation for nuclear physics research. One hour is devoted to demonstrations and recitations. Prerequisite: PHY 210, 211, or 252; MTH 230.

300-3 Properties of Semiconductor Materials
Examines crystal structure and growth, quantum theory and atomic structure, energy bands in solids, charge carriers and thermodynamic equilibrium, generation and recombination of excess charge carriers, diffusion, and junctions. Prerequisite: PHY 252, CHM 121.

302-3 Semiconductor Device Processing
Underlying principles of the manufacture of microelectronic devices and integrated circuits. Crystal growth and epitaxy. Oxidation and film deposition. Diffusion and ion implantation. Lithography and etching. Process integration and computer design aids. Prerequisite: PHY 300, 301 or ME 370 or permission of instructor.

310-3 Issues in Science
(Also listed as BIO 310, CHM 310, MTH 310, and GL 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.

322-4 Applied Optics
Study of optical instruments by means of both geometrical and physical optics. Theory and application of interferometry and light detection devices. Brief introduction to lasers and holography. 3 hours lecture, 2 hours lab. Prerequisite: PHY 252 or equivalent; MTH 235.

371-3, 372-3 Analytical Mechanics
Intermediate problems in statics, kinematics, and dynamics; equilibrium of forces, rectilinear motion, curvilinear motion, central forces, constrained motion, energy and moments of inertia, and the Lagrange method. Prerequisite: PHY 210, 211, or PHY 252; MTH 232. Corequisite: MTH 233.
400-3 Introduction to Solid Earth Geophysics
The basics of seismic, gravimetric, magnetic, and heat conduction principles used to determine the geophysical properties of the solid earth. Emphasis is on the deeper parts of the crust, the mantle, and the core. Prerequisite: PHY 210, 211 or 252.

420-3 Thermodynamics
First and second laws of thermodynamics; general thermodynamic formulas with applications to matter. Prerequisite: PHY 210, 211 or 252.

421-3 Statistical Thermodynamics
Topics include kinetic theory of gases, Maxwell-Boltzmann statistics, and an introduction to quantum statistics. Prerequisite: PHY 420.

422-5 Introduction to Geophysical Prospecting
(Also listed as GL 422.) Introduction to principles of gravity, magnetic, seismic, electrical, and radioactive prospecting. 4 hours lecture, 2 hours lab. Prerequisite: MTH 229.

424-4 Gravity and Magnetic Exploration
(Also listed as GL 424.) Study of the theory of the earth’s gravitational and magnetic fields and the application of these principles to resource exploration. 3 hours lecture, 2 hours lab. Prerequisite: PHY 422 or permission of instructor.

432-3 Lasers
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. Prerequisite: PHY 252, 260; or CHM 121; or MTH 102; or permission of instructor. (Previously listed as PHY 332.)

450-3, 451-3, 452-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell’s equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 252; MTH 232, 233.

460-4 Introduction to Quantum Mechanics
Mathematical structure of quantum mechanics. Applications to selected one- and three-dimensional problems with emphasis on atomic structure. Prerequisite: PHY 260, 372; MTH 333.

461-4 Introduction to Solid State Physics
Selected properties of solids and their quantitative explanation in terms of simple physical models. Applications of quantum mechanics to solids. 3 hours lecture, 2 hours lab. Prerequisite: PHY 316, 460.

462-4 Introduction to Nuclear Physics and Relativity
Examines special theory of relativity, nuclear radiation, nuclear properties, nuclear transformations, and elementary particles and interactions. Prerequisite: PHY 460.

470-3 Selected Topics
Selected topics in physics. Prerequisite: PHY 372.

480-3, 481-3, 482-3 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 372, 452, MTH 333.

488-1 to 3 Independent Reading
Prerequisite: PHY 250, 251, 252; or equivalent.

494-3 Senior Projects
Selected problems in experimental and theoretical physics with critical analysis of results.

499-3 Special Honors Research Problems
Special research in a recognized branch of physics, usually related to research carried on by the department. Critical analysis of results required.

Physiology and Biophysics/P&B
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Core Courses

301-4 Physiology of Health and Disease I
Subject areas include membrane transport, nervous and skeletal function, central and autonomic nervous systems, gastrointestinal function, and metabolism. Topics include normal and abnormal responses of the body. Prerequisite: ANT 201, 202; CHM 102; MTH 202; BIO 105, equivalent, or permission of instructor.

302-4 Physiology of Health and Disease II
Subject areas include cardiac function and circulation; pulmonary and renal function; and acid-base regulation. Topics include normal and abnormal responses of the body. Prerequisite: P&B 301 or permission of instructor.

303-4 Physiology of Health and Disease III
Subject areas include fluids, electrolytes, osmolarity, blood, endocrinology and reproduction. Topics include normal and abnormal responses of the body. Prerequisite: P&B 301 or permission of instructor.

442-3 Introductory Neurophysiology
Studies the 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. Prerequisite: BIO 105 and CHM 101 or equivalents.
469-3 Quantitative Aspects of Membrane Transport
Employs a quantitative approach to the properties of solutes, water, bio-electrical phenomena, the properties of transport systems that move solutes across biological membranes, and the interactions of these solutes with membranes. Completion of a course in calculus and cell biology required.

Additional Courses
488-1 Independent Reading in Physiology
Independent reading in physiological literature. A written report is required for each registered period.

499-1 to 4 Special Problems in Physiology
Specialized program that gives seniors an opportunity to explore 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.

Political Science/PLS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course
200-3 Political Life
Examination of political power relationships in contemporary society. Emphasizes the origins and forms of power and the key social structures exercising power with contemporary public issues. Provides case studies of the consequences of political relationships.

Departmental Courses
200-3 Political Life
Examination of political power relationships in contemporary society. Emphasizes the origins and forms of power and the key social structures exercising power with contemporary public issues. Provides case studies of the consequences of political relationships.

210-4 Introduction to Quantitative Methods of Political Science
Uses of quantitative political data with emphasis on contemporary research applications. Survey design and questionnaire construction. Analysis and interpretation of data. Prerequisite: MTH 102 or Level 3 on placement exam.

211-4 Empirical Political Analysis
Scope and methods of empirical political research; concepts and hypotheses; explanation and prediction; and methodological approaches to the study of politics and political behavior. Prerequisite: PLS 210 or permission of instructor.

212-4 American National Government
Introductory survey of American national government including study of political participation, interest groups, political parties, leadership, mass media, elections and campaigns, the Constitution, presidency, Congress, bureaucracy, and the courts. Prerequisite: Permission of instructor.

222-4 International Politics
Introductory survey of the international political system including study of state and nonstate actors, major features of the system, conflict roots and approaches to peace-keeping, and current issues. Prerequisite: PLS 200 or permission of instructor.

301-4 Modern Political Ideologies
Systematic analysis of the major political ideologies of the twentieth century with particular attention to democracy, fascism, communism, and nationalism.

Advanced Courses
PLS 302 through 494 require completion of political science core courses or permission of instructor.

302-4 Classical and Medieval Political Thought
(Also listed as PHL 431.) Critical examination of political ideas from 500 B.C. to A.D. 1500 with special attention to Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, Luther, Calvin, and Machiavelli.

303-4 Political Thought: Hobbes to Mill
(Also listed as PHL 432.) Critical examination of political ideas from 1600 to 1900 with special attention to Hobbes, Locke, Rousseau, Montesquieu, Hume, Burke, Hegel, Bentham, Marx, and Mill.

304-4 Twentieth-Century Political Thought
Critical examination of twentieth-century political theory. Emphasis on nature, methodology, evaluation, existing condition, and future of political thought.

305-4 Comparative Marxist Theory
Critical examination of the chief theories developed by Marx, Engels, Lenin, Stalin, Mao Tse-tung, Castro, and various revisionists. Emphasis on Soviet and Chinese ideologies.

306-4 The Marxist-Christian Dialogue
Examination and evaluation of the Marxist-Christian dialogue. Emphasis on such categories as hope, liberation, alienation, people, love, class struggle, transcendence, power, and change.

321-4 City Politics
Governments and politics of metropolitan regions; government structure and functions; and interest and power relations.

322-4 State Government
Survey and analysis of the structures and functions of the American states with special attention to the problems of federal-state and state-local relations, legislative apportionment, and urban growth.
323-4 Government of Ohio
Organization and functions of the government of Ohio with special attention to development, social structure, legal status, electoral processes, and fiscal problems.

324-4 Political Aspects of Urban Development
Institutional and political context of planning: laws, governmental structures and procedures, and urban politics.

331-4 Political Parties

335-4 The American Presidency
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.

337-4 The Legislative Process
Policy role, political functions, internal structure, and operation of Congress. Secondary concern for state legislatures and non-American legislative bodies.

340-4 Law and Society
Theories of law; in addition to the nature and functions of the judicial process.

342-4 Civil Liberties I: The First Amendment
Cases and related materials on the Bill of Rights and the Fourteenth Amendment with emphasis on the First Amendment freedoms: freedom of speech, of the press, and of religion.

343-4 Civil Liberties II: Due Process and Equal Protection
Cases and related materials on the enforcement of civil rights and liberties through the due process and equal protection claims of the Fourteenth Amendment.

345-4 Public Administration
Nature and scope of public administration, administrative law, and public interest in the administrative process.

346-4 Public Personnel Administration
Methods of employment, training, compensation, and employee relations in various levels of civil service. Examines organizations of public employees.

351-4 Western European Politics
Comparative study of the political systems of Great Britain, France, and West Germany.

352-4 Ethnic Politics
Comparison of ethnic identity and politics in Western societies including the United States, Canada, Great Britain, and France. Topics include minorities and the welfare state, affirmative discrimination, and black politics in the United States.

354-4 Governments of Eastern Europe
Introduction to the governments and politics of Eastern Europe, particularly since World War II. Includes current developments in Poland, Czechoslovakia, East Germany, Hungary, Rumania, Bulgaria, and Yugoslavia.

356-4 Politics and Society in France
Examines the historic interaction of French culture and politics. Topics include the growth of the French nation and state, French society, the nature of modern politics and institutions, and France's role in world affairs.

360-4 Politics of the Developing Nations
Comparative analysis of various problems, particularly political, confronting developing nations in nation building and development.

366-4 Politics of the Middle East
Introduction to governments and politics of the Middle East with special attention to cultural and historical background and the Arab-Israeli conflict.

370-4 International Theory
Study of recent findings in international politics. Explanations of world political developments such as war, alliance formation, and arms races. Prerequisite: PLS 222.

371-4 Current World Problems
Various views and perspectives on selected contemporary problems and trends in international politics.

376-4 Peace Studies
Study of war, peace, and current efforts in dealing with international conflict. Examines the roots of war in American society and alternative strategies for elimination of war as an instrument of policy.

380-4 American Foreign Policy
Role of the United States in contemporary international politics and the relationship of the domestic political system to that role. Discussion of current problems. Prerequisite: PLS 222.

381-4 National Security Policies
Study of U.S. national defense and security policy process and the major strategic issues facing the U.S. government. Prerequisite: PLS 200 and major core courses.

383-4 Soviet Foreign Policy
Study of the historical and ideological origins of Soviet foreign policy with emphasis on U.S./Soviet relations and Soviet involvement in the Third World.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of political science. Topics vary.

407-4 Seminar in Political Theory
Readings, research, reports, and discussion on selected theorists, topics, and problems. Topics vary.

412-4 Topics in Empirical Political Analysis
Selected topics of methodological or analytical concern in contemporary political research.
<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>425-4 Seminar in Metropolitan Studies</td>
<td>Intensive interdisciplinary treatment of metropolitan studies. Reading and discussion of pertinent theory, methodology, and case studies. Practical research by students.</td>
</tr>
<tr>
<td>427-4 Urban Policy Analysis</td>
<td>Study of selected urban problems and their relationship to the political environment. Use of simulation gaming to understand community development processes.</td>
</tr>
<tr>
<td>429-4 Urban Communications Theory</td>
<td>Processes and institutions by which individuals and groups communicate in urban environment. Model of an urban communication system developed by interdisciplinary systems approach.</td>
</tr>
<tr>
<td>430-4 Seminar in American Politics and Government</td>
<td>Selected topics related to American political institutions and processes. Emphasis on readings, discussion, and research.</td>
</tr>
<tr>
<td>433-4 Public Opinion</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>434-4 Political Leadership</td>
<td>Development of political attitudes and values among leaders, activists, and the public. Relationship between personality, political leadership, behavior, and policy.</td>
</tr>
<tr>
<td>435-4 Political Corruption in America</td>
<td>Analysis of political corruption in America, including campaigns and elections, graft, the executive branch, congressional ethics, corruption in law enforcement, organized crime, and abuse of authority.</td>
</tr>
<tr>
<td>436-4 Criminal Law</td>
<td>Examines the nature of the criminal law and reviews the law pertaining to criminal liability; inchoate crimes; the elements of crimes against persons, property, and habitation; and the defenses to criminal actions.</td>
</tr>
<tr>
<td>437-4 Criminal Procedure</td>
<td>Examines the constitutional protections that the individual has when confronting the criminal justice system and examines the case law pertaining to the surrounding the Fourth Amendment (search and seizure), Fifth Amendment (self-incrimination), and Sixth Amendment (right to counsel).</td>
</tr>
<tr>
<td>438-4 Environmental Law and Policy</td>
<td>Examines environmental law and policy and reviews the statutory framework pertaining to environmental impact statements, the regulation of air and water pollution, the disposal and cleanup of toxic wastes, and workplace safety.</td>
</tr>
<tr>
<td>439-4 Bioethics and Law</td>
<td>Examines the legal implications of new biological technologies, particularly mind and behavior control, genetic engineering, birth and death control, and organ transplantation.</td>
</tr>
<tr>
<td>440-4 Constitutional Law</td>
<td>Cases in which provisions of the Constitution have been judicially interpreted. Also examines federal systems, separation of powers, and limits on government.</td>
</tr>
<tr>
<td>441-4 Civil Liberties</td>
<td>Cases and related materials on the Bill of Rights and the Fourteenth Amendment with an emphasis on the First Amendment freedoms.</td>
</tr>
<tr>
<td>442-4 The American Criminal Justice System</td>
<td>Survey of the American criminal justice system concentrating on political aspects. Police, judges, attorneys, Supreme Court decisions, crime, and public opinion.</td>
</tr>
<tr>
<td>443-4 Administrative Law Procedure</td>
<td>Study of the law controlling the process by which public agencies make and administer policy. Topics include policy formulation and budgeting, legislative delegation, administrative agencies, rule making, and adjudication.</td>
</tr>
<tr>
<td>444-4 Public Budgeting</td>
<td>Examination of the major phases of the governmental budget cycle; types of budget; budgetary reform; economic and public policy impact of government budgeting; decision-making process; and legislative/executive relations in budget formation and implementation.</td>
</tr>
<tr>
<td>445-4 Administrative Law Procedure</td>
<td>Study of the law controlling the process by which public agencies make and administer policy. Topics include policy formulation and budgeting, legislative delegation, administrative agencies, rule making, and adjudication.</td>
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<tr>
<td>446-4 Public Budgeting</td>
<td>Examination of the major phases of the governmental budget cycle; types of budget; budgetary reform; economic and public policy impact of government budgeting; decision-making process; and legislative/executive relations in budget formation and implementation.</td>
</tr>
<tr>
<td>447-4 Seminar in Public Administration</td>
<td>Selected national, state, and local problems with emphasis on legal scope of administrative power and on research methods used by staff agencies. Topics vary.</td>
</tr>
<tr>
<td>450-4 Political Institutions in Primitive Societies</td>
<td>Study of that part of the culture of primitive societies that we recognize as political organization. An attempt is made to show how in less complex (primitive) societies new local communities come into being through fission.</td>
</tr>
<tr>
<td>453-4 Political System of the Soviet Union</td>
<td>Analysis of the Soviet system with emphasis on development of the Communist Party.</td>
</tr>
<tr>
<td>460-4 Seminar on Comparative Political Systems</td>
<td>Readings, research, reports, and discussion of selected topics and problems. Topics vary.</td>
</tr>
<tr>
<td>470-4 Seminar in International Relations</td>
<td>Readings, research, reports, and discussion of selected topics and problems.</td>
</tr>
<tr>
<td>471-4 International Law</td>
<td>Study of rules governing the conduct of international politics with emphasis on their relevance to current world problems.</td>
</tr>
</tbody>
</table>
472-4 International Terrorism
Surveys the phenomenon of terrorism: who employs it, how and why it occurs in international politics, and how targets respond to terrorism. The special problems terrorism creates for democracies and the politics of hostage-taking are examined. Prerequisite: PLS 222.

490-1 to 4 Independent Reading
Supervised individual readings on selected topics. Arranged between students and faculty member directing the study.

491-1 to 4 Independent Research
Supervised individual research on selected topics. Arranged between students and faculty member directing the study.

492-1 to 4 Independent Field Experience
Supervised individual projects. May involve intern programs in local government or other special programs.

493-1 to 4 Contemporary Problems
Advanced study in selected topics that frequently include new developments in the methodology or subject matter of the various subfields of the discipline.

