# General Education

Distribution Courses

Distribution courses emphasize ways of thinking and methods of inquiry within various disciplines. Students are required to take one course in each of the following seven areas:

• Arts—Visual and Performing

• History

• Literature

• Mathematics

• Natural Science (lab required)

• Social and Behavioral Sciences

• Advanced Quantitative/Scientific Reasoning

Courses

Advanced Quantitative/Scientific Reasoning (AQSR)

Courses in the AQSR category have Mathematics or Natural Science prerequisites and often additional prerequisites. For the full list of prerequisites, see the course description section of this catalog.

ONE COURSE from

|  |  |  |  |
| --- | --- | --- | --- |
| ANTH 235 | Bones and Stones: How Archaeologists Know | 4 | Annually |
| ANTH 306 | Primate Ecology and Social Behavior | 4 | F, Sp |
| ANTH 307 | Human Nature: Evolution, Ecology, and Behavior | 4 | F, Sp |
| BIOL 221 | Genetics | 4 | F |
| BIOL 335 | Human Physiology | 4 | F, Sp, Su |
| CHEM 104 | General Chemistry II | 4 | F, Sp, Su |
| CHEM 106 | General, Organic, and Biological Chemistry II | 4 | F, Sp, Su |
| CSCI 423 | Analysis of Algorithms | 4 | Sp |
| GEOG 201 | Mapping Our Changing World | 4 | F, Sp |
| GEOG 205 | Earth's Physical Environments | 4 | F, Sp |
| HIST 207 | Quantitative History Through Applied Statistics | 4 | Sp (alternate years) |
| HSCI 232 | Human Genetics | 4 | F |
| MATH 213 | Calculus II | 4 | F, Sp, Su |
| MATH 239 | Contemporary Topics in Mathematics II | 4 | F, Sp, Su |
| MATH 241 | Statistical Methods II | 4 | F, Sp |
| MATH 248 | Business Statistics I | 4 | F, Sp, Su |
| MATH 324 | College Geometry | 4 | F, Sp |
| PHIL 220 | Logic and Probability in Scientific Reasoning | 4 | F, Sp |
| PHYS 102 | General Physics II | 4 | Sp, Su |
| PHYS 120 | The Extraordinary Physics of Ordinary Things | 4 | Sp |
| PHYS 201 | Electricity and Magnetism | 4 | Sp |
| PHYS 309 | Nanoscience and Nanotechnology | 4 | F (odd years) |
| POL 300 | Methodology in Political Science | 4 | F, Sp |
| PSCI 208 | Forensic Science | 4 | F, Sp |
| PSCI 214 | Introduction to Meteorology | 4 | F |
| SOC 302 | Social Research Methods | 4 | F, Sp, Su |
| SOC 404 | Social Data Analysis | 4 | F, Sp, Su |
| SWRK 303 | Social Work Research Methods II | 4 | F, Sp, Su |
| TECH 306 | Automation and Control Systems | 4 | Annually |
|  |  |  |  |

Arts—Visual and Performing (A)

ONE COURSE from

# Feinstein School of Education and Human Development

Technology Education B.S.

Course Requirements for Concentration in Teaching

Courses

|  |  |  |  |
| --- | --- | --- | --- |
| TECH 200 | Introduction to Technological Systems and Processes | 3 | F, Sp |
| TECH 202 | Design Processes | 3 | F |
| TECH 204 | Energy and Control Systems | 3 | Annually |
| TECH 216 | Computer-Aided Design | 3 | As needed |
| TECH 300 | Orientation to Technology Education | 4 | F, Sp |
| TECH 306 | Automation and Control Systems | 4 | Annually |
| TECH 326 | Communication Systems | 3 | F |
| TECH 327 | Construction Systems | 3 | Sp |
| TECH 328 | Manufacturing Systems | 3 | Sp |
| TECH 329 | Transportation Systems | 3 | Annually |

Professional Courses

|  |  |  |  |
| --- | --- | --- | --- |
| CEP 315 | Educational Psychology | 3 | F, Sp, Su |
| FNED 346 | Schooling in a Democratic Society | 4 | F, Sp, Su |
| SPED 433 | Adaptation of Instruction for Inclusive Education | 3 | F, Sp, Su |
| TECH 406 | Methods in Technology Education | 4 | F, Sp |
| TECH 407 | Practicum in Elementary Technology Education (Grades K through Six) | 4 | Sp |
| TECH 408 | Practicum in Technology Education (Grades Seven through Twelve) | 4 | F |
| TECH 421 | Student Teaching in Technology Education | 10 | F, Sp |
| TECH 422 | Student Teaching Seminar in Technology Education | 2 | F, Sp |

