This section provides descriptions of all courses given by the University at both the undergraduate and graduate levels.

Refer to the statements on Credits and Course Formats and Credits in the Academic Programs section of the catalog.

COURSE NUMBERS

001-099 Non-Credit Courses
Courses with these numbers are offered by the University to permit students to make up deficiencies in previous training or to improve their facility in certain basic skills without earning credit.

For information about remedial-developmental-preparatory courses, consult the Undergraduate Education section of this catalog.

100-299 Undergraduate Courses
Courses with these numbers are for undergraduate students. They carry no graduate credit, although graduate students may be admitted to such courses in order to make up prerequisites or to gain a foundation for advanced courses.

For information about remedial-developmental-preparatory courses, consult the Undergraduate Education section of this catalog.

300-499 Advanced Undergraduate Courses
Courses with these numbers are for advanced undergraduate students. They constitute the advanced portion of an undergraduate program leading to the bachelor's degree. A graduate student may carry 400 level courses for credit upon approval of the student's major department or school. In exceptional cases, a graduate student may petition the dean of his or her college, in writing, for approval of a 300 level course for graduate credit.

500-699 Graduate-Professional Courses
Courses with these numbers are courses in the graduate-professional programs. A graduate student may carry these courses for credit with approval of the major department or school.

800-899 Graduate Courses
Courses with these numbers are for graduate students. Advanced undergraduates with Honors College status or a grade-point average in their total programs equal to or greater than the minimum requirement for graduation with honors may be admitted to 800-899 level courses. The student must obtain approval of the relevant department. More than half of the credits of the total required for a master's degree shall be taken at the 800 and 900 level except as specifically exempted by the dean of the college.

900-999 Advanced Graduate Courses
Courses with these numbers are exclusively for graduate students and primarily for advanced graduate students. A master's degree student may take these courses with the approval of the major department or school, with the exception of courses numbered 999 (doctoral dissertation research). Admission to a doctoral degree program is a prerequisite of all courses numbered 999.

VARIABLE CREDIT COURSES
For each variable credit course, the range of credits for which a student may enroll in a given semester and the maximum number of credits that a student may earn in a course with a reenrollment provision shall be specified.

MULTITITLED COURSES
A multititled course is one that has been approved as such by the Academic Council upon recommendation of the University Committee on Curriculum (UCC). Approval of a course as a multititled course shall include authorization for subtitles for the course to be established. Approved subtitles shall have the same status as separately approved courses that are included in the Descriptions of Courses section of the University catalog.

For example, an approved subtitle shall be included in the Schedule of Courses in place of the general, authorized title for the multititled course and shall appear on students' academic records (including transcripts). Multititled courses are identified as such by the coding '(MTC)' after the course titles in the Descriptions of Courses.

Multititled courses may have approved subtitles. A subtitle of a multititled course represents a subject matter area that is related to the course and that has been approved as a subtitle for that course by the UCC.

COURSE LISTINGS

| A | 405. Biomedical Electronics |
| B | Fall. 3(3-0) May reenroll for a maximum of 6 credits. Interdepartmental with Electrical Engineering. |
| C | P: MTH 132, PHY 184. C: BME 406. R: Open only to juniors and seniors. |
| D | Electronic components and circuits. Physiological measurements, transduction of physiological events to electrical signals. |
| E | SA: BME 409. |

To understand the characteristics of a course, consider each of the five categories depicted below.

A The course number and title including The course number suffix:
H — Honors Course
1 — Type I
2 — Type II
3 — Type III
4 — Type IV
5 — Type V
Remedial-Developmental-Preparatory Courses

For additional information about remedial-developmental-preparatory courses, consult the Academic Programs section of the catalog.
The designation code for a Tier II writing course in parentheses following the course title:
(W) — Tier II writing course

For additional information, refer to the statement on Writing Requirement in the Academic Programs section of the catalog.

The diversity designation code for an integrative studies course in parentheses following the title:
(I) — international and multicultural diversity
(N) — national diversity
(D) — national diversity, and international and multicultural diversity

For additional information, refer to Integrative Studies in the Academic Programs section of the catalog.

The designation code for a multitled course:
(MTC) — multitled course

B Information about the semester of offering, credits and instructional model, reenrollment provision, and interdepartmental status.
The semester(s) the course is authorized to be given is identified. Lack of staff or low student enrollment may preclude offering the course every semester for which it is authorized.
The semester credits are designated to include class hours a week as follows: A(B-C) where:
A = Number of semester credits.
B = Number of class hours a week in lecture/recitation/discussion.
C = Number of class hours a week in laboratory.
If the credit is indicated to be variable, the number of credits is to be determined at the time of enrollment. If the course is a non-credit course, the credit-equivalent is given in brackets. Reenrollment provision is identified. Interdepartmental course status is identified.