494-1 to 4 Special Topics
Study of particular political problems of contemporary significance.

Portuguese/POR
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

111-4 Essentials of Portuguese
Introduction to Portuguese with an emphasis on speaking the language.

Psychology/PSY
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course
105-4 Psychology: The Science of Behavior
Consideration of the causes of behavior. Includes physiological processes; learning, memory, and processing of information; perceptual, cognitive, and social changes from birth to old age; and individual differences in thoughts, feelings, and actions. Substitutions: PSY 111, 112.

Departmental Courses
105-4 Psychology: The Science of Behavior
Consideration of the causes of behavior. Includes physiological processes; learning, memory, and processing of information; perceptual, cognitive, and social changes from birth to old age; and individual differences in thoughts, feelings, and actions.

110-4 The Science of Behavior II
Fundamental principles and practices of psychology are reviewed. Topics include social behavior, adjustment and mental health, motivation and emotion, and perception.

111-4 Introductory Psychology
Introduction to basic concepts in the study of behavior with emphasis on methods of psychology; physiological considerations; motivation, sensation and perception, and learning and cognition.

112-4 Introductory Psychology
Introduction to basic concepts in the study of behavior with emphasis on statistics, psychological tests, development, personality, abnormal behavior, social psychology, and applied psychology.

200-2 to 4 Psychological Study of Contemporary Problems
Restricted psychological problem areas and their implications for modern society and modern intellectual thought. Topics vary. Prerequisite: PSY 105, 110 or PSY 111, 112.

201-4 Divorce: Current Perspectives
Survey of theory, current research, and methodological issues relating to the divorce process, the effects of divorce on children, and professional intervention. Prerequisite: PSY 105, 110 or PSY 111, 112.

202-4 Psychology of Nonverbal Communication
Introduction to the perception of nonverbal sources of information and the impact on physical and cognitive behaviors. Prerequisite: PSY 105, 110 or PSY 111, 112.

203-4 Psychology of Health Behavior
Survey of the contributions of the psychology of health care. The focus is both theoretical and practical, emphasizing the integration of physiological and psychological knowledge. Prerequisite: PSY 105, 110 or PSY 111, 112.

208-4 Environmental Psychology
Effects on behavior of environmental factors such as crowding, noise, pollution, temperature, lighting, and architecture. Applications of psychological knowledge and techniques in dealing with current environmental problems are also considered. Prerequisite: PSY 105, 110 or PSY 111, 112.

209-4 Behavior Modification
Basic survey of the principles of conditioning as they relate to problems in human adjustment. General principles of the psychology of learning are emphasized, but are also applied through cases of interest to a wide variety of helping professionals. Prerequisite: PSY 105, 110 or PSY 111, 112.

210-4 Psychology of Women and Men
Examines the current state of research evidence 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. Prerequisite: PSY 105, 110 or PSY 111, 112.
### Advanced Courses

PSY 111 and 112 are the minimum prerequisites for all advanced courses (300 and above).

#### 300-5 Research Design and Methods
Introduction to the design and execution of behavioral studies, including laboratory exercises and field observations. Laboratory exercises give students practice dealing with problems and data from a representative sample of areas within psychology. 3 hours lecture, 4 hours lab. Prerequisite: PSY 105, 110 or PSY 111, 112, STT 265.

#### 304-4 Industrial and Organizational Psychology
Scientific psychological principles, procedures, and methods applied to human behavior in organizations. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 306-4 Engineering Psychology
(Also listed as HFE 306.) Introduction to the study of human factors in the design and operation of machine systems. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 307-4 Tests and Measurements
Introduction to the construction and use of attitude scales, and aptitude and ability tests in organizational settings, with emphasis on the use of standard tests. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 311-4 Abnormal Psychology
Overview of facts and theories pertaining to abnormal behavior. Topics include classification and diagnosis, and causes and treatment of abnormal behavior. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 321-4 Cognition and Learning
Survey of cognitive processes with an emphasis on learning and memory systems. Topics include short-term memory, retrieval mechanisms, conceptual structures, cognitive skill tests (e.g., IQ tests), mnemonic techniques, and amnesias. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 323-4 Cognition and Learning Methods
Laboratory research in various areas of cognitive psychology. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 321.

#### 331-4 Psychology of Personality
Review of contemporary theories of personality and associated research methodolgy. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 333-4 Personality Research Methods
Laboratory experience in research techniques related to experimental personality. Examines problems of design with students expected to develop and implement a research proposal. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 331.

#### 341-4 Lifespan Developmental Psychology
Survey of theory, research, and methodological issues in the study of development across the lifespan. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 343-4 Developmental Psychology Methods
Survey of research design appropriate to developmental analysis, innovations in developmental methodology, and laboratory experience in the selection, design, and analysis of developmental problems of specific interest to individual students. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 341.

#### 351-4 Social Psychology
Survey of current theories and experimental findings regarding the determinants of social behavior. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 353-4 Social Psychology Methods
Laboratory course in methods and problems involved in social psychology research. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 351.

#### 361-4 Conditioning and Learning
Introduction to experimental findings and contemporary theories of conditioning, learning, and motivation. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 363-4 Conditioning and Learning Methods
Problems and methods of research in conditioning, learning, and motivation. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 361.

#### 371-4 Perception
Study of the active processes by which organisms gather, interpret, and respond to environmental stimuli. Prerequisite: PSY 105, 110 or PSY 111, 112.

#### 373-4 Perception Methods
Laboratory experience and research techniques in various areas of perception. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 371.

#### 391-4 Physiological Psychology
Physiological mechanisms of behavior. Emphasis on motivational systems and learning. Prerequisite: PSY 105, 110 or PSY 111, 112 (no prerequisite for biological sciences majors).

#### 392-4 Advanced Physiological Psychology
Physiological mechanisms of behavior. Emphasis on motor and sensory systems. Prerequisite: PSY 391.

#### 393-4 Physiological Psychology Methods
Laboratory exercises in neuropsychology. 2 hours lecture, 4 hours lab. Prerequisite: PSY 300, 392.

#### 400-4 Advanced Research Design and Quantitative Analysis
Use of factorial designs and multivariate tests in psychological research. Prerequisite: PSY 300.

#### 401-4 Advanced Experimental Design: Packaged Computer Programs
Focus on the use of canned computer programs such as SPSS, SAS, and BIOMED in the design, analysis, and interpretation of behaviorally oriented research. Prerequisite: PSY 300, 400.
411-4 Advanced Topics in Abnormal Psychology
Theories and research relating to causes, symptoms, and influences of abnormal behavior. Prerequisite: PSY 311.

419-4 Advanced Topics in Physiological Psychology
Detailed examination of selected areas in physiological psychology. Prerequisite: PSY 391.

421-4 Advanced Topics in Cognition and Learning
Detailed examination of selected areas in cognition and learning. Prerequisite: PSY 331 or 351.

425-4 Human-Computer Interface
Relationship of human cognitive, perceptual, and language processes to the effective operation of computer systems. Review of research and theory. Prerequisite: PSY 321, CS 142.

429-4 Advanced Topics in Interpersonal Relations
Interpersonal relations as a subject of research and theory. Consideration of application to therapeutic intervention and everyday interaction. Prerequisite: PSY 331 or 351.

431-4 Advanced Topics in Personality
Review of selected topics in personality. Selected personality constructs and their measurement (e.g., need for achievement, self-concept) as well as situational determinants of behavior. Prerequisite: PSY 331.

432-4 Practicum in Applied Psychology
Work under supervision in an applied psychological setting consistent with students' individual interests (e.g., mental health agency, industrial or organizational setting). Graded pass/unsatisfactory.

433-4 Developmental Psychopathology
Survey of theoretical approaches to the description and explanation of childhood psychopathology, overview of current research in the area of childhood psychopathology, and description of methodological problems involved in clinical research with children. Prerequisite: PSY 341 or equivalent.

439-4 Theory and Research in Clinical Psychology
Overview of contemporary clinical approaches, research techniques, and empirical data. Prerequisite: PSY 331, 411.

441-4 Advanced Topics in Developmental Psychology
Development of learning and cognition in children covered in depth. Prerequisite: PSY 341.

443-4 Psychometrics
Emphasis on measurement theory and its applications including concepts of reliability, validity, discrimination, and prediction. Prerequisite: PSY 300.

444-4 Advanced Industrial Psychology
Theories and research findings in selected topics in industrial psychology. Prerequisite: PSY 300, 304 or permission of instructor.

447-4 Psychology of Aging
Overview of the theoretical, methodological, and conceptual issues in the study of human aging. Focus on both current research and applied relevance. Prerequisite: PSY 111, 112, 341.

450-4 Biofeedback: Research and Application
Introduction to biofeedback in the context of general behavior theory of learning. Literature is surveyed. Topics include problems of methodology and experimental design and application to problems in clinical psychology. Prerequisite: PSY 361.

451-4 Advanced Topics in Social Psychology
Detailed examination of selected areas of current research in social psychology. Prerequisite: PSY 351.

465-4 Information Processing
Study of information processing skills such as selective attention, pattern recognition, reading, problem solving, and human performance. Prerequisite: PSY 321.

471-4 Advanced Topics in Perception
Emphasis on modern controversial issues and theories. Prerequisite: PSY 371.

475-4 Signal Detection Theory in Psychology
Presents signal detection theory in the context of Thurstonian scaling and statistical decision theory. Studies the application of signal detection theory in various areas of psychology including psychophysics, memory, physiology, and psycholinguistics. Prerequisite: PSY 300.

478-4 Animal Behavior
(Also listed as BIO 478.) Physiology, phylogeny, and ontogeny of behavior. Prerequisite: BIO 112, 114, 115; or BIO 105, 106, 107; or PSY 111, 112, 300.

481-4 History of Psychology
Major trends in the development of psychology from its beginnings to the modern period.

488-1 to 4 Seminar in Special Topics
Topics vary.

489-2 Honors Seminar
Primarily derived from current honors thesis research. Literature surveys, experimental designs, and special analytical problems presented and discussed by students and faculty. Topics vary.

490-1 to 4 Independent Readings
Specific topics selected by students and instructor. Graded pass/unsatisfactory.

498-1 to 4 Independent Research
Original problems for investigation. Graded pass/unsatisfactory.

499-1 to 4 Honors Research Project
Original problems for investigation leading to a psychology department honors thesis.
Regional Studies/RST/RSE

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Courses

RST 260-3 Regional Studies: Asia
Introduction to the environments, human organizations, and populations of selected regions or countries in Asia, providing an overview of the region with focus on a particular part of the region such as Japan, China, or South Asia. Titles vary.

RSE 260-3 Asia: China
Brief introduction to Asian environments and cultures and a detailed examination of the development of China and of the conflict between traditional values, cultural patterns, and current development efforts.

RST 270-3 Regional Studies: Africa
Introduction to African environments; diversity of cultural heritages; changes due to modernization; colonialism, slavery, and independence; a brief survey of the relations of Africa to other non-Western regions; and the contribution of Africa to world civilization.

RST 280-3 Regional Studies: Latin America
Survey of non-Western societies including Indians, mestizos, blacks, and the peasantry, from pre-Columbian and African origins to the present, in terms of ideology, organization, social structure, culture, and economic activities.

RST 290-3 Regional Studies: The Middle East
Introduction to the history, peoples, cultures, and geography of the Middle East from Mauritania to Pakistan from the seventh century to the present.

Departmental Courses

RST 260-3 Regional Studies: Asia
Introduction to the environments, human organizations, and populations of selected regions or countries in Asia, providing an overview of the region with focus on a particular part of the region such as Japan, China, or South Asia. Titles vary.

RSE 260-3 Asia: China
Brief introduction to Asian environments and cultures and a detailed examination of the development of China and of the conflict between traditional values, cultural patterns, and current development efforts.

RST 270-3 Regional Studies: Africa
Introduction to African environments; diversity of cultural heritages; changes due to modernization; colonialism, slavery, and independence; a brief survey of the relations of Africa to other non-Western regions; and the contribution of Africa to world civilization.

RST 280-3 Regional Studies: Latin America
Survey of non-Western societies including Indians, mestizos, blacks, and the peasantry, from pre-Columbian and African origins to the present, in terms of ideology, organization, social structure, culture, and economic activities.

RST 290-3 Regional Studies: The Middle East
Introduction to the history, peoples, cultures, and geography of the Middle East from Mauritania to Pakistan from the seventh century to the present.

Rehabilitation/RHB

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-4 Introduction to Rehabilitation
Philosophy, history, and development of rehabilitation. Familiarizes students with areas considered when providing services to people with physical and/or mental disabilities. Students also obtain an understanding of the rehabilitation code of ethics and sociocultural influences.

202-4 Rehabilitation Resources
Prepares students to locate, evaluate, and use local, state, and federal resources available to meet the needs of the disabled and disadvantaged. Information includes obtaining funds to establish programs and organizations via proposal writing. Graded pass/unsatisfactory. Prerequisite: RHB 201.

213-3 Introductory Field Experience in Rehabilitation Services
Seventy-five clock hours of supervised field experience intended to acquaint community/rehabilitation services students with career options, with the structure and administrative procedures of various human services agencies, and with the application of client-intake procedures. Prerequisite: RHB 201.

214-3 Rehabilitation Services Interviewing
Introduction to the role of the rehabilitation services aide in the client-intake process, and how this process occurs within the organizational structure of human services agencies. Prerequisite: RHB 201.

223-3 Advanced Field Experience in Rehabilitation Services
Seventy-five clock hours of supervised field experience intended to provide community/rehabilitation services students with in-depth knowledge of the structure and processes of a selected agency, the job description duties of the rehabilitation services aide within this agency, and the special social, personal, and vocational needs and problems of the target client population. Prerequisite: RHB 201, 213, 214.
Courses

Rehabilitation

301-4 Medical Aspects of Rehabilitation I
Introduction to medical terminology and system disorders that usually have continued and long-standing residual effects and that commonly require rehabilitation intervention. Consideration is given to the vocational and social activities that facilitate employment of clients with physical disabilities. Prerequisite: BIO 105, 106, 107, RHB 201.

303-4 Strategies for Employing the Physically Disabled
Overview of vocational theories, job-seeking skills, occupational information, and other techniques that facilitate employment of clients with physical disabilities. Attention is given to job analysis, job placement, and other techniques. Consideration is given to attitudinal and architectural barriers that clients may encounter. Prerequisite: RHB 201, 301.

304-4 Rehabilitation Casework
Assists students in acquiring skills in interviewing, case recording, writing rehabilitation plans with appropriate justifications, and case management. Prerequisite: RHB 201, 202, 301.

305-4 Substance Abuse: Societal and Human Issues
Provides an overview of the social, cultural, and psychophysiological effects of substance abuse. Emphasis is on alcoholism and other popular mind-altering drugs. Prerequisite: RHB 201, 301 or permission of instructor and junior standing.

370-1 to 3 Independent Study/Minor Problems in Rehabilitation
Independent study in areas of interest to students that are not readily available in any existing course. Topics vary. Graded pass/unsatisfactory.

401-4 Functional Disorders
Techniques used to rehabilitate clients disabled by psychiatric, neurotic, or character-trait disorders, chemical dependency, or mental deficiency. Consideration is given to the uniqueness of problems encountered by clients as they return to society. Prerequisite: RHB 201, 301; PSY 311.

402-4 Behavioral Assessment in Rehabilitation
Assists students in developing knowledge and skills essential to the interpretation of diagnostic information. Work evaluation reports, general aptitude test batteries, and psychological test reports are examined. Prerequisite: RHB 201, 202, 301.

403-4 to 12 Rehabilitation Practicum
Integrative experience for rehabilitation education students. Requires 400 clock hours of field work supervised by the faculty and the agency. Graded pass/unsatisfactory. Prerequisite: RHB 201, 202, 301, 303, 304, 401, 402, 407, CNL 461, 467 and the currently required grade point average.

404-4 Rehabilitation Seminar
Problems and programs of special interest in rehabilitation. Prerequisite: RHB 201, 301, 303, 402.

405-3 Rehabilitation of the Deaf I
Manual communication techniques for professionals preparing to work in rehabilitation or for anyone interested in acquiring expertise in the area of sign language. Emphasis is on conversational skills. Prerequisite: RHB 201.

406-3 Rehabilitation of the Deaf II
Continued introduction to manual communication for professionals preparing to work in rehabilitation or for anyone interested in acquiring expertise in the area of sign language. Emphasis is on conversational skills. Prerequisite: RHB 405.

407-4 Principles of Rehabilitation Counseling
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. Prerequisite: RHB 201, 202, 301, 304, CNL 461.

470-1 to 3 Special Topics
Special workshop courses to meet the needs of in-service rehabilitation professionals as well as providing courses on a one-time basis to meet special interests. May be taken for letter grade or pass/unsatisfactory.

499-1 to 4 Special Problems in Rehabilitative Sciences
Enables students to explore selected research topics related to the rehabilitation of various patient populations. Students and faculty advisers interact to establish specific course requirements.