Cognates

|  |  |  |  |
| --- | --- | --- | --- |
| CHEM 103 | General Chemistry I | 4 | F, Sp, Su |
| MATH 120 | Intermediate Algebra | 4 | F, Sp, Su |
| MATH 139 | Contemporary Topics in Mathematics | 4 | F, Sp, Su |
| PSCI 103 | Physical Science | 4 | F, Sp, Su |

Total Credit Hours: 82

Note: TECH 306 satisfies the Advanced Quantitative/Scientific Reasoning (AQSR) General Education requirement

Course Requirements for Concentration in Applied Technology

Note: This program does not lead to RIDE teaching certification.

Courses

|  |  |  |  |
| --- | --- | --- | --- |
| TECH 200 | Introduction to Technological Systems and Processes | 3 | F, Sp |
| TECH 202 | Design Processes | 3 | F |
| TECH 204 | Energy and Control Systems | 3 | Annually |
| TECH 216 | Computer-Aided Design | 3 | As needed |
| TECH 306 | Automation and Control Systems | 4 | Annually |
| TECH 326 | Communication Systems | 3 | F |
| TECH 327 | Construction Systems | 3 | Sp |
| TECH 328 | Manufacturing Systems | 3 | Sp |
| TECH 329 | Transportation Systems | 3 | Annually |
| TECH 430 | Internship in Applied Technology | 6 | As needed |
| TECH 431 | Capstone Design Project | 4 | F, Sp |

Cognates

|  |  |  |  |
| --- | --- | --- | --- |
| CSCI 157 | Introduction to Algorithmic Thinking in Python | 4 | F, Sp |
| CSCI 201 | Computer Programming and Design | 4 | F, Sp |
| MGT 201 | Foundations of Management | 3 | F, Sp, Su |
| MGT 331 | Occupational and Environmental Safety Management | 3 | F |
| MATH 209 | Precalculus Mathematics | 4 | F, Sp, Su |
| MATH 212 | Calculus I | 4 | F, Sp, Su |
| PHYS 101 | General Physics I | 4 | F, Su |
| PHYS 102 | General Physics II | 4 | Sp, Su |

Total Credit Hours: 68

Note: TECH 306 satisfies the Advanced Quantitative/Scientific Reasoning (AQSR) General Education requirement

COURSE DESCRIPTIONS:

## TECH - Technology Education

TECH 200 - Introduction to Technological Systems and Processes (3)

This is an introduction to technological development, technological literacy, the use of technological systems, and tools for fundamental production processes to solve social technical problems. 4 contact hours.

Offered: Fall, Spring.

TECH 202 - Design Processes (3)

This class introduces design processes necessary for problem solving and production in a technological society. Emphasis is placed on the design sequence, processes, and techniques for sketching, modeling, prototyping, and CAD. 4 contact hours.

Offered: Fall.

TECH 204 - Energy and Control Systems (3)

Energy sources and common energy processing techniques are introduced. Study includes control devices, energy transmission technology, and the operation of energy conservation systems. 4 contact hours.

Offered: Annually.

TECH 216 - Computer-Aided Design (3)

International drafting-language protocol is explored and used to solve design problems in orthographic and pictorial presentation. Study includes basic computer-aided drafting. 6 contact hours.

Offered: As needed.

TECH 300 - Orientation to Technology Education (4)

The field of technology education and its historic role in education are introduced. This study includes past and contemporary trends, technological literacy standards, program and curriculum development, and professional traits.

Prerequisite: TECH 200 or TECH 202, with minimum GPA of 2.75; completion of at least 12 credit hours of content area courses, with minimum GPA of 2.75; and minimum cumulative GPA of 2.75.

Offered: Fall, Spring.

TECH 306 - Automation and Control Systems (4)

Students study automation and control systems to create efficient technological systems.  Activities include CNC, 3D printing, laser cutting/etching, and pneumatics to support appropriate technological problem solving and decision-making opportunities.

General Education Category: Advanced Quantitative/Scientific Reasoning (AQSR)

Prerequisite: Completion of any mathematics or natural science general education distribution.

Offered: Annually.

TECH 326 - Communication Systems (3)

Communication processes, systems, and their applications are examined. Study includes the technological processes used in developing, producing, delivering, and storing ideas and information in a technological society. 4 contact hours.

Prerequisite: TECH 200 or TECH 202.

Offered: Fall.