C Information about prior academic preparation and student access to the course:
P — Prerequisite = a course to be completed either prior to, or concurrently with, another course. A prerequisite is identified by course alpha code and number. The course alpha codes and corresponding names are listed below. The prerequisite may be satisfied by the course or courses indicated or equivalent background.
C — Corequisite = a course that must be completed concurrently with another course. A corequisite is identified by course alpha code and number. The course alpha codes and corresponding names are listed below.
R — Restriction = a limitation on student access to the course. For example, a course may be available only to juniors and seniors, or to students in a specified major, department, or college.

A student who is unsure of eligibility for enrolling in a course should contact the department, school, or college that administers the course.

D A brief description of the course.

SA — Semester Alias = a course identified as the equivalent of another course.

Course Designations
Throughout the programs of study given in this section, courses are identified either by course alpha codes, course numbers, and course titles (example: CPS 100 Introduction to Computing) or by course names and course numbers (example: Computer Science 100). Additional information about specific courses may be found in the Descriptions of Courses section of the catalog.

To assist in locating information about specific courses in the Descriptions of Courses, the course alpha codes are listed below in alphabetical order. For each alpha code, the corresponding name is given.

ALPHA CODE NAME

ACC Accounting
ADV Advertising
AE Agricultural Engineering
AEC Agricultural Economics
AEE Agricultural and Extension Education
AFR African Languages
AL Arts and Letters
AMS American Studies
ANP Anthropology
ANR Agriculture and Natural Resources
ANS Animal Science
ANT Anatomy
ARB Arabic
AS Aerospace Studies
ASC Audiology and Speech Sciences
ASN Asian Languages
AST Astronomy and Astrophysics
ATL American Thought and Language
ATM Agricultural Technology and Systems Management
BCH Biochemistry
BCM Building Construction Management
BE Biosystems Engineering
BIM Biomechanics
BME Biomedical Engineering
BOT Botany and Plant Pathology
BS Biological Science
CAS Communication Arts and Sciences
CE Civil Engineering
CHE Chemical Engineering
CHS Chinese
CJ Criminal Justice
CLA Classical Studies
COM Communication
CPS Computer Science
CSS Crop and Soil Sciences
EAD Educational Administration
EC Economics
EE Electrical Engineering
EGR Engineering
ENE Environmental Engineering
ENG English
ENT Entomology
ES Earth Science
FCF Family and Child Ecology
FE Food Engineering
FI Finance and Insurance
FM Family Medicine
FPM Family Practice
FOR Forestry
FRN French
FSC Food Science
FSM Food Systems Economics and Management
FW Fisheries and Wildlife
GBL General Business and Business Law
<table>
<thead>
<tr>
<th>ALPHA CODE</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEN</td>
<td>Genetics</td>
</tr>
<tr>
<td>GEO</td>
<td>Geography</td>
</tr>
<tr>
<td>GLG</td>
<td>Geological Sciences</td>
</tr>
<tr>
<td>GRK</td>
<td>Greek</td>
</tr>
<tr>
<td>GRM</td>
<td>German</td>
</tr>
<tr>
<td>HA</td>
<td>History of Art</td>
</tr>
<tr>
<td>HEB</td>
<td>Hebrew</td>
</tr>
<tr>
<td>HEC</td>
<td>Human Ecology</td>
</tr>
<tr>
<td>HED</td>
<td>Human Environment and Design</td>
</tr>
<tr>
<td>HM</td>
<td>Human Medicine</td>
</tr>
<tr>
<td>HNF</td>
<td>Human Nutrition and Foods</td>
</tr>
<tr>
<td>HRI</td>
<td>Hotel, Restaurant and Institutional Management</td>
</tr>
<tr>
<td>HRT</td>
<td>Horticulture</td>
</tr>
<tr>
<td>HST</td>
<td>History</td>
</tr>
<tr>
<td>IAH</td>