Religion/REL

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course

204-3 Great Books: The Bible and Western Culture
Study of selected Biblical writings viewed in their original cultural contexts and chosen to reflect the varieties of Biblical literature, the Bible's relationship to various societies, and its role in the development of Western culture.

Departmental Courses

205-3 What is Religion?
Explores the question of 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. (Previously listed as REL 114.)
206-3 Eastern Religions
General introduction to the major religious traditions of South Asia and East Asia: Hinduism, Buddhism, Confucianism, Taoism, and Shintoism. (Previously listed as REL 111.)

207-3 Western Religions
General introduction to the major religious traditions of Judaism, Christianity, Islam, and other selected religious traditions. (Previously listed as REL 112.)

208-3 Contemporary Issues in Religion
Study of selected problems, ideas, and religious developments that have become important in contemporary society. (Previously listed as REL 113.)

220-3 Hebrew Scripture (Old Testament)
Introduction to the literature, history, and religion of ancient Israel. (Previously listed as REL 200.)

221-3 Between the Testaments
Introduction to the literature and religion in Jewish sects from the Exile (ca. 500 B.C.E.) to the Mishnah of Judah the Prince (200 C.E.), including the Dead Sea Scrolls. (Previously listed as REL 201.)

222-3 Literature and Religion of the New Testament
Introduction to the literature, history, and religion of early Christianity. (Previously listed as REL 202.)

230-3 Introductory American Religion Studies
Introduction to specific segments of American religious life. Focuses on one or more distinctive religious groups or movements in the context of American history and culture.

231-3 Religion and the American Experience
Survey of different religions in the United States with attention to the growth of a distinctive form of religion shaped by the American experience. (Previously listed as REL 210.)

235-3 Introduction to the Afro-American Religious Experience
Survey of the black American religious experience from the colonial era to the present. Examines what black American religion is and the role it plays in the sociopolitical life of African-Americans.

245-3 World Religions
Comparative study of the role of religion in cultures and societies on the international scene.

246-3 African Religion
Focuses on the religious concepts and practices of premodern African tradition.

270-3 Approaches to Religious Ethics
Examination of various religious ethical systems from diverse cultural situations.

280-3 Philosophy of Religion: Faith and Reason
(Also listed as PHL 280.) Selected cross-disciplinary issues arising from philosophy and religion; Judeo-Christian concept of God, grounds for belief and disbelief, revelation and faith, religious language, verification, immortality and resurrection, and karma and reincarnation. Issues are discussed on the basis of selected texts on faith and reason.

281-3 Philosophy of Religion: Contemporary Western Survey
(Also listed as PHL 281.) Cross-disciplinary perspective on philosophical and religious schools of thought in the early twentieth century. Absolute and personal idealism, spirit, value, positivism and naturalism, history and culture, modernism and pragmatism, religious consciousness, and phenomenology. (Previously listed as REL 381.)

290-3 Current Problems
Investigation and discussion of a single current problem in the field of religion.

310-4 Early and Medieval Western Religious Thought
Survey of important themes in religious thought of the major Western traditions. Selected readings from primary sources and secondary interpretations.

311-4 Reformation and Modern Western Religious Thought
Survey of important themes in the religious thought of the major Western traditions. Selected readings from primary sources and secondary interpretations.

315-4 Christianity
Examination of the structures of religious experience that have shaped the development of Christianity in history. Institutional and ritual forms are investigated as systems of meaning against the backdrop of the general history of religions. (Previously listed as REL 309.)

316-4 Judaism: Faith and People
Examination of Judaism as a religious faith and people, with special reference to formative historical, social, ethnic, and cultural factors.

318-4 Contemporary Jewish Thought
Examination of the major themes and issues in the works of contemporary Jewish thinkers (e.g., Borowitz, Herberg, Fackenheim, Kaplan, Rothschild, Heschel, Rubenstein, and Weisel).

321-4 Religions in the Biblical Period
Examination of selected religious movements and/or problems in the Biblical period, and their interconnectedness and mutual influences. (Previously listed as REL 304.)

322-4 Topics in Biblical Literature
Examination of 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. (Previously listed as REL 305.)
383-4 Philosophy of Religion: Secular
(Also listed as PHL 383.) Cross-disciplinary analysis of modes of human awareness through which religious meaning is expressed (sensation, morality, beauty, reason, and human relations). Examination of presuppositions of contemporary secular religion in existentialism.

390-4 Studies in Selected Subjects
Problems, approaches, and topics in the field of religion. Topics vary. (Previously listed as REL 390.)

394-4 Existentialism
(Also listed as PHL 394.) Representative writers of the existentialist movement.

435-3 Black American Religious Thought
Analysis of black American religious thought through critical study of the writings of selected figures who have helped shape black religion from 1780 to the present.

443-4 Asian Religious Philosophy
(Also listed as PHL 443.) Perennial themes in Asian cultures (such as individual, society, and cosmos; appearance and reality; time and history; karma, freedom, and responsibility) as they have been treated in the philosophical traditions of these cultures. (Previously listed as REL 349.)

456-4 Religious Themes in Literature
(Also listed as ENG 406.) Provides intensive study of literary works in terms of significant and recurring religious themes and images as they can be traced in various cultures and literary traditions. (Previously listed as REL 410.)

479-3 Ethics in an Industrial Society: The Responsibility of Business in Society
Ethical responsibilities of business in light of political, moral, social, and religious considerations. Emphasis on analysis and evaluation of the changing framework of responsibilities facing both business organizations and their leaders. (Previously listed as REL 419.)

487-4 Evolution, Religion, and Ethics
(Also listed as BIO 417.) Introduction to the biological, philosophical, theological, and ethical aspects of evolution. (Previously listed as REL 417.)

490-1 to 4 Independent Reading
(Previously listed as REL 481.)

493-4 Seminar in Religion
Topics vary. (Previously listed as REL 400.)

494-1 to 4 Undergraduate Research in Religion
Intensive consideration of problems and issues in a given area of religious study; topics determined in consultation between students and department. Graded pass/unsatisfactory at discretion of department. (Previously listed as REL 450.)

497-4 Foundations for Religion Studies
Introduction to various methods used in religion studies and an application of these methods to concrete data. (Previously listed as REL 429.)
498-3 Workshop
Intensive study of selected problems (e.g., the teaching of religion in the secondary school, medical ethics) to meet particular needs of participating students. Topics vary. (Previously listed as REL 470.)

Russian/RUS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-4, 102-4, 103-4 First-Year Russian
Study of vocabulary and structure of the Russian language; practice in conversation, reading, and writing.

201-4, 202-4, 203-4 Second-Year Russian
Grammar review, reading, and discussion of selected texts with practice in speaking and writing. Prerequisite: RUS 103.

311-4, 312-4 Russian Conversation
Emphasis on the culture of the Russian-speaking world. Prerequisite: RUS 203 or equivalent.

331-4, 332-4 Survey of Russian Literature
Historical survey of Russian literature from its beginning to the present. Prerequisite: RUS 203 or equivalent.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of Russian. Topics vary.

Social Work/SW
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

270-4 Social Work as a Profession
Introduction to the profession: historical development, value base, social systems perspective on social problems, and major fields of practice. Includes required knowledge, skills, and values; critical thinking; problem solving; self-awareness; and appreciation of racial, ethnic, and cultural pluralism.

271-4 Social Welfare and Social Services
Study of social welfare and social services in society; introduction to generalist social work practice; continued career testing. Agency-based field project required. Prerequisite: SW 270.

280-4 Human Behavior in Social Functioning
Analysis of human behavior in assessment of social functioning as it relates to social work intervention. Includes ego psychology, social systems theory, role theory, and learning theory.

320-1 to 6 Workshop in Current Problems
(Also listed as SOC 314.) Intensive study of a particular problem area using professionally qualified personnel from academia and the practice community. Topics vary.

370-4 Community Welfare Organizations and Services
Analysis of community agencies designed to meet social welfare needs. Four-hour field placement per week in a social agency. Prerequisite: SW 270, 280, or permission of instructor.

380-4 Basic Practice Theory
Foundation sequence of generic social work practice theory. Problem assessment, data collecting, data analysis, intervention methods, and evaluation procedures. Introduction to task-centered approach. Prerequisite: SW 270, 280; COM 102.

389-2 to 4 Seminar on Special Problems in Social Work Practice
Selected topics related to current issues in social work practice; readings, research, and discussion.

394-2 to 4 Readings in Social Work
May be taken for letter grade or pass/unsatisfactory.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of social work. Topics vary. May be taken for letter grade or pass/unsatisfactory.

462-4 Social Gerontology
(Also listed as SOC 462.) Study of social aspects of aging, the needs of the aging population, and society's response to these needs.

463-4 Social Gerontology II
Continuation of social gerontology. Prerequisite: SW 462 or equivalent experience.

464-4 Racial and Ethnic Awareness in the Human Services
Impact of racism and ethnicity on the delivery of human services. Examination of interpersonal relationships and institutional policies and procedures; provides opportunity to develop strategies for change at both levels. Prerequisite: SW 370 or permission of instructor.

470-4 Social Welfare Policy
Development, status, and effectiveness of social welfare policies. Application of social work values and knowledge to current policies, programs, and services. Prerequisite: SW 370.

472-4 Social Work and the Law
Legislative base of various social welfare agencies and programs. Legal authority aspects of various social work practice roles. Social work practice relations to judicial, law enforcement, and legislative processes.

473-4 Child Welfare
Framework for categorizing child welfare problems. Historical and current examination of legislation, policies, programs, and service to address child welfare needs, including the role of the child welfare worker. Prerequisite: SW 380.
477-1 to 4 Seminar on Special Problems in Social Welfare Policy and Services
Selected topics related to the operation of the social welfare system in America; issues, trends, and problems.

480-3 to 4 Gerontology Practicum
Supervised learning under direction of faculty and agency staff. Ten weeks/20 hours per week, or twenty weeks/10 hours per week. Prerequisite: SW 462/SOC 462.

481-4 Generalist Practice with Individuals
In-depth study of generalist social work practice theory for the enhancement of social functioning of individuals. Prerequisite: SW 380.

482-4 Generalist Practice with Groups
In-depth study of generalist social work practice theory for the enhancement of social functioning of small groups. Prerequisite: SW 380.

483-4 Generalist Practice with Families
In-depth study of generalist social work practice theory for the enhancement of family social functioning. Prerequisite: SW 380.

484-4 Generalist Practice with Organizations and Communities
In-depth study of generalist social work practice theory for the enhancement of social functioning in social welfare organizations and communities. Prerequisite: SW 380.

487-4 to 12 Practicum in Social Work
Application of theory to practice in agency settings. Individual supervised learning experiences and on-site seminars under direction of instructor and agency staff. Prerequisite: SW 481.

490-4, 491-4 Research Methods in Social Work I, II
Sequential study of evaluative research design methodology. Development of criteria for the selection and intelligent use of research reports. Evaluation of selected research reports for relevance to social work practice. Prerequisite: SW 370 or permission of instructor.

494-2 to 4 Independent Research in Social Work
May be taken for letter grade or pass/unsatisfactory.

Sociology/SOC
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

General Education Course
200-3 Social Life
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.

Departmental Courses
SOC 201 or 202 is prerequisite for all advanced courses except 210 and 462.

200-3 Social Life
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.

201-3 Modern Society
Problems facing modern society and possible solutions. Exploration of such questions as: What is the nature of modern society? How are modern political, economic, and educational systems organized?

202-1 SIMSOC (Simulated Society)
SIMSOC is a learning game designed to supplement the materials covered in introductory sociology courses. The game involves students as members of a simulated society. May be taken for letter grade or pass/unsatisfactory. Pre- or corequisite: SOC 200.

203-2 SIMSOC II
Builds on experience of SIMSOC I and analyzes societal processes: small group interaction, stratification, leadership roles, political and economic philosophies, and minority relations. Students simulate a society and analyze experience. Graded pass/unsatisfactory. Prerequisite: SOC 202.

204-2 Sociology Career Seminar
Designed to help students think about their futures, become familiar with career options, relate theoretical work to practical concerns, and plan their career work with an awareness of postgraduate needs.

210-3 Courtship and Marriage Analysis
Analysis of family behavior in the United States stressing courtship, preparation for marriage, developmental tasks in marriage, child rearing, and marital tension.

221-3 Exploring Social Issues
Focuses on specific social problems. Topics vary.

231-3 Violence
Defines violence, explores patterns at individual and group levels, and examines explanations for change in quantity and intensity. Areas covered include criminal violence, domestic violence, rape, homicide, and genocide.

301-4 History of Sociological Theory
Historical study of the emergence and development of sociological thought from Adam Ferguson and Montesquieu through the nineteenth century; emphasis on the basic writings of Comte, Spencer, Marx, and others.

303-4 Contemporary Sociological Theory
Analyzes contemporary sociological theory (structural functionalism, symbolic interactionism, critical theory, and phenomenological theory) with a focus on the interpretation of society and on major figures of the twentieth century.
306-4 Introduction to Research Methods
Philosophical and applied issues of sociological investigation. Various means of collecting sociological data are analyzed.

310-4 Sex and Gender Roles
Explores cross-cultural sociological knowledge and theories concerning origin/nature of sex roles; stratification of sexes in various societies; sex roles in institutions of family, education, religion, politics, economics, and health; and other topics including socialization and media.

312-1 to 6 Workshop in Current Problems
Intensive study of a particular problem area using professionally qualified personnel from the academic and community environments. Titles vary. May be taken for letter grade or pass/unsatisfactory.

314-1 to 6 Workshop in Current Problems
(Also listed as SW 320.) Intensive study of a particular problem area using professionally qualified personnel from the academic and community environments. Titles vary. May be taken for letter grade or pass/unsatisfactory.

315-2 Drug and Alcohol Intervention Workshop
Participant observation of the intervention and treatment of drug and alcohol problems including therapy and counseling groups, client/therapist contact, and professionals practicing intervention and confrontation techniques. Prerequisite (one of the following): CNL 461; PSY 311, 331; RHB 301, 407; SW 270, 481, 482, 483; SOC 320, 461; premedical concentration; prenursing concentration; or permission of instructor.

320-4 Sociology of Deviant Behavior
Extensive exploration of the various sociological approaches to the study of deviance and social disorganization with emphasis on contemporary sociological theory and research.

330-4 Criminology
Survey of crime, some causal theories, and attempts at crime prevention in the United States.

332-4 Juvenile Delinquency
Problems of definition and treatment of delinquency. Preparation for further study and work with delinquents.

340-4 Social Organization
Theories and analysis of social organization in its historical and present context. Emphasis on the interrelationship between individuals, the family, and other institutions.

341-4 Social Inequality
Structures, theories, and consequences of social inequality with special emphasis on the United States.

342-4 The Demography of Human Populations
Introduction to factors influencing the structure and growth of human populations and the social consequences of population change. Patterns of fertility, mortality, and migration in today's societies are emphasized, and methods and materials used to study populations are presented.

345-4 Social Change
Explanations of social change in modern societies. Emphasis on identification of sources of change, effects of change throughout society, major trends, and issues for the future.

350-4 Occupations and Society
Investigation, analysis, and discussion of contemporary theories focusing on the relationship of the individual to work.

360-4 Sociology of Family
Sociological analysis of family development over its life cycle. Involved is the relationship of the family to society and the individual. Topics include courtship, marriage, parenthood, adulthood, and aging.

361-4 Religion and Society
(Also listed as REL 361.) 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.

363-4 Sociology of Education
School as a social institution. Internal and external influences, structure of the school social system, and sociological issues affecting the school such as social class factors and equality of educational opportunity.

380-4 Individual and Society
Interaction between society and the individual, forms and content of social relationships, and socialization as a social process. Emphasis on the basic writings of G. H. Mead and others.

390-2 to 4 Directed Readings in Sociology
Readings in areas of specialized interest. May be taken for letter grade or pass/unsatisfactory.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of sociology. Topics vary.

406-4 Applications of Research Methods
Advanced course in social research techniques that provides students the opportunity to design and carry out a full-scale research project within a seminar-like class setting. Students are encouraged to select research problems related to their major interest areas. Prerequisite: SOC 306.

420-4 Human Sexual Alternatives
Course examines alternative sexual lifestyles and behaviors. Employing the concepts of cultural relativity and ethnocentrism, students learn how sexual relationships are perceived and respond to in contemporary American society. Prerequisite: SOC 200.
Courses

Sociology

- 432-4 Penology
  Historical development and critical assessment of penal institutions. Field visits to selected institutions. Prerequisite: SOC 330 or 332 or permission of instructor.

- 433-4 Internship in Corrections and Family
  Supervised field experience in corrections and family agencies (probation, parole, jail, juvenile, adult, and aging). Requires readings, a log, progress reports, and a paper synthesizing readings and field experience.

- 439-4 Selected Topics in Problems/Deviance
  Topics vary.

- 440-4 Bureaucracy and Bureaucrats
  Examination of the nature of modern bureaucratic organizations, their place in society, and consequences of bureaucratic forms for their members and society.

- 441-4 Industrial Sociology
  Cross-cultural analysis of industrialization; organization of relationships within industrial social groups.

- 442-4 Race and Minority Relationships
  Study of intergroup, racial, and ethnic group relations including the processes and consequences of conflict, prejudice, and discrimination.

- 443-4 South Africa and Apartheid
  An introduction to the social history of South Africa and the system of apartheid. Considers several scenarios regarding the future of South Africa and invites reflection upon past and future U.S. involvement in that country. Prerequisite: SOC 200.

- 444-4 Urban Sociology
  Deals with the role of cities in past and present societies, the social and cultural implications of urban living, and special problems associated with city life.

- 446-4 Neighbors and Communities
  What part do the community and the neighborhood play in the social life of modern societies? What makes a good neighborhood, a good community? These and other questions are addressed.

- 450-4 Stress Management
  An investigation and analysis of contemporary theories that suggest an interrelationship between personal stress, distress, varying lifestyles, and a rapidly changing society with transitional values and norms.

- 461-4 Medical Sociology
  Social dimension of health and illness. Consideration of the patterns of disease, along with the organization, provision, and delivery of medical services.

- 462-4 Social Gerontology
  (Also listed as SW 462.) Study of social aspects of aging, the needs of the aging population, and society's response to these needs.

- 463-4 Social Gerontology II
  Continuation of social gerontology. Explores in-depth concepts and issues related to aging. Prerequisite: SOC 462 or permission of instructor.

- 470-4 The Future of the Family
  Investigation, analysis, and discussion of contemporary research focusing on the family as a changing social institution.

- 489-4 Selected Topics in Social Interaction
  Titles vary.

- 490-2 to 4 Independent Research in Sociology
  Field project in an area of interest. May be taken for letter grade or pass/unsatisfactory.

Spanish/SPN

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

- 101-4, 102-4, 103-4 First-Year Spanish
  Study of the vocabulary and structure of the Spanish language; practice in conversation, reading, and writing.

- 201-4, 202-4, 203-4 Second-Year Spanish
  Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Prerequisite: SPN 103 or equivalent.

Advanced Courses

- 311-4, 312-4 Spanish Conversation
  Practice in oral use of Spanish emphasizing the culture of the Hispanic world. Prerequisite: SPN 203 or equivalent.

- 321-4, 322-4 Spanish Composition
  Oral and written composition in Spanish; translations from English into Spanish. Prerequisite: SPN 203 or equivalent.

- 331-4, 332-4 Survey of Spanish Literature
  Historical survey of Spanish literature. 331: from the beginning to romanticism. 332: romanticism to the present. Prerequisite: SPN 312 and 322 or permission of instructor.

- 333-4, 334-4 Survey of Spanish-American Literature
  Reading of prose, poetry, and plays by Spanish-American writers. 333: from pre-Columbian times to romanticism. 334: romanticism to the present. Prerequisite: SPN 312 and 322 or permission of instructor.

- 361-2 Spanish Phonetics
  Study of the vowel and consonant sound system through phonetic method; intonation. Prerequisite: SPN 312 and 322 or permission of instructor.

- 381-1, 382-1, 383-1 Applied Elementary Spanish Instruction
  Spanish majors assist elementary course instructors in conducting classes. For Spanish majors only.
399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of Spanish. Topics vary.
403-4 Advanced Studies: Language/Civilization
Topics vary. Conducted in Spanish.
412-4 Modern Drama
Intensive readings of dramas by playwrights of the nineteenth and twentieth centuries.
421-4 Cervantes
Intensive study of the works of Cervantes including Don Quixote, novelas ejemplares, entremeses, and longer dramatic works. Lectures, discussions, and oral reports on Cervantes and his time.
431-4 Seminar in Spanish Literature
Intensive study of selected topics in peninsular literature. Background lectures, oral reports, and discussions. Topics vary.
432-4 Seminar in Spanish-American Literature
Intensive study of selected topics in Spanish-American literature. Background lectures, oral reports, and discussions. Topics vary.
442-4 Contemporary Latin-American Literature
Readings in the novels, poetry, and drama of various Latin-American writers from the late 1930s to the present.
450-1 to 4 Undergraduate Research in Spanish
Topics vary.
481-4, 482-4 Independent Reading for the Advanced Student
Topics vary.

Statistics/STT
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

164-3 Elementary Statistics I
Numerical descriptive methods; the axioms of probability; events; random variables; expected values; and introduction to the binomial and normal distributions. Prerequisite: MTH 126 or 127 or equivalent or at least Level 4 on math placement test.

165-1 Elementary Statistics Laboratory I
Data-oriented problems in descriptive statistics and probability at the introductory level. Corequisite: STT 164.

265-3 Elementary Statistics II
Statistical inference: point and interval estimation of the mean, the binomial parameter, hypothesis testing, the distribution, and population variance. Linear regression and correlation, least squares, chi-square, and contingency tables. The analysis of variance. Examples from social, industrial, clinical, educational, and other applications. Prerequisite: STT 164.

266-1 Elementary Statistics Laboratory II
Data-oriented problems in statistical inference at the elementary level. Corequisite: STT 265.

343-3 Probability and Statistics for Elementary/Middle School Teachers
Probability and statistical methods applied to real problems. Scientific method of investigation. Data collection, organization, display and analysis. Empirical and axiomatic probability, simulation, variation, sampling, expected values, and statistical inference. Probability and uncertainty. For elementary and special education majors only. Prerequisite: MTH 244.

360-4, 361-4 Applied Statistics I, II
Introduction to applied probability and statistics. Data handling, using electronic calculators, and packaged computer programs. Standard parametric statistical methods considered. Prerequisite: for 360, completion of two calculus courses; for 361, STT 360.

363-3 Engineering Statistics
Introduction to probability, distributions, and statistical methods; using calculus to develop the necessary theory. Prerequisite: MTH 232.

367-2 Introduction to SAS
Introduction to the use of the statistical analysis system, a statistical computing package widely used in industry, government, and academia. Prerequisite: STT 265 or equivalent.

386-1 to 5 Independent Reading in Statistics and Probability
Topics vary.

396-1 to 5 Topics in Statistics and Probability
Titles vary. May be taken for letter grade or pass/unsatisfactory.

401-4 Nonparametric Methods
Distribution-free estimation and hypothesis testing procedures. Includes methods for use in one- and two-sample location and dispersion problems, nonparametric alternatives to ANOVA and regression, goodness-of-fit tests, measures of association, and tests for randomness. Prerequisite: STT 466 or equivalent.

411-4 Applied Time Series
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. Prerequisite: STT 361 (561) or permission of instructor.

424-4 Statistical Control Methods for Quality and Productivity I
Control charts including adaptations, acceptance sampling for attributes and variables data, acceptance plans, sequential analysis, statistics and probability distributions, and applications. Prerequisite: STT 360 or 363 or permission of instructor.

426-4 Reliability and Life Data
Presentation of important models and methods, and analysis of lifetime and survival data. Prerequisite: STT 361 or equivalent.
428-4 Queuing Theory
Stochastic concept of a queuing process is developed. Theories and applications of single and many server queues are presented. Emphasis on applications in engineering and computer science. Prerequisite: STT 360 or 363 or equivalent.

461-4 Theory of Statistics I
Probability models, density and distribution functions, expectation, marginal and conditional distributions, stochastic independence, moment generating functions, central limit theorem, decision theory, and estimation of parameters. Prerequisite: STT 361, MTH 232, or permission of instructor.

462-4 Theory of Statistics II
Hypothesis testing, linear model, and nonparametric methods. Prerequisite: STT 461 or permission of instructor.

464-4 Biostatistics
Classical statistical techniques for analysis and interpretation of research data with emphasis on biomedical applications. Includes descriptive statistics, distributions, experimental design, ANOVA, regression, correlation, contingency table analysis, and nonparametric procedures.

466-4 Statistical Methods I
Classical statistical techniques for analysis and interpretation of research data with emphasis on the use of packaged computer routines and the use of linear models. Includes basic probability and statistics review; simple, multiple, and polynomial regression; indicator variables in regression; and multiple and partial correlation. Nonparametric methods; analysis of categorical data; and exploratory data analysis. Prerequisite: MTH 253 or 355, STT 265 or 361 or equivalent.

467-4 Statistical Methods II
Continuation of STT 466. Includes analysis of variance, multiple comparisons, factorial experiments, analysis of covariance, and randomized block designs. Exploratory data analysis. Prerequisite: STT 466.

469-4 Introduction to Experimental Designs
Use of techniques of experimental designs, blocking, Latin squares, and regression design. One or more statistical computing packages are used to analyze resulting data. Emphasis on applications to various areas of scientific research. Prerequisite: STT 265 or 361 or 363 or equivalent.

496-1 to 5 Topics in Statistics and Probability

Study Skills/SS
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

Credit for Study Skills Courses
Credit for these courses does not count toward a degree.

071-5 Reading Improvement I
To help severely underprepared students acquire the skills and confidence necessary to reduce the passive chores aspects of reading in order to stimulate an enthusiasm for learning in general. Graded pass/unsatisfactory.

072-5 Basic Writing Skills I
Provides intensive instruction for students whose writing skills are significantly below those necessary for success in university-level writing requirements. Graded pass/unsatisfactory.

073-5 Basic Mathematics I
Probability models, density and distribution functions, expectation, marginal and conditional distributions, stochastic independence, moment generating functions, central limit theorem, decision theory, and estimation of parameters. Prerequisite: STT 361, MTH 232, or permission of instructor.

081-5 Reading Improvement II
To help students acquire skills necessary to comprehend a tenth grade textbook; to find the main idea, recognize sentence patterns, deduce meaning of words, and to complete a book report on an outside reading. Graded pass/unsatisfactory.

082-5 Basic Writing Skills II
To provide learning activities enabling students to brainstorm for ideas; develop and organize their writing; revise; edit for grammar, sentence structure, and mechanics; and prepare standard, acceptable final drafts of their writing. Graded pass/unsatisfactory.

083-5 Basic Mathematics II
Continuation of STT 466. Includes analysis of variance, multiple comparisons, factorial experiments, analysis of covariance, and randomized block designs. Exploratory data analysis. Prerequisite: STT 466.

087-1 College Study Strategies
Offers how to advice on topics such as note taking, time management, preparing for exams, textbook skills, memory training, library usage, etc. Individual and group study/counseling offered as time permits.

091-3 Reading Improvement III
Individual instruction designed to help students improve reading skills. Demonstrates how to improve levels of concentration, comprehension, and retention. Special topics include vocabulary, spelling enrichment, and research.
092-3 Fundamental English Skills III
Builds on skills developed in SS 089. Helps students write grammatically correct, logical, concisely organized papers and themes. Course covers paragraph development and concludes with the writing of a 200- to 300-word theme. Prerequisite: SS 089 or equivalent.

093-3 Basic Math Skills III
Available to students who need help in arithmetic functions. Topics include properties of whole numbers, primes and composites, arithmetic operations, decimals, ratios, rates, proportions, percents, and elementary algebra functions.

094-3 Critical Reading Improvement
Critical analysis of content area readings. Emphasis on recognizing organizational patterns; distinguishing fact from opinion; problem solving; logical reasoning; recognizing author's background, intent, attitude, bias, and tone; making inferences; and recognizing propaganda and persuasive writing.

096-3 Psychology Concepts
Introduces students to the field of psychology and to specific psychological principles, concepts, and terminology. May be taken for letter grade or pass/unsatisfactory.

097-3 Biology Survey
Focuses on building a vocabulary of biological terms and acquaints students with the concepts involved in the study of cell biology, heredity, and evolution. 3 hours lecture, 2 hours lab. May be taken for letter grade or pass/unsatisfactory.

098-3 Chemistry Survey
Provides an overview and understanding of twelve principal topics taught in general chemistry. 3 hours lecture, 2 hours lab. May be taken for letter grade or pass/unsatisfactory.

099-3 Geology Survey
Designed for students with no prior knowledge of geology. Provides an overview of basic geological concepts, terms, and their application to everyday living. 3 hours lecture, 2 hours lab. May be taken for letter grade or pass/unsatisfactory.

Theatre/TH
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

See Motion Pictures/TH and Dance/DAN for additional course listings.

General Education Course
214-3 The Theatre in Western Culture
Introduction to the many arts of the theatre including the roles of the actor, playwright, director, designer, critic, and audience. Selected scripts from representative historical periods are examined as an aid in understanding the theatrical event.

Departmental Courses
102-3 Introduction to Technical Theatre
General survey of technical aspects of theatre including its personnel and organization.

110-1 to 3 Theatre Management Activities
Participation in University Theatre productions; specific assignments determined at initial meeting.

120-2 Makeup for the Theatre
Theory and practice of stage makeup. Prerequisite: TH 102.

124-2 Theatre Graphics I: Fundamentals
Drawing for the theatrical designer with emphasis on fundamentals.

125-2 Theatre Graphics I: Media
Drawing for the theatrical designer with emphasis on media. Prerequisite: TH 124 or permission of instructor.

126-2 Theatre Graphics I: Concepts
Drawing for the theatrical designer with emphasis on concepts. Prerequisite: TH 125 or permission of instructor.

144-3.5, 145-3.5, 146-3.5 Acting I
Training imagination, mind, body, and voice of the beginning actor.

147-2, 148-2, 149-2 Acting Aesthetics
Generalized acting course that includes various aspects of movement, vocal technique, improvisation, and scene work. Designed for students who are emphasizing the technical areas of the arts. For technical design majors only. Prerequisite: for 148, TH 147; for 149, TH 148.

210-3 Theatre Technology
Participation in the operation of a production shop. Introduces students to the fundamentals of theatre technology, emphasizing basic processes and materials. Participation in selected department productions required. For B.F.A. technology majors only.

214-3 The Theatre in Western Culture
Introduction to the many arts of the theatre including the roles of the actor, playwright, director, designer, critic, and audience. Selected scripts from representative historical periods are examined as an aid in understanding the theatrical event.

220-3 Stagecraft
Introduction to theory and practice of theatre technology with study of the materials and techniques involved. Includes practice in construction, mounting, and running of productions.

222-3 Theatre Production
Practical study of technical theatre involving participation in a University Theatre production. Students are assigned to either the scene, costume, or properties shop, or to run a theatre production.

224-3 Theatre Graphics II: Drafting
Introduction to and practice with the basic graphics tools, materials, and techniques used in drafting designs for the theatre.
225-3 Theatre Graphics II: Color
Introduction to and practice with the basic color theories, materials, and techniques used in designing for the theatre.

226-3 Theatre Graphics II: Model Making
Introduction to and practice with the basic tools, materials, and techniques of scale model building for the theatre.

227-3 Stage Lighting Technology
Mechanics of stage lighting including behavior of light, lighting instruments, and control systems. Includes study of the functions and duties of the stage lighting technician.

228-3 Scenery Technology
In-depth study of scenery technology and its techniques. Includes the study of scenery construction, metalworking, and the application and details of stage rigging and its equipment. For B.F.A. technology majors only. Prerequisite: TH 220.

229-3 Costume Technology
Introduction to the basics of costume technology. Includes fundamentals of construction, aging, dyeing, and distressing of costumes.

240-1, 241-1, 242-1 Movement for the Actor I
Study of physical alignment, improvisation, warm-up methods, and exploration of movement dynamics as they relate to acting. Basic tumbling and pantomime techniques are introduced. For sophomore acting majors only.

244-3, 245-3, 246-3 Acting II
Second year of acting emphasizes character study. Emphasis on audition at the end of spring quarter. Prerequisite: for 244, TH 146.

254-2, 255-2, 256-2 Theatre Speech I
Second year of speech focusing on expansion and strengthening of the actor's voice. Emphasis on clear articulation and proper enunciation of the phonemes of American Standard English. Prerequisite: for 255, TH 254; for 256, TH 255. Corequisite: for 254, TH 244; for 255, TH 245; for 256, TH 246.

301-3 Design for the Theatre: Art on Stage
Design for the theatre presented as a recognized art form. The analysis of theatre design, costumes, lights, and sets as graphic arts, and in relation to the other theatrical art forms. Prerequisite: TH 102.

304-4 Dramatic Writing
Theory and practice of the techniques of dramatic writing emphasizing the writing of original plays. Prerequisite: ENG 101, 102, or permission of instructor.

310-1 to 3 Theatre Arts Management Practicum
Participation in University Theatre Arts Management activities. Specific assignments determined at initial meeting.

320-6 Applied Theatre Technology I
Practical study in technical execution. Emphasis on daily operation of theatre production facilities and shops. Participation in all major department productions required. For B.F.A. design/technology majors only. Prerequisite: completion of 18 credit hours of TH 210; TH 227, 228, 229, and permission of instructor.

324-3 Lighting Design
Study of lighting design and the behavior of light as an expressive medium of theatrical design. Includes project work with an emphasis on professional technique.

325-3 Set Design
Study of scenic design and the dynamics of stage space use. Includes project design work with an emphasis on professional technique and period design.

326-3 Costume Design
Study of costume design for the theatre. Includes project design work with an emphasis on professional technique and period design.

328-3 Decorative Style through the Ages
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.