<td>Integrative Studies in Arts and Humanities</td>
</tr>
<tr>
<td>IDC</td>
<td>Interdisciplinary Courses</td>
</tr>
<tr>
<td>IM</td>
<td>Internal Medicine</td>
</tr>
<tr>
<td>ISB</td>
<td>Integrative Studies in Biological Sciences</td>
</tr>
<tr>
<td>ISP</td>
<td>Integrative Studies in Physical Sciences</td>
</tr>
<tr>
<td>ISS</td>
<td>Integrative Studies in Social, Behavioral and Economic Sciences</td>
</tr>
<tr>
<td>ITL</td>
<td>Italian</td>
</tr>
<tr>
<td>JPN</td>
<td>Japanese</td>
</tr>
<tr>
<td>JRN</td>
<td>Journalism</td>
</tr>
<tr>
<td>LA</td>
<td>Landscape Architecture</td>
</tr>
<tr>
<td>LES</td>
<td>Lyman Briggs School</td>
</tr>
<tr>
<td>LCS</td>
<td>Large Animal Clinical Sciences</td>
</tr>
<tr>
<td>LIN</td>
<td>Linguistics</td>
</tr>
<tr>
<td>LIR</td>
<td>Labor and Industrial Relations</td>
</tr>
<tr>
<td>LL</td>
<td>Linguistics and Languages</td>
</tr>
<tr>
<td>LTN</td>
<td>Latin</td>
</tr>
<tr>
<td>MC</td>
<td>James Madison College</td>
</tr>
<tr>
<td>ME</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>MED</td>
<td>Medicine</td>
</tr>
<tr>
<td>MGT</td>
<td>Management</td>
</tr>
<tr>
<td>ML</td>
<td>Marketing and Logistics</td>
</tr>
<tr>
<td>MIC</td>
<td>Microbiology</td>
</tr>
<tr>
<td>MS</td>
<td>Military Science</td>
</tr>
<tr>
<td>MSM</td>
<td>Materials Science and Mechanics</td>
</tr>
<tr>
<td>MT</td>
<td>Medical Technology</td>
</tr>
<tr>
<td>MTH</td>
<td>Mathematics</td>
</tr>
<tr>
<td>MUS</td>
<td>Music</td>
</tr>
<tr>
<td>NSC</td>
<td>Natural Science</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ALPHA CODE</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR</td>
<td>Nursing</td>
</tr>
<tr>
<td>OGR</td>
<td>Obstetrics, Gynecology, and Reproductive Biology</td>
</tr>
<tr>
<td>OM</td>
<td>Osteopathic Medicine</td>
</tr>
<tr>
<td>OST</td>
<td>Osteopathic Medicine</td>
</tr>
<tr>
<td>PED</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>PES</td>
<td>Physical Education and Exercise Science</td>
</tr>
<tr>
<td>PHD</td>
<td>Pediatrics and Human Development</td>
</tr>
<tr>
<td>PHL</td>
<td>Philosophy</td>
</tr>
<tr>
<td>PHM</td>
<td>Pharmacology and Toxicology</td>
</tr>
<tr>
<td>PHY</td>
<td>Physics</td>
</tr>
<tr>
<td>PIM</td>
<td>Integrative Management</td>
</tr>
<tr>
<td>PKG</td>
<td>Packaging</td>
</tr>
<tr>
<td>PLS</td>
<td>Political Science</td>
</tr>
<tr>
<td>PRM</td>
<td>Public Resource Management</td>
</tr>
<tr>
<td>PRR</td>
<td>Park and Recreation Resources</td>
</tr>
<tr>
<td>PRT</td>
<td>Portuguese</td>
</tr>
<tr>
<td>PSC</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>PSL</td>
<td>Physiology</td>
</tr>
<tr>
<td>PSY</td>
<td>Psychology</td>
</tr>
<tr>
<td>PTH</td>
<td>Pathology</td>
</tr>
<tr>
<td>RAD</td>
<td>Radiology</td>
</tr>
<tr>
<td>RD</td>
<td>Resource Development</td>
</tr>
<tr>
<td>REL</td>
<td>Religious Studies</td>
</tr>
<tr>
<td>ROM</td>
<td>Romance Languages</td>
</tr>
<tr>
<td>RUS</td>
<td>Russian</td>
</tr>
<tr>
<td>SCS</td>
<td>Small Animal Clinical Sciences</td>
</tr>
<tr>
<td>SOC</td>
<td>Sociology</td>
</tr>
<tr>
<td>SPN</td>
<td>Spanish</td>
</tr>
<tr>
<td>SSC</td>
<td>Social Science</td>
</tr>
<tr>
<td>STA</td>
<td>Studio Art</td>
</tr>
<tr>
<td>STT</td>
<td>Statistics and Probability</td>
</tr>
<tr>
<td>SUR</td>
<td>Surgery</td>
</tr>
<tr>
<td>SW</td>
<td>Social Work</td>
</tr>
<tr>
<td>SYS</td>
<td>Systems Science</td>
</tr>
<tr>
<td>TC</td>
<td>Telecommunication</td>
</tr>
<tr>
<td>TCC</td>
<td>Transcollegiate Courses</td>
</tr>
<tr>
<td>TE</td>
<td>Teacher Education</td>
</tr>
<tr>
<td>THR</td>
<td>Theatre</td>
</tr>
<tr>
<td>UP</td>
<td>Urban Planning</td>
</tr>
<tr>
<td>VM</td>
<td>Veterinary Medicine</td>
</tr>
<tr>
<td>WS</td>
<td>Women's Studies</td>
</tr>
<tr>
<td>ZOL</td>
<td>Zoology</td>
</tr>
</tbody>
</table>