329-3 Clothing Style through the Ages
Costume and fashion from prehistoric to modern times. Overview of the history of costume and fashion and how it relates to theatre.

340-2, 341-2, 342-2 Movement for the Actor II
Basic movement skills such as period movement, dancing, and stage combat as they relate to performing; designed to give the performer total perception and to discover the physical and psychological stimulus for movement. For studio acting majors only. Prerequisite: for 340, TH 246.

344-3, 345-3, 346-3 Acting III
First year of Professional Actor Training program. Prerequisite: for 344, TH 246.

350-4 Directing
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. Prerequisite: TH 244.

352-2 Directing Laboratory
Presentation of a one-act play in the studio theatre for departmental and public audiences. Prerequisite: TH 350.
354-2, 355-2, 356-2 Theatre Speech II
Speech for the classical stage. Emphasis on unique demands of communication of dramatic verse text through exploration of Shakespeare, Molière, and Restoration playwrights. Particular attention given to diction or the art of emphasis to illuminate poetic language. Prerequisite: for 354, TH 256; for 355, TH 354; for 356, TH 355. Corequisite: for 354, TH 344; for 355, TH 345; for 356, TH 346.

360-3 The History of the Theatre I
Survey of the history and development of theatrical production from the Greeks through the Renaissance and including primitive forms both ancient and contemporary. Emphasis on the history of play production rather than on literature.

361-3 The History of the Theatre II
Survey of the history and development of theatrical production from the seventeenth century through the present day. Emphasis on the history of play production.

366-3, 367-3, 368-3 Theatre Repertoire I, II, III
Special problems of analysis, acting, and staging plays from various periods of theatre history are explored from a production point of view. 366: from Aeschylus to Jonson. 367: from Beaumont to Chekhov. 368: from Shaw to Albee.

370-3 Creative Dramatics
Study of the nature of creativity in children and of the techniques that develop sensitivity, bodily freedom, characterization, and impression.

375-3 Theatre Management
Operational procedures for school, community, and professional theatre. Includes problems of organization, personnel, budgeting, purchasing, accounting, ticket sales, publicity, promotion, and house management.

390-2 to 4 Projects in Theatre
Advanced individual work.

399-1 to 4 Studies in Selected Subjects
Course of variable content dealing with problems, approaches, and topics in the field of theatre.

410-1 to 3 Stage Management Practicum
Participation in University Theatre Stage Management activities. Specific assignments determined at initial meeting.

420-6 Applied Theatre Technology II
Intensive study of selected aspects of technical theatre. Titles vary. Prerequisite: completion of 18 credit hours of TH 320 required.

424-6, 425-6, 426-6 Advanced Design Studio
Intensive study of theatrical costumes, scenery, and lighting with a focus on script interpretation. Includes practical design work with an emphasis on produced designs, professional development, and specialization in the students’ area of design. Prerequisite: for 425, TH 424; for 426, TH 425.

427-3 Advanced Stagecraft
Advanced study of stagecraft practices including complex scenery layout, rigging, power drive systems, and materials. For B.F.A. design/technology majors only. Prerequisite: TH 220, 227, 229.

429-3 Advanced Theatre Crafts
Lecture/workshop class with variable topics including property and furniture building, scenic painting, welding, draping, etc. Topics vary.

440-2, 441-2, 442-2 Movement for the Actor III
Visualizing techniques along with specific analysis of the ideas of LeCoq, Marceau, Alexander, Davis, and others. For B.F.A. studio acting majors only. Prerequisite: for 440, TH 342; for 441, TH 440; for 442, TH 441.

444-3, 445-3, 446-3 Acting IV
Second year of Professional Actor Training program. Prerequisite: for 444, TH 346.

447-3, 448-3 Acting Thesis Project
Intensive work on a final creative performance project. For senior acting studio majors only. Prerequisite: TH 444.

450-3 Studies in Directing
Provides intensive study of selected aspects of directing for the theatre. Titles vary.

451-3, 452-3 Directing Thesis Project
Original directed research culminating in a creative performance project. For B.F.A. directing majors only. Prerequisite: TH 352.

454-2, 455-2, 456-2 Theatre Speech III
Thorough analysis and study of sounds of foreign dialects and regional accents. Students explore transformation of their own voices. Students also learn to vary their stage voices for age and character roles. Prerequisite: for 454, TH 356; for 455, TH 454; for 456, TH 455. Corequisite: for 454, TH 444; for 455, TH 445; for 456, TH 446.

495-3 to 12 Workshop in Theatre
Intensive study of special topics or problems, or intensive experience in theatrical presentation according to particular needs of participants. Titles vary.

498-12 to 15 Professional Theatre Internship
Placement of superior upper-division B.F.A. theatre majors in various professional theatres as management or production interns. For B.F.A. theatre majors only.

University Division/UD
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-2 Freshman Seminar: The University Experience
Overview of higher education, nature of scholarly study, academic requirements and organization of the university, selection of degree programs, characteristics of academically successful students, study strategies, and academic coping skills.
**University Honors/URH**

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-1 to 4 Directed Study
Faculty-directed research or reading.

201-3 to 4 Studies in the Humanities
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.

202-3 to 4 Studies in the Social Sciences
Explores the social sciences comparatively, stressing similarities and differences in themes, methods, materials, theoretical constructs, and problems. Focuses on such topics as people and groups or institutions and bureaucracies.

203-4 Studies in the Natural Sciences
Varying topics or issues in the natural sciences approached in an interdisciplinary framework. Course permits intensive coverage of subject matter while also focusing on the interrelationships of the natural scientific disciplines.

400-3 to 4 University Honors Seminar
Emphasis on broadly interdisciplinary topics or issues. Topics vary.

**Urban Affairs/URS**

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

311-4 Introduction to Urban Affairs
Interdisciplinary introduction to general field of urban affairs. Reviews idea of the city and meaning of urban life.

316-4 American Urban History
(Also listed as HST 316.) Urban history in its broadest sense from the ancient world to the present, providing historical perspective to the contemporary urban metropolitan phenomenon and exploring how and why urban civilization came to be.

317-4 Urban Planning I: Introduction to Urban Planning
(Also listed as GEO 311.) Examination of the development of city planning as a professional discipline. Consideration of the contributions to planning by the arts and sciences. Selected activities and functions of contemporary urban planning agencies are viewed from the perspective of current urban problems.

318-4 Urban Planning II: Principles of Planning
(Also listed as GEO 312.) Includes the role of planning in urban structures, and duties and responsibilities of planning commissions; process of preparing comprehensive plans; population change, the economic base, and determinants of future urban structure. Prerequisite: URS 317.

321-4 City Politics
(Also listed as PLS 321.) Governments and politics of metropolitan regions, government structure and functions, and interest and power relations.

345-4 Public Administration
(Also listed as PLS 345.) Nature and scope of public administration; administrative law; and public interest in the administrative process.

399-1 to 6 Studies in Selected Subjects
Problems, approaches, and topics in the field of urban affairs. Topics vary.

411-4 Seminar in Urban Affairs
Includes development of a major research paper and a bibliography in urban affairs.

490-1 to 4 Special Topics
Advanced study in selected topics in urban studies. Topics may include new developments in methodology or the various subfields of the discipline.

492-6 Urban Affairs Internship
Senior-level internship in which students work in the offices of a local public agency.

**Vocational Education/VOE**

431-3 Evaluation of Student Performance in Trade and Industrial Education
Evaluation of student performance in trade and industrial education. Prerequisite: Trade and industrial teaching or permission of instructor.

455-3 Laboratory Safety and Accident Prevention for Vocational Teachers
To develop an awareness of safety as well as the prevention of accidents in industrial shops and laboratories. Prerequisite: Trade and industrial majors or permission of instructor.

456-3 Vocational Student Organizations
An analysis of vocational youth organizations with emphasis on planning and conducting such programs.

458-3 Selection and Organization of a Trade and Industrial Curriculum
Provides trade and industrial instructors the competencies to prepare/refine a course of study according to the State Department of Education guidelines.
467-3 Organization and Administration in Marketing Education
Understanding the organization and administration of marketing education in Ohio as it relates to federal concept on U.S.O.E. Includes federal and state funding patterns involved in Ohio as well as federal legislation and funding. Prerequisite: ED 211 through 217 or equivalent.

468-3 Methods of Teaching Marketing Education
Selection, organization, and presentation of subject matter in high school and adult extension programs. Methodology and teaching techniques will be emphasized through theory and practice. Participation experience required during enrollment in course. Prerequisite: ED 211 through 217 or equivalent. Corequisite: ED 323.

469-3 Coordination Techniques in Marketing Education
Intensive practical study in vocational education.

471-8 Vocational Teaching: Preservice
The development of basic cognitive and performance skills required by new nondegree vocational teachers to earn a one-year teaching certificate. Prerequisite: Vocational education teacher.

472-2, 473-2, 474-2 Inservice Education I, II, III
Development of basic knowledge, skills, and attitudes required for vocational certification of new, noncertified vocational teachers. Prerequisite: for 472, VOE 471; for 473, VOE 472; for 474, VOE 473.

475-4 Vocational Technical Teaching: Two Week Follow-up
Refinement of curriculum development, motivation, leadership, and human relations skills required by employed one-year certified vocational teachers. Prerequisite: VOE 471, 472, 473, 474.

476-1, 477-1, 478-1 Inservice Education IV, V, VI
Development of basic knowledge, skills, and attitudes required for vocational certification of new noncertified vocational teachers. Prerequisite: for 476, VOE 471, 472, 473, 474, 475; for 477, VOE 476; for 478, VOE 477.

481-3 Curriculum in Marketing Education
Securing, evaluating, and organizing instructional material and the development of curriculum and experiences for high school marketing education cooperative classes and adult marketing education courses. Prerequisite: ED 211 through 217, VOE 467.
The following technical courses are part of technical education programs leading to associate degrees and are offered only at the Wright State University Lake Campus.

Technical Courses

Engineering Technology/TEG

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

130-3 Numerical Computations
Provides a solid numerical-methods package to drafting students on graphical representations of engineering applications, using either canned or self-composed software. A computer software package is used to demonstrate and illustrate numerical methods: bisection, Guass elimination, Lagrange interpolation, linear regression, the trapezoidal rule, and Euler’s method. 2 hours lecture, 2 hours lab. Prerequisite: TEG 270. Corequisite: TEG 202.

131-3 Statistical Process Control
Emphasis is on classic probability as it serves the practical tools of statistical process control and single, double, sequential, variable, and continuous sampling plans. Prerequisite: TMT 115, TEG 225.

141-2 Development of Engineering and Technology
Historical perspective of the development of engineering, science, and technology, including the inter-relationship of technology and society.

144-3 Introduction to Engineering Graphics
Lectures, classroom discussion, and drawing board work are combined to help students gain knowledge and acquire skills needed to produce drawings and understand drafting theory. Includes units in sketching, lettering, applied geometry, orthographic projections, dimensioning, sectional views, and pattern developments. 1 hour lecture, 4 hours lab. Corequisite: TMT 113.

145-4 Engineering Drawing I
Lecture, classroom discussion, and drawing board work are combined to help students gain knowledge and acquire skills needed to produce orthographic projections by the use of descriptive geometry methods. Course includes analysis of points, lines, and planes. 2 hours lecture, 4 hours lab. Prerequisite: TEG 144. Corequisite: TMT 114.

146-3 Engineering Drawing II
A course emphasizing the design process in the development of assembly drawings. Includes tolerancing, threads and fasteners, design and working drawings, assemblies, specifications, and materials lists. 1 hour lecture, 4 hours lab. Prerequisite: TEG 145. Corequisite: TMT 115.

147-3 Engineering Drawing III
Covers geometric dimensioning and tolerancing as it applies to assembly drawing, threads, fasteners, jigs and fixtures, bolts, gears, chains, and powertrains. Machinists’ handbook is used as an engineering tool to provide a strong technical background. 1 hour lecture, 4 hours lab. Prerequisite: TEG 146, 170.

148-3 Electronic Drawing
Drafting for students in electronics technology. Topics include preparation of electrical drawings including block and ladder diagrams, pictorial and schematic wiring diagrams, and printed circuit layouts. Stresses use of electrical and electronic symbols and nomenclature. Computer drafting introduced. 1 hour lecture, 4 hours lab.

150-3 Manufacturing I
An introduction to many of the basic tools, machines, and measuring instruments used in the manufacturing industry. Emphasizes safety in the operation of industrial metalworking equipment, understanding material cutting science, and logical process decisions. Lab work emphasizes turning operations and permanent metal joining techniques. 2 hours lecture, 2 hours lab. Prerequisite: TMT 113 or permission of instructor.

151-3 Manufacturing II
A continuation of TEG 150. Course involves further discussion of manufacturing processes as well as hands-on machining experience. Lab work emphasizes milling operations, welding operations, and EDM machining. 2 hours lecture, 2 hours lab. Prerequisite: TEG 150 or permission of instructor.

152-3 Automated Manufacturing I
An introduction to the operation and programming of computer numerically controlled equipment. Students learn the process of writing and editing of CNC programs and the basic principles of CAD-CAM software operation. 2 hours lecture, 2 hours lab. Prerequisite: TEG 151, TMT 114, or permission of instructor.

153-4 Automated Manufacturing II
A step-by-step process through the operation of computer-aided-manufacturing software to manipulate part programs and produce standard CNC code. Uses the basic principles of CAD for product design and CAM to set-up tool paths, offsets, and other required information to produce the CNC codes and manufacture the parts. 2 hours lecture, 4 hours lab. Prerequisite: TEG 152, TMT 114, or permission of instructor.

160-4 DC Circuit Analysis
Introduces the basic concepts of electricity including current, voltage, power, and energy. Series, parallel, and combination circuits are covered along with applications using these circuits. Network analysis techniques are used to study complex circuits. 2 hours lecture, 4 hours lab. Corequisite: TMT 113.
161-4 AC Circuit Analysis
Introduction to inductive and capacitive reactance along with fundamental magnetic concepts. Series and parallel and combination passive circuits are covered along with applications using these components. The network analysis techniques introduced in TEG 160 are continued in this course and applied to these circuit elements. Filter theory along with the operation of motors and generators are presented. 2 hours lecture, 4 hours lab. Prerequisite: TEG 160, TMT 113. Corequisite: TMT 114.

170-5 CAD I
Takes students step-by-step in the learning of computer-aided design, from the beginning to the advanced level. Users learn to create, store, edit, and plot drawings. Principles of twodimensional drawing are taught. Units covered include, but are not limited to, starting and saving drawings, creating layers, and using colors, text fonts, polylines, and object snap. 2 hours lecture, 6 hours lab. Prerequisite: TEG 144 or permission of instructor.

201-4 Statics
Forces, resultants, components, moments; equilibrium of particles and rigid bodies; analysis of structures; centroids and moments of inertia. Prerequisite: TMT 115, PHY 101, 111.

202-4 Dynamics
Motion of particles and rigid bodies; displacement, velocity, acceleration, force, and mass; torque, mass moments of inertia, rotation; work-energy relation for particles and rigid bodies. Prerequisite: TEG 201.

203-4 Strength of Materials
Axial stress and strain, shear stress and strain, torsion of circular shafts, combined stresses; shear and bending moment diagrams; deflection of beams columns; modes of failure. Prerequisite: TEG 202.

204-4 Machine Design I
An advanced mechanical drafting and design exercise into applied elements of machine design, requiring student comprehension of machine functions, ergonomics, design parameters, mechanisms, and materials and processes. Use of CAD system is necessary to develop such drafting exercises. Material selection, fasteners, belt, chain and gear drives, design of castings, weldments, jigs and fixtures, and drafting exercises. 2 hours lecture, 4 hours lab. Prerequisite: TEG 147.

205-4 Design Analysis with CAD/CAM
Design as an engineering process; engineering graphics (numerical methods) and digital computers (geometric modeling in threedimensional design space with the use of a MicroCAD laboratory or a mainframe) for problem solution. Application of the design analysis method to problems involving industrial design products. Includes exercises to integrate CAD and CAM facilities. 2 hours lecture, 4 hours lab. Prerequisite: TEG 270.

206-4 Technical Illustration
Focuses on the development of reproducible pictorials—obliques, isometrics, axonometrics, perspectives, and autoshade drawings. Use of MicroCAD helps to make the transition from mechanical drawing to geometric modeling. 2 hours lecture, 4 hours lab. Prerequisite: TEG 205, TMT 115.

209-3 Fluid Mechanics
Basic study of hydraulics and pneumatics. Applications of hydraulic principles to industrial control systems and compressed air systems to common industrial control circuits. Prerequisite: PHY 101, 111; TMT 113.

210-4 Electronics I
An introduction of the basic concepts of semiconductor devices and their applications. Diode and bipolar transistors are discussed. Diode applications—half wave rectifier, full wave rectifier, bridge rectifier, and power supply are covered. Class A amplifier gain, input and output impedance, bias techniques, and transistor configurations are explained. 2 hours lecture, 4 hours lab. Prerequisite: TEG 161.

211-3 Computer Programming Technology
Begins with basic PC fundamentals and continues through the study of higher-level languages using BASIC for solution of engineering problems. Typical PC applications are presented. 2 hours lecture, 2 hours lab.

212-4 Materials Science
The fundamental chemistry and application of chemistry and physics to the commonly encountered engineering materials including ferrous and nonferrous metals, ceramics, polymers, and composites. 3 hours lecture, 2 hours lab. Prerequisite: PHY 101, 111.

218-3 Facility Design
Material flow, warehousing, quantitative techniques, estimating, planning, and design of industrial and service facilities with emphasis on material handling, production and office layout, management, personnel, aesthetics, and the environment.

219-3 Industrial Safety
Introduces a comprehensive approach to the central factors involved in developing safe practices and conditions. Imparts the ability to set up safety organizations, to conduct safety education and training, and to recognize the effect of plant layout, mechanical guards, and occupational safety hazards on injury rates and accident costs. Includes the economic and engineering aspects of fire protection, personal protection equipment, industrial waste disposal, and the analysis of a safety program.

220-4 Electronics II
Continuation in the discussion of transistor amplifiers. AC load line, class B power amplifier, and transformer couplings are discussed. JFET, E-MOSFET, D-MOSFET transistors, their biasing techniques, and applications are introduced. 2 hours lecture, 4 hours lab. Prerequisite: TEG 210.
221-4 Automation and Robotics
Industrial robots: types, applications, and current developments. Automation in the industrial setting. Computer Integrated Manufacturing (CIM), vision systems, voice control, industrial sensors and their applications. Labs include robot programming, set-up and operation of flexible manufacturing cells. 2 hours lecture, 4 hours lab. Prerequisite: TEG 211 or 233 or permission of instructor.

225-3 Work Measurement
An overview of the concepts of work measurement and its use in the industrial environment. The techniques behind time and motion study, work sampling, predetermined time systems, and standard data are studied. Emphasis is on understanding the application and ramifications of work measurement in manufacturing organizations. Explores the Continuous Improvement concept, or Just-in-Time (JIT) and how it is impacted by work measurement. Visits the related disciplines of production management, materials management, capacity analysis, and manufacturing flow and facilities. Prerequisite: TMG 201.

226-3 Metallurgy
Terminology and designations of materials used in manufacturing and the relation between the nature of materials and their properties. Altering of properties for design purposes and methods of comparing and testing materials for selection. 2 hours lecture, 2 hours lab. Prerequisite: TEG 212.

227-3 Human Factors Engineering
Human and machine interactions are considered. Emphasis is on the psychological, anthropological, and environmental factors which affect the design of the workstation and products. Prerequisite: PSY 105, TMG 270.

230-4 Electronics III
Introduction of differential and operational amplifier and their various applications. Summing amplifier, integrator, comparator, active filter, and oscillators are discussed. 555 timer and solid state switching circuit such as Schmitt trigger and multivibrator are introduced. 2 hours lecture, 4 hours lab. Prerequisite: TEG 220.

232-4 Industrial Electronics
Motors, transformers, components used in electrical control circuits such as contacts, relays, timers, etc. Phase shift control, photoelectric control, time-delay circuits, static switching, and servo-mechanisms. 2 hours lecture, 4 hours lab. Prerequisite: TEG 230.

233-3 Process Control
Industrial processes: types, examples, and common problems. Sensors used in industrial processes. Fundamentals of industrial control. Programmable controllers: programming, hardware, operation, applications, installation, maintenance, and trouble-shooting. 2 hours lecture, 2 hours lab. Prerequisite: TEG 161 or permission of instructor.

235-4 Industrial Systems
A study of the components that make up a typical industrial control system. Various sensor and control subsystems are evaluated both individually and in combination. Industrial applications of lasers and fiber optics are studied with regard to sensor and data communication usage. 2 hours lecture, 4 hours lab. Prerequisite: TEG 232.

240-4 Digital Logic
Boolean algebra, combination logic, and more complex digital circuits such as flip-flops, registers, counters, decoders, encoders, multiplexers, adder, and timer. 2 hours lecture, 4 hours lab. Prerequisite: TEG 240 or permission of instructor.

241-4 Microprocessors I
Covers 8086 assembly and machine language programming. The internal functionality of current microcomputers are presented along with basic system architecture and multiplexed display circuitry. 3 hours lecture, 2 hours lab. Prerequisite: TEG 240 or permission of instructor.

242-4 Microprocessors II
A continuation of TEG 241 expanding the study to include typical microcomputer subsystems such as keyboards, floppy and hard disc systems, dot matrix and laser printers, and video interfaces. Diagnostic techniques are presented and practiced. 3 hours lecture, 2 hours lab. Prerequisite: TEG 241.

243-4 Microprocessors III
A continuation of TEG 242 covering hardware, software, and repair of complete microcomputer applications. CAD, communications systems, control systems, and measurement applications are presented. 3 hours lecture, 2 hours lab. Prerequisite: TEG 242.

250-3 Electronic Communications
Methods of transmission of digital data are studied, particularly modem and LANs. Exposure to setup, installation, and trouble-shooting is given. 2 hours lecture, 2 hours lab. Prerequisite: TEG 242.

270-5 CAD II
Provides students with CAD techniques on computer operating systems and software customization with the use of macros and menus. Covers adapting a CAD system to one's own needs. Principles of three-dimensional drawing will be covered. Students learn to use the User Coordinate System and other AutoCAD options to create and view pictorial views of objects. 2 hours lecture, 6 hours lab. Prerequisite: TEG 170.

295-1 to 4 Independent Study
Directed studies on selected topics.

297-1 to 5 Studies in Selected Topics
Problems, approaches, and topics in the field of engineering. Titles vary. May be taken for letter grade or pass/unsatisfactory.
Technical Accountancy/TAC

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

210-3, 211-3 Financial Accounting I, II

220-3, 221-3 Cost Accounting I, II
Practice of cost accounting and cost procedures in industry: job order, process, and standard cost methods. Prerequisite: for 220, ACC 203; for 221, TAC 220.

224-3 Payroll Accounting
Familiarization of payroll accounting systems, understanding tax laws in relation to payroll, and practical application to records and related tax forms. Prerequisite: ACC 202.

225-3, 226-3 Tax Accounting I, II
Income tax regulations related to business and individual income tax reporting. Prerequisite: for 225, ACC 203; for 226, TAC 225.

241-3 Accounting Information Systems
Analysis of accounting information needs of an organization, alternatives for satisfying these needs, and problems in implementing useful accounting information systems. Prerequisite: ACC 203.

271-3 Fund Accounting
Application of accounting principles to municipalities, governmental entities, and nonprofit organizations. Prerequisite: ACC 203.

280-3 Auditing
Introduction to principles, procedures, and standards involved in the conduct of an audit by an accountant. Prerequisite: ACC 203.

295-1 to 3 Independent Study
Directed studies in selected topics.

297-1 to 5 Studies in Selected Topics
Problems, approaches, and topics in the field of accounting. Titles vary. May be taken for letter grade or pass/unsatisfactory.

299-4 Internship
Practical business experience in accounting for qualified students under the joint planning and coordination of faculty, students, and business representatives.

Technical Administration/TAD

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

232-3 Business Law
Study of law as it relates to business organizations and transactions. Considers the nature and classification of law courts, torts, contracts, corporations, and negotiable instruments.

Technical Data Processing/TDP

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

121-4, 122-4 COBOL I, II
Programming elements of COBOL language; techniques for debugging and interpreting computer output; linkage to subroutines and overlays; file structures involving both sequential and random access; and case studies with business applications. 3 hours lecture, 2 hours lab. Prerequisite: for 121, CS 141 or permission of instructor; for 122, TDP 121.

130-4 BASIC I
Programming elements of BASIC language; techniques for debugging and interpreting computer output; linkage to subroutines and overlays; file structures involving sequential access; and case studies with business applications. 3 hours lecture, 2 hours lab. Prerequisite: CS 205.

210-3 Introduction to Lotus 1-2-3
Use of the electronic spreadsheet as an integrated program that combines spreadsheet processing, word processing, and data base management software with graphics capabilities. Emphasis on how to save, retrieve, extract data, create a spreadsheet, and use worksheet commands, database commands, and graphics commands. 2 hours lecture, 2 hours lab. Prerequisite: CS 205 or permission of instructor.

211-3 Advanced Lotus 1-2-3
Use of electronic spreadsheet that incorporates use of macros, database functions, logical functions and operations, and /X commands. 2 hours lecture, 2 hours lab. Prerequisite: TDP 210.

221-3 Systems Analysis I
Introduction to fundamental concepts of systems development and design. Topics include basic system concepts, planning, elements of systems, performing systems study, and alternatives in systems design. 2 hours lecture, 2 hours lab. Prerequisite: CS 141; TDP 130 or TEG 211.

222-3 Systems Analysis II
Students design and implement an information system from a managerial perspective. Includes analysis of present information flow, systems specifications, equipment selection, and system effectiveness. 2 hours lecture, 2 hours lab. Prerequisite: TDP 221.

230-4 Introduction to Operating Systems
Introduction to the concepts of computer operating systems and resource allocation. Topics include executive options, layered products, multiprogramming and multiprogramming options, utility functions, and memory management. Laboratory assignments consist of generating and tailoring a usable operating system with layered products. 2 hours lecture, 4 hours lab. Prerequisite: CS 141; TDP 130 or TEG 211.
295-1 to 3 Independent Study
Directed study on selected topics. May be taken for letter grade or pass/unsatisfactory.

297-1 to 4 Studies in Selected Topics
Problems, approaches, and topics in the field of data processing. May be taken for letter grade or pass/unsatisfactory. Titles vary.

299-4 Internship
Practical data processing experience under planning and coordination of faculty, students, and business representatives. May be taken for letter grade or pass/unsatisfactory. Completion of 60 hours of course work required.

Technical English/TEN
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

085-4 Basic Writing
Helps students develop and improve writing skills. Subject areas include grammar, sentence structure, paragraph development, essay writing, and proofreading. Cannot be applied toward graduation. Graded pass/unsatisfactory.

Technical Finance/TFI
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

205-3 Business Finance
Introduction to 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. Forms of business financing and fundamental concepts of capital budgeting are analyzed. Prerequisite: ACC 203.

232-3 Real Estate Law
Areas of law commonly concerned with the 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. Prerequisite: TFI 231.

233-3 Real Estate Finance
Major instruments used in financing real estate. Mortgage types, terms, and provisions. Default and foreclosure. Land contracts, leases, sales, and lease-back arrangements. The mortgage market, determinants of supply and demand, and the effect of interest rate changes. Financial institutions and government operations. Alternative methods for financing income properties. Successful completion of this course meets part of the licensing requirements for a real estate broker in Ohio. Prerequisite: TFI 231.

234-3 Real Estate Valuation and Appraisal
Purpose of appraisal and the concept of value. Factors influencing value. Determination of economic value through capitalization of future cash flows. Methodology for determining the capitalization rate, and use of compound interest tables. Market conditions. Replacement cost, depreciation, and land value. Successful completion of this course meets part of the licensing requirements for real estate broker in Ohio. Prerequisite: TFI 231.

231-3 Real Estate Principles and Practices
Orientation to the broad field of real estate. Principles, practices, and issues of real estate. The real estate market, types of real property interest, contracts, deeds, financing, home ownership, leases, investment, management, purchasing, selling, role of real estate agent, search, examination, registration of title, title closing, the valuation process, city planning, zoning, public housing, urban renewal, and state regulation. Major issues and trends involving economic, political, and social implications in the field of real estate.

295-1 to 3 Independent Study
Directed study on selected topics. May be taken for letter grade or pass/unsatisfactory.

299-4 Internship
Practical business experience in finance for qualified students under the planning and coordination of faculty, students, and business representatives. Completion of 60 hours of course work required.

Technical Management/TMG
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-3 Fundamentals of Management
Basic fundamentals of the process of management applied to business organizations. Emphasis on the practical applications of techniques employed by managers at lower and middle organizational levels.

202-3 Labor Relations
Consideration of the practices, principles, and organization of collective bargaining. Study of the techniques of mediation and the agencies involved in mediation. Causes and cures of labor disputes. Prerequisite: TMG 201 or 210.
210-3 Personnel Management
Study of the characteristics, purposes, objectives, and techniques of supervision and coordination of the work of others. Discussions include employment interviewing, training procedures, supervision, and improvement of human relations. Prerequisite: TMG 201.

250-3 Purchasing
Composition of a purchasing office; buying the right quality from the right vendor; buying to support inventory control; make-versus-buy philosophy; and some legal aspects of buying. Prerequisite: TMG 201 or TMK 202.

270-3 Production Management
Introduction to the functions making up the production system, including product parts manufacture, process routing, quality standards, work measurement, work methods, scheduling, and inventory control. Prerequisite: TMG 201.

280-3 Small Business Management
Stresses business management functions important to small businesses, including single ownership, partnership, incorporation, capitalization and financing requirements, legal requirements, production, and marketing arrangement. Prerequisite: TMG 201 or 210.

290-3 Comprehensive Marketing
Integrates students’ two-year programs and promotes marketing problem-solving capabilities. Prerequisite: TMK 201 or TMG 202.

295-1 to 3 Independent Study
Directed studies on selected topics.

299-4 Internship
Practical business experience in retail marketing for qualified students under the joint planning and coordination of faculty, students, and business representatives. Completion of 60 hours of course work required.

Technical Marketing/TMK
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

201-3 Basic Marketing I
Study of the functions of marketing in the American business system with emphasis on economic and social determinants. Prerequisite: EC 201, MTH 127.

202-3 Basic Marketing II
Practical evaluation of marketing functions relative to product development, promotion, pricing, distribution, and establishing market objectives. Prerequisite: TMK 201.

210-3 Promotion
Use of personal selling, sales promotion, and advertising techniques. Prerequisite: TMK 201.

220-3 Retailing
Study of the marketing functions at the retail level. Emphasis on institutional practices at various types of retail establishments. Prerequisite: TMG 201, MTH 127.

228-3 Retail Management
Concentrates on merchandise management and retail control. Includes application of buying procedures and analysis of current merchandising policies. Prerequisite: TMK 202, 220.

240-3 Salesmanship and Sales Supervision
Analysis of personal skills essential to successful selling. The personal characteristics and merchandising knowledge necessary for customer development are discussed. Mass and personalized methods of sales supervision are considered. Prerequisite: TMK 201 or permission of instructor.

290-4 Comprehensive Marketing
Integrates students’ two-year programs and promotes marketing problem-solving capabilities. Prerequisite: TMK 202, TMG 202 or 210; or permission of instructor.

295-1 to 3 Independent Study
Directed studies on selected topics.

299-4 Internship
Practical business experience in retail marketing for qualified students under the joint planning and coordination of faculty, students, and business representatives. Completion of 60 hours of course work required.

Technical Mathematics/TMT
Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

113-5 Technical Mathematics I
An introduction to the real number system and operations with signed numbers; solving first-degree equations; products and factoring of monomials and polynomials; working with solving equations and radicals; and an introduction to right triangular trigonometry.

114-4 Technical Mathematics II
Includes work with vectors; j operators, logarithmic functions; solving equations; some theory of equations, inequalities, properties of the trigonometric functions, and variations. Prerequisite: TMT 113.

115-4 Technical Mathematics III
Topics covered are variations, progressions, properties of the trigonometric functions, inverse trigonometric functions, and analytical geometry. Prerequisite: TMT 114.

116-4 Technical Calculus
Introduces topics of calculus such as limits, derivative and applications, integration and applications, differentiation of transcendental functions, methods of integration. Prerequisite: TMT 115.
Technical Office Administration/TOA

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

101-1 Professional Development I
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

102-1 Professional Development II
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

103-1 Professional Development III
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

104-1 Professional Development IV
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

105-1 Professional Development V
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

106-1 Professional Development VI
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

110-1 Keyboarding
Basic keyboarding instruction in touch typewriting on an alphanumeric keyboard.

115-3 Business/Office Correspondence
Study of terminology and formats used in business communication: letters, reports, memos, dictation, grammar fundamentals, sentence construction, punctuation rules, and spelling. Prerequisite: ENG 101, OA 212.

223-3 Word Processing Simulations
Simulations in word processing functions using merge, list processing, math, and sort. Covers medical, legal, and executive situations. 6 hours lab. Prerequisite: OA 222.

224-3 Office Procedures I
Integrates the development of operational functions and decision-making competencies. Simulations in executive, medical, and legal procedures including experiences in telephone and communication techniques, word processing, and administrative services. Prerequisite: OA 211; TOA 250 or 251 or 252.

225-3 Office Procedures II
Continuation of TOA 224. Prerequisite: TOA 224.

226-3 Office Procedures III
Continuation of TOA 225. Prerequisite: TOA 225.

230-3 Records Management
Filing systems and procedures. Combines technical aspects of records technique with sound principles of management.

231-3 Office Management
Office organization; emphasis on work flow, proper equipment, problems in supervision, human relations, and management techniques.

233-3 Machine Transcription I
Executive, medical, and legal transcription from cassettes, emphasizing skills needed in today's word-processing environment. 2 hours lecture, 2 hours lab. Prerequisite: OA 213; OA 220; TOA 250 or 251 or 252.

234-3 Machine Transcription II
Continuation of TOA 233 including executive, medical, and legal projects. 2 hours lecture, 2 hours lab. Prerequisite: TOA 233.

235-3 Calculator Applications
Operation of electronic display and printing calculators using business math and office applications. 2 hours lecture, 2 hours lab.

237-3 Copy Processing
Emphasis on producing duplicated work using paste-ups, designs, and copy processing. Includes use of copiers and auxiliary equipment. 2 hours lecture, 2 hours lab. Prerequisite: OA 211.

241-3 Beginning Desktop Publishing
Business course using a computer graphic design system to produce typeset-quality text and graphics such as newsletters, letterheads, brochures, and manuals. 2 hours lecture, 2 hours lab. Prerequisite: OA 211 or TOA 110.

242-3 Advanced Desktop Publishing
Continuation of TOA 241 using more advanced features and applications of graphics and software programs. 2 hours lecture, 2 hours lab. Prerequisite: TOA 241.

250-3 Executive Terminology
Study of executive terminology and other basic aspects of the executive assistant profession. Corequisite: OA 211.

251-3 Legal Terminology
Study of legal terminology and other basic aspects of the legal assistant profession. Corequisite: OA 211.

252-3 Medical Terminology
Study of medical terminology and other basic aspects of the medical assistant profession. Corequisite: OA 211.

295-1 to 3 Independent Study
Directed studies in selected topics.

297-1 to 5 Studies in Selected Topics
Problems, approaches, and topics in the field of office administration. May be taken for letter grade or pass/unsatisfactory. Titles vary.

299-4 Internship
Practical secretarial experience under the joint planning and coordination of faculty, students, and business representatives. May be taken for letter grade or pass/unsatisfactory. Completion of 60 hours of course work required.
Technical Psychology/TPS

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

204-3 Industrial and Organizational Psychology
Scientific psychological principles, procedures, and methods applied to human behavior in industrial organizations. Prerequisite: PSY 105.

Technical Study Skills/TSS

Note: See quarterly class schedule or departmental adviser for further enrollment restrictions, requirements, or special course information.

051-1 Reading Comprehension I
Emphasis is placed on improving reading skills, comprehension, concentration, and related vocabulary development. This is accomplished by using individualized instruction in sequenced kits and other related materials. Graded pass/unsatisfactory.

052-1 Reading Comprehension II
Continuation of TSS 051. Graded pass/unsatisfactory.

061-1 Vocabulary Development I
Allows students to proceed at their own pace. Provides students with one-to-one instruction. Students work toward improved vocabulary, concentrating on techniques of unlocking meaning through contextual clues and knowledge of Latin and Greek roots, prefixes, and suffixes. Students formulate data retention cards to master specific or general vocabulary of a discipline/course. Graded pass/unsatisfactory.

062-1 Vocabulary Development II
Continuation of TSS 061. Graded pass/unsatisfactory.

071-1 Speed Reading I
For students interested in becoming a more flexible reader. Emphasis is on refining skills and improving rate, comprehension, and efficiency. Recommended for those students who already read adequately, but desire techniques which will decrease the amount of time spent in reading. Helps determine at what rates different materials should be read. Graded pass/unsatisfactory.

072-1 Speed Reading II
Continuation of TSS 071. Graded pass/unsatisfactory.
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University Officers

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Academic Officers

College of Business and Administration, Dean
Waldemar M. Goulet

College of Education and Human Services, Dean
Frederick J. Gies

College of Engineering and Computer Science, Dean
James E. Brandeberry

College of Liberal Arts, Dean
Perry D. Moore

College of Science and Mathematics, Dean
Richard S. Millman

WSU Lake Campus, Dean
Donald A. Carlson

School of Graduate Studies, Dean
Joseph F. Thomas, Jr.

School of Medicine, Dean
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School of Nursing, Dean
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Criteria for Ohio Residency

Ohio Board of Regents Rule 3333-1-10
Ohio student residency for state subsidy and tuition surcharge purposes

(A) Intent and Authority
(1) It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.
(2) This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by section 3333.31 of the Revised Code.

(B) Definitions
For purpose of this rule:
(1) A "resident of Ohio for all other legal purposes" shall mean any person who maintains a twelve-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.
(2) "Financial support," as used in this rule, shall not include grants, scholarships, and awards from persons or entities that are not related to the recipient.
(3) An "institution of higher education," as used in this rule, shall mean any university, community college, technical institute or college, general and technical college, medical college, or private medical or dental college that receives a direct subsidy from the state of Ohio.

(C) Residency for Subsidy and Tuition Surcharge Purposes

The following persons shall be classified as residents of the state of Ohio for subsidy and tuition surcharge purposes:

(1) A dependent student, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for twelve consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.
(2) A person who has been a resident of Ohio for the purpose of this rule for at least twelve consecutive months immediately preceding his or her enrollment in an institution of higher education and who is not receiving, and has not directly or indirectly received in the preceding twelve consecutive months, financial support for persons or entities who are not residents of Ohio for all other legal purposes.
(3) A dependent child of a parent or legal guardian, or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time, self-sustaining employment and established domicile in the state of Ohio for reasons other than gaining the benefit of favorable tuition rates.

Documentation of full-time employment and domicile shall include both the following documents:
(a) A sworn statement from the employer or the employer's representative on the letterhead of the employer or the employer's representative certifying that the parent or spouse of the student is employed full time in Ohio.
(b) A copy of the lease under which the parent or spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which the parent or spouse is the owner and occupant; or if the parent or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that the parent or spouse resides at that residence.

(D) Additional criteria that may be considered in determining residency for the purpose may include but are not limited to the following:

(1) Criteria evidencing residency:
(a) If a person is subject to tax liability under section 5747.02 of the Revised Code;
(b) If a person qualifies to vote in Ohio;
(c) If a person is eligible to receive state welfare benefits;
(d) If a person has an Ohio's driver’s license and/or motor vehicle registration.

(2) Criteria evidencing lack of residency:
(a) If a person is a resident or intends to be a resident of another state or nation for the purpose of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the student qualified for that loan program by being a resident of that state or nation);
(b) If a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits (see paragraph (D)(2)(a) of this rule).

(E) Exceptions to the general rule of residency for subsidy and tuition surcharge purposes:

(1) A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education shall be considered a resident of Ohio for these purposes.
(2) A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
(3) A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.
(4) A person who is transferred by his or her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.
(5) A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.
Procedures

(1) A dependent person classified as a resident of Ohio for these purposes under the provisions of paragraph (C)(1) of this rule and who is enrolled in an institution of higher education when his or her parents or legal guardian remove their residency from the state of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.

(2) In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of twelve months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraph (C)(1) or (C)(2) of this rule.

(3) For students who qualify for residency status under paragraph (C)(3) of this rule, residency status is lost immediately if the employed person upon whom resident student status was based accepts employment and establishes domicile outside Ohio less than twelve months after accepting employment and establishing domicile in Ohio.

(4) Any person once classified as a nonresident, upon the completion of twelve consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding twelve consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident.

Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.

(5) Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

(6) Any institution of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which may be deemed necessary to a full and complete determination under this rule.

Guidelines for Interpretation and Application of Ohio Board of Regents' Residency Rule 3333-1-10

1. Section (B)(1)
   a. A "twelve-month place or places of residency in Ohio," within the meaning of this section, shall mean the maintenance of living quarters in the state. This may be fulfilled in whole or in part by the rental of a dormitory room. It should not be interpreted so as to require unbroken physical presence in the state, so long as the "place" of residence is maintained. Residency is not lost, therefore, by vacationing out of the state. However, should an individual leave for the entire summer to be employed out of state, the legitimacy of a claim that twelve-month residency in Ohio has been maintained should be seriously questioned.
   b. A person who is "qualified as a resident to vote in Ohio" and receive state welfare benefits need only be physically present here for thirty days and have declared himself or herself to be a resident. This should not be interpreted so as to require anyone to actually register to vote or apply for welfare benefits.
   c. Persons "who may be subjected to tax liability under section 5747.02 of the Revised Code" are defined in Revised Code 5747.01(0) as follows:
      "Resident" means:
      (1) an individual who is domiciled in this state;
      (2) an individual who lives in and maintains a permanent place of abode in this state, and who does not maintain a permanent place of abode elsewhere, unless such individual, in the aggregate, lives more than 335 days of the taxable year outside this state.

   The essential reason for this requirement is to insure that persons who do enjoy residency benefits also have such income as they have subjected to Ohio taxation.

   d. A person who has not "declared himself or herself to be or allowed himself or herself to remain" a resident of another state for "these and other purposes" shall mean one who does not retain an out-of-state driver's license, automobile registration, or voting residence, or who does not receive such things as loans or scholarships from another state when residency in that state is a prerequisite. This total disavowal of residency in another state must be for a full year's time before Ohio residency can be granted under this rule.

   2. Section (B)(2)
      The purpose of this section is to insure that persons receiving direct and substantial parental or family support from out of state shall not be allowed Ohio residency. Occasional small gifts that are not a substantial part of a person's maintenance should not disqualify that person from achieving residency. Similarly, the receipt of grants, loans, or scholarships from the federal government, corporations, foundations, or banks that are not simply conduits for family support, or from other states when this is not precluded by section (B)(1), should not disqualify a person.

   3. Section (B)(5)
      a. Certain immigration visas carry with them the current legal status, by virtue of federal treaties and agreements, to enable the holder to remain in the United States and establish resident status. A student who holds one of these visas can therefore be considered for resident status for tuition surcharge purposes in the same manner as any other student assuming that the requirements specified in section (B)(1) of this rule are met.
      b. The determination of the twelve-month residency requirement for an alien admitted for permanent residence, if necessary, shall include any portion, up to twelve months, of the elapsed time between the date of application for adjustment of status to lawful permanent resident and the date of application for residency for these purposes. All other relevant requirements under section (C) of this rule must also be adhered to in making the residency determination.
      c. To change his or her immigration status from temporary to permanent, an alien must file INS form I-845. The college or university residency official can obtain the date an application was accepted by INS through an information release form (G-641) signed by the alien. There is also a nominal service fee that must accompany the release form.
      d. In instances where, prior to August 10, 1978, aliens, for reasons of quota, have not been permitted to officially file for permanent residency (INS form I-845), but have had their visa preference petition approved by INS, and have been allowed to remain and to work in the United States, the residency official may use the INS verified petition approval date* to document intent to become a permanent resident. For these cases, the visa preference petition must be filed by the individual seeking Ohio residency, if adult, and not by another party. In the case of minors, the head of the family's application for such minors is acceptable. All other relevant requirements under section (C) of this rule must be adhered to in making the residency determination.

   4. Section (C)(1)
      The intent of the term "dependent student" is to tie the residency of persons who have never emancipated themselves from their parents to those parents. This connotes a continued, unbroken dependency.

   Children who emancipate themselves from parents who are Ohio residents and later return to dependency on those parents may be awarded immediate residency status by providing satisfactory documentation of renewed dependence and evidence of compliance with other pertinent provisions of the rule, including physical presence in the state.

   *Immigration and Naturalization Service terminology for the petition approval date is "third preference visa priority date."
“Enrollment” under this section shall commence with the first day of classes at the institution attended.

5. Section (C)(2)
The term “resident” in this section shall mean a person who meets the requirements of section (B)(1).

6. Section (C)(3)
The intent of this provision is to speed up the “residency clock” for family members (i.e., spouse, dependent children) whose domicile follows that of a full-time employed person who has moved into Ohio for employment purposes. Rather than being subject to out-of-state tuition rates for the first twelve months of the employed person’s presence in Ohio, the dependent children and spouse of the full-time employed person are eligible for resident tuition rates immediately—provided that the move to Ohio was not for the purpose of gaining favorable tuition rates, and that appropriate documentation is provided.

In accordance with the provisions of section (F)(5) of the rule, residency officers may request such documentation in addition to the materials specifically described in (C)(3) as they deem necessary to conclusively determine employment status and domicile. Also, residency officers may request documentation of application and acceptance dates pertaining to employment and instructional programs as necessary to weigh questions of intent.

7. Section (E)(1)
  a. “Gainfully employed,” as used in this section, shall mean engaged in an income-producing occupation. The spouse of the person gainfully employed may also be considered gainfully employed provided he or she is providing full-time services as a homemaker.
  b. “Full-time” employment, as used in this section, shall be construed in light of the standards applicable to a given occupation.
  c. A “part-time program of instruction” for these purposes is to be defined by an institution as that term is otherwise applied.

8. Section (F)(2)
  a. The “United States military service,” as used in this section and in section (E)(3), shall mean persons holding status in the branches of military service, whether performing actual military duty or on assignment elsewhere.
  b. “Dependents” under this section and under section (E)(3) shall be limited to members of the immediate family who are in fact dependent on the member of the military for a substantial part of their financial support.
  c. Active service of commissioned officers of the Public Health Service shall be deemed to be active military service in the armed forces of the United States for determining residency for tuition purposes.
  d. “Domicile,” under this section, shall mean the place a person declares to be his or her home for voting and taxation purposes.

9. Section (E)(4)
“Domicile,” under this section, is to be interpreted in the same manner as (E)(2).

10. Section (E)(5)
  a. For purposes of this rule, a migrant is defined as someone who makes or has made his or her livelihood in hiring out to do seasonal work and has traveled interstate for this purpose.
  b. The income earned in Ohio shall have been subjected to Ohio taxation.
  c. In making a determination under this section, an institution may consider any probative evidence submitted by a person. Any evidence taken may be required to be sworn.

11. Sections (F)(1), (F)(2), and (F)(3)
  a. A person’s parents or legal guardian shall be deemed to have removed their residency from Ohio when the person with whom a student resides and upon whom he or she is financially dependent leaves the state with no present intention of returning to resume residency.

b. An “academic degree program” shall not include the associate degree when the person receiving such degree continues full-time pursuit of a baccalaureate degree.

c. For students who qualify for residency status under (C)(1) or (C)(2), a period of twelve months following removal of the dependent student’s parents or legal guardian is permitted during which residency is not lost.

d. Students who qualify for residency status under (C)(3) will lose residency status immediately if the employed person upon whom immediate resident student status was based accepts employment and establishes domicile outside Ohio less than twelve months after accepting employment and establishing domicile in Ohio. If the employed person retains Ohio employment and domicile for twelve months or more, the student would qualify for residency under (C)(1) and would retain residency status as described in a., b., and c. above.

12. Section (F)(4)
  a. A change in residency status under this section is never automatic, and must be initiated by an application for such change by the person seeking it.
  b. “Clear and convincing proof” is that standard of evidence that is beyond mere preponderance, but falling short of the “beyond a reasonable doubt” test. It requires that there exist no substantial evidence, direct or circumstantial, conflicting with that proffered by a person applying for a change in residency status.
  c. In making a determination under this section, and institution may consider any probative evidence required to be sworn.

13. Section (F)(5)
It is incumbent upon a person to apply for a change in residency, and his or her failure to do so as soon as he or she is entitled to a change shall preclude the granting of residency retroactive to that date. A change in residency shall be prospective only from the date such application is received.

14. Section (F)(6)
No person need be afforded the opportunity for personal appearance before the person or body making a determination under this rule; however, any such opportunity that is afforded any one person must be equally granted to others. A person or body making a determination under this section shall allow the student an opportunity to submit all documentary evidence that such student wishes in support of a claim of residency, and shall consider all such evidence that is relevant and probative.
Appendix II
Notice to Students


The following notice is published as a public service for the student body. Federal regulations require annual notice to students on this subject.

Wright State University has for many years regulated access to student records. Federal regulations now apply in this area and are designed to protect the privacy of student records. The statute and regulations govern access to records, their release, and the rights of students to review and, if necessary, challenge information they believe to be inaccurate.

This notice, to be published annually, is a digest of these regulations. The full text is available for student examination in the Office of Student Development, the Office of the Registrar, the Affirmative Action Programs Office, and in most college offices. A more detailed digest of the act may also be found in the Student Handbook.

Under the act, "education records" means, with certain exceptions as listed below, those records, files, documents, or other materials related directly to a student and maintained by any unit of the university. The following categories of information are exempt and are not considered to be "education records": (a) records made by university personnel which are in the sole possession of the maker and are not revealed to any other person; (b) records maintained by campus security; and (c) medical and counseling records used solely for treatment. (Records pertaining to students, which are maintained by university offices, are official records, and as such, remain the property of Wright State University.)

Students may seek access to their records by submitting a written request to their classes each quarter, a request to withhold information, if: (a) the student is named to the dean's list) if the student requests either of the above options.

Education records or personally identifiable information other than public information may be released without the written consent of the student to the following only: (a) other university officials who have legitimate educational interests; (b) officials of other schools in which the student intends to enroll, provided the student is informed of the record transfer, receives a copy of the record, if desired, and has an opportunity to challenge the content of the record; (c) authorized representatives of certain federal agencies, and education agencies, or state educational authorities under certain conditions; (d) in connection with a student's application for, or receipt of, financial aid; (e) state and local officials or authorities to whom information is specifically required to be reported or disclosed pursuant to the Ohio Revised Code adopted prior to November 19, 1974; (f) organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction, if such studies are conducted in such a manner as will not permit the personal identification of students and their parents by persons other than representatives of such organizations and such information will be destroyed when no longer needed for the purpose for which it is conducted; (g) accrediting function; (h) parents of a dependent student as defined in section 152 of the Internal Revenue Code of 1957; (i) in connection with an emergency, appropriate persons may be advised if the knowledge of such information is necessary to protect the health and safety of the student or other persons; (j) in compliance with judicial order or pursuant to lawfully issued subpoena, upon condition a reasonable attempt to notify the student is made in advance of the compliance therewith.
446

Index

Abbreviations used in course listings, front
Academic Council, 35
Academic officers, 324
Academic performance scholarships, 49
Academic advising, 44; services, 44
Accountancy, 73
Accreditations, 27
Acting. See Theatre Arts
Activities, extracurricular 34
Adding courses, 46
Additional Scholarships for Incoming Students, 50
Administration. See Management
Admission standards: transfer students, 39; university, 38. See also individual colleges and School of Nursing
Adult and Transfer Services, 45
Advising: academic, 44; mandatory, 58. See also individual colleges
Affirmative Action policy, 17
African and African-American Studies minor, 134
Alternative academic programs, 22
Anatomy, 183
Anthropology minor, 167
Anthropology, 166
Appeals process, 42
Appendix I, 339
Appendix II, 343
Archives and Special Collections. See University Library
Areas of study, 17
Art and Art History, 135
Art Education. See Visual Arts K-12
Arts for the Disabled and Handicapped, Center for, 26
Associate degrees, 206
Association of Black Business Students, 72
Athletics, 34
Auditing courses, 57
Bachelor's degrees, list of, 17. See also individual colleges and degree programs
Biochemistry, 184
Biological Sciences Education, 86
Biological Sciences, 184
Biomedical and Human Factors Engineering, 115
Biomedical Engineering, 115
Biophysics, 200
Board of Trustees, 324
Bolinga Cultural Resources Center, 26
Bookstore, University, 33
Branch campus. See Wright State University Lake Campus
Business and Administration, College of, 17, 69: Admission, 70; Degree Requirements, 71; Graduation Requirements, 72; Honors Program, 72; Major Programs, 73; Student Organizations, 72
Business Comprehensive Education, 87
Business Economics, 75
Business minor, 72
Career Planning and Placement. See Career Services
Career Services, 31
Catalog, Guide to Using, front
Center for Arts for the Disabled and Handicapped, 26
Certificate program: cartography, 145; photogrammetry, 145; professional writing, 143; remote sensing, 145; Teaching English to Speakers of Other Languages (TESOL), 143; technical writing, 143
Certification, teaching, 83, 85, 134, 183
Chemistry Education, 88
Chemistry, 188
Chemistry—ACS Certified, 188
Chemistry—Premedical Orientation, 189
Class rank, 57
Classical Humanities minor, 137
Classics, 136: Greek, 137; Latin, 137
College Work-Study Program, 53
Combined Liberal Arts/Business Program, 134
Communication minor, 139
Communication, 138
Communications Comprehensive Education, 89
Competitive Scholarships, 50
Computer Engineering, 118
Computer Science Education, 120
Computer Science, 120
Computer services, 25
Concurrency, 25
Continuing students: 44; scholarships for, 51
Cooperative Education, 22. See also individual degree programs
Counseling, academic. See Academic advising
Counseling, career. See Career Services
Counseling, personal. See Psychological Services Center
Course: additions, 46; audit policy, 57; changes, fees for, 46; descriptions, 217 (for specific page numbers, see Abbreviations and Page Numbers for Course Descriptions, front); drops, 46; load, 45; numbering system, front; repeat, 57
Credit by examination, 22
Credit hour, 45
Criteria for Ohio Residency, 48, 340
Cultural Activities, 36
Dance. See Theatre Arts
Dean's list, 57
Deficiency, academic, 38, 59
Degree application deadlines, 57
Degree-seeking students, 38
Degrees: applying for, 57; offered at university, 17; university requirements for, 56. See also individual colleges and degree programs
Design/Technology. See Theatre Arts
Developmental Education, 44
Directing/Stage Management. See Theatre Arts
Disabled students, services for, 30
Dismissal from university, 58
Diversity Statement, 17
Doctor of Philosophy degrees offered at university, 22
Dropping of courses, 46
Dual majors. See Interdisciplinary study; individual degree programs
Early Childhood Education Pre-K–KP Program, 83, 91
Earth Science Education, 92
Economics (Business and Administration), 74
Economics (Liberal Arts), 140
Economics Education, 93
Education and Human Services, College of, 18, 81:
Admission and Retention Standards/Advising, 84;
Degree Requirements, 84; Honors Program, 83;
Recommendations for Certification, 85;
Undergraduate Program, 83
Electrical Engineering, 123
Elementary Education, 94
Employment, student, 53
Engineering and Computer Science, College of, 18,
113; Admission and Advising, 114; Degree
Requirements, 115; Doctor of Philosophy Degree,
114; Honors Program, 115; Master of Science
Degree, 114
Engineering Physics, 125
English Education, 95
English Language and Literatures, 141
English minor, 144
Environmental Health Sciences, 187
Equal Opportunity/Affirmative Action policy, 17
Executive officers, 324
Extracurricular activities, 34

Facilities, 32
Faculty: listing, 323; officers, 338
Family Educational Rights and Privacy Act of 1974,
344
Fees: paying, 46; refunds, 48; schedule, 47
Finance, 75
Finance, Insurance, and Real Estate, 75
Financial aid, 48
Financial Services, 76
Food service, 33
Foreign language requirement, 133
Foreign study programs. See Student exchange
programs; study abroad
French, 150

General Education requirements, 61: Checklist, 67;
Honors Sections, 62; Substitutions, 62
General Science Education, 96
Geography Education, 96
Geography minor, 149
Geography, 144
Geological Sciences, 190
Geological Sciences/General Geology Option, 191
Geological Sciences/Geophysics, 192
Geological Sciences/Ground Water Technology
Option, 193
German, 150
Good standing, 58
Government, Student, 35
Grading system, 56
Graduate Studies, School of, 21
Graduation requirements. See individual colleges and
School of Nursing
Graduation: fee, 47; with honors, 60
Grants, 53
Grants-in-aid. See Sports
Greek, 137
Ground Water Technology, 193
Guide to Using This Catalog, front

Health services, 32
High school students: college preparation for, 38;
superior, 44
History Education, 96
History minor, 148
History of the university, 14
History, 146
Honors Program, University, 23, 59. See also
individual degree programs
Honors, graduation with, 58
Housing, student, 33
Human Factors Concentration/Experimental
Psychology, 202
Human Factors Engineering, 117
Human Resource Management, 77

Immunology, 197
Important Phone Numbers, inside front cover
Institutional Transfer, 40
Insurance. See Finance, Insurance, and Real Estate
Inter-Club Council, 35
Interdisciplinary study, 23
International students, 43. See also Student
Development, Office of
International Studies, 148

Lake Campus, Wright State University, 22, 203
Languages Education, 97; French K–12, 98; German
K–12, 98; Latin K–12, 99; Spanish K–12, 99
Languages. See Classics; Modern Languages
Latin Education 7–12, 100
Latin, 137
Liberal Arts minor, 134
Liberal Arts, College of, 18, 131: Admission and
Advising, 132; Degrees and Areas of Study, 133;
Interdisciplinary Study, 133; Minors, 134
Library, University, 24
Loans, 53

Management Information Systems, 78
Management, 76
Mandatory advising, 58
Marketing, 80
Master's degrees offered at university, 21
Materials Science and Engineering, 128
Mathematics and Statistics minor, 197
Mathematics and Statistics, 193
Mathematics Education, 101
Mathematics/Applied Mathematics Concentration, 195
Mathematics/Computing Concentration, 195
Mathematics/Pure Mathematics Concentration, 194
Mathematics/Statistics Concentration, 195
Mechanical and Materials Engineering, 127
Mechanical Engineering, 127
Media, student, 36
Medical Care, 32
Medical Technology, 186
Medicine, School of, 22
Memberships, university, 27
Microbiology and Immunology, 197
Military personnel, residency determination. See
Criteria for Ohio Residence
Minors: African and African-American studies, 134;
anthropology, 167; business, 72; classical
humanities, 137; communication, 139; English,
Index

144; geography, 149; health science, 134; history, 148; liberal arts, 134; mathematics and statistics, 197; modern languages, 157; music, 156; offered at university, 19; political science, 160; psychology, 202; religion, 162; sociology, 166

Mission statement, university, 15

Modern Languages Education. See Languages Education

Modern Languages minor, 157

Modern Languages, 149

Motion Pictures. See Theatre Arts

Music minor, 156

Music, 152: composition, 154; education, 154; extracurricular, 34; history and literature, 154; performance, 152; theory, 154

Nondegree undergraduate students, 43

Notice to Students, 344

Nursing, 177

Nursing, Wright State University-Miami Valley School of, 19, 175

Officer training, 23

Ohio residency, rules governing, 48

Ombudsman, 35

Operations Management, 79

Organizational Services Group, 26

Organizations, student, 35

Parking Services, Office of, 32

Performing arts. See Cultural Activities; Dance; Music; Theatre

Petitions: for admission by transfer students, 39; for exceptions to scholastic regulations, 59; readmission after dismissal, 59

Ph.D. See Doctor of Philosophy degree

Philosophy, 156

Phone Numbers, inside front cover

Physical Education K-12, 102

Physics Education, 103

Physics, 197

Physics/Biology Option, 200

Physics/Computing Option, 199

Physics/Geophysics Option, 199

Physics—For Students Entering with A-P Calculus or Equivalent, 198

Physiology and Biophysics, 200

Placement testing, 39, 44

Political Science Education, 104

Political Science minor, 160

Political Science, 157

Post-Master's Degree Program, 22

Prelaw Study, 21

Premedical and Predental Study, 20

Preprofessional Advising, Office of, 31

Preprofessional Planning, 31

Preprofessional programs, 20

Professional Psychology, School of, 22

Psychological Services Center, 31

Psychology minor, 202

Psychology, 200

Psychology/Sociology Education, 104

Public Safety, Department of, 32

Publications, student, 36

Quarter system, 45

Radio station, student, 36

Rank, class, 57

Readmission after dismissal, 59

Real Estate. See Finance, Insurance, and Real Estate

Refunds, tuition, 48

Registrar, Office of the, 38

Registration, 45

Regulations, scholastic, 56

Rehabilitation Education, 83

Rehabilitation, 104

Religion minor, 162

Religion, 160

Removing High School Deficiencies, 59

Repeating courses, 57

Research methods requirement, 133

Residence halls. See Student housing

Residence requirements for graduation, 56

Residency, Ohio, rules governing, 48

Resources for special interest, 26

Returning students: admission procedure for Business and Administration, 71; admission procedure for university, 44

ROTC program, 23

Scholarships, 48

Scholastic regulations, 56

School of Nursing, Wright State University-Miami Valley, 19, 175: Admission and Promotion, 176

Science and Mathematics, College of, 19, 181: Admission and Advising, 182; Degrees and Areas of Study, 183; Doctor of Philosophy Degree, 182; Master of Science Degree, 182

Science Comprehensive Education, 105

Second teaching fields, education, 18, 83

Security. See Public Safety

Selected Studies, 162

Social and Industrial Communication, 163

Social Studies Comprehensive Education, 106

Social Work, 164

Sociology and Anthropology, 165

Sociology Education. See Psychology/Sociology Education

Sociology minor, 166

Sociology, 165

Southwestern Ohio Council for Higher Education. See Consortium

Spanish, 150

Special Education, 108

Special Services Program for Underprepared Students. See Developmental Education

Speech, 109

Sports, 34

Stage management. See Theatre Arts

Statistics, 194

Student activities and organizations, 35

Student body, 14

Student classification, 57

Student Development, Office of, 30

Student employment, 53

Student exchange programs, 23

Student Health Services, 32

Student housing, 33

Student Installment Payment Plan (SIPP), 46

Student services, 30
Students: continuing, 44; nondegree undergraduate, 43; returning, 44, 71; superior high school, 44; transfer, 39
Study: abroad, 23; areas of, 17; interdisciplinary, 23
Superior high school student program, 44
Teacher education. See Education and Human Services, College of
Teaching certification candidates, 44
Teaching certification, 83, 85, 134, 183
Technical associate degree programs, 210
Technical course descriptions, 313. For specific page numbers, see Abbreviations and Page Numbers for Course Descriptions, front
Testing Services, University, 45
Theatre Arts, 168: Acting, 171; Dance, 168; Design/Technology, 172; Directing/Stage Management, 172; Motion Pictures, 169; Motion Picture History, Theory, and Criticism, 170; Motion Picture Production, 170; Theatre Studies, 173;
Transcripts: issued by registrar, 38; required for admission, 38; required of transfer students, 39
Transfer credit, 39. See also Alternative academic programs; individual colleges
Transfer module, 40, 42
Transfer students, 39
Tuition, 47
Tutoring, 44
University Center, 32
University Division, 44
University faculty officers, 338
University Honors Program, 23, 59
University Library, 24
University: degree requirements, 56; history, 14; mission, 15
Urban Affairs, 173
Using This Catalog, Guide to, front
Veterans: Affairs, Office of, 32; benefits, 53
Visual Arts K-12, 109
Vocational Business Education, 110
Work-Study Program, 53
Wright brothers collection, University Library, 24
Wright Start, 44
Wright State University Lake Campus, 22, 203:
  Academics, 205; Associate of Arts and Associate of Science degrees, 206; Mission, 204;
  Preprofessional Areas of Study, 205; Technical Associate Degree Programs, 210
Campus Map

AW Administrative Wing
Executive offices

A Allyn Hall
Allyn Hall Lounge (food service), first floor
Bursar/Fee payment, first floor
Information Center, first floor
Mailboxes (student), first floor
Ombudsman, first floor
Public Safety Communication Center (24 hours), first floor
Registration, first floor
School of Nursing, fourth floor
Student Health Services, basement
Student Information Systems, first floor
University Communications, second floor
University Publications, second floor

AF Alumni Affairs/WSU Foundation Building
Alumni Affairs
WSU Foundation and Development

FB Art Annex

BH Biological Sciences Building

BL Brehm Laboratory

CM Campus Ministry Center

CD Wright State University Childhood Development Center

LA Computer Services Library Annex

CA Creative Arts Center
Box Office, Theatre, commons
Celebration Theatre, basement, theatre wing
Concert Hall, commons
Festival Playhouse, commons
Recital Hall, commons
University Art Galleries, first floor, art wing

EM Engineering and Mathematical Sciences Building
College of Engineering and Computer Science

NC Ervin J. Nutter Center
Sports information

F Fawcett Hall

FW Frederick A. White Center
Forest Lane Apartments
FL Forest Lane Community Center

FC Forest Lane Community Center

G Garden for the Senses
(Alara E. Weisenborn)

GA Gaza House

H Hamilton Hall
Student residence hall

HS Health Sciences Building
School of Professional Psychology

L Library
Parking Services, basement
Wright Brothers Collection, second floor

LA Computer Services Library Annex

LH Lowery House

MS Medical Sciences Building
Admissions, School of Medicine
Communications, School of Medicine
Fordham Health Sciences Library, School of Medicine

M Millett Hall
Bicycle Shop (food service), basement
Bolinga Cultural Resources Center, first floor
College of Education and Human Services, third floor
College of Liberal Arts, fourth floor
Honors Program, first floor
Public Safety/Police, basement

NC Nutter Center, Ervin J.
Sports information

O Oelman Hall
College of Science and Mathematics, first floor
School of Graduate Studies, first floor

PE Physical Education Building
Recreational facilities, basement and first floor

R Rike Hall
College of Business and Administration

S Student Services
Admissions
Adult and Transfer Services
Financial Aid
Handicapped Student Services
International Student Programs
University Division
Advising of freshmen
Tutoring
University Placement Services/Cooperative Education
Veterans Affairs

TV Television Center

TS Transportation Services Center

UC University Center
Administrative Offices and Facilities
University Center director's office, upper level
Bookstore, lower level
Computer room, lower level
Conferences and Continuing Education, upper level
Dining Services Office, upper level
Faculty Dining Room, upper level
Game rooms, lower level
Housing Office, lower level
Meeting rooms, lower level
Presidential Dining and Conference rooms, upper level
Rathskeller (lounge), lower level
Student Development, lower level
University Cafeteria, upper level
University Center Box Office, lower level
Student Organizations, lower level
Greek Office
The Guardian, student newspaper
Inter-Club Council
Nexus

Nutter Center Parking

1 Handicapped
Corporate Box
2 Unrestricted
3 Handicapped
4 Unrestricted
5 Faculty
Staff
6 Student
University vehicles
Unrestricted
7 Handicapped
A permits
Faculty
Staff
B permits
Unrestricted
8 Unrestricted