GENERAL SCIENCE, MINOR - TEACHING

Middle Childhood/Early Adolescence (Code 120-403)

The MCEA science minor prepares students to teach a breadth of science areas in Grades 1-8. A minimum of 24 semester credits is required to fulfill the science minor. To prepare to teach in Grades 1-8, courses in certain science areas are required.

For advising, contact the Education Studies Department.

Required of all MCEA students:

- **BIOL 105** General Biology 3-4
- or **BIOL 151** Biology of Humans

AND one of the following: 4-5

- **CHEM 103** General Chemistry I
- or **CHEM 105** General Chemistry I Lecture & **CHEM 106** General Chemistry I Laboratory

- **GEOL 106** Earth Science
- **GEOL 110** Physical Geology
- **PHYS 100** Physical Science

Total: 7-8 credits (1 biological & 1 physical science lab science)

Remaining 16-17 credits must include the science area not taken from the MCEA required science courses (i.e. physical or earth/space) but is not limited to the courses listed above. MCEA science minor students should complete a course in physical, life, and earth/space sciences. Therefore, remaining credits may be taken from any of the science areas listed below. A variety of science areas is recommended to increase breadth of science knowledge.

Select courses from the following:

**Biology**

- **BIOL 130** Human Sexual Biology 3
- **BIOL 151** Biology of Humans 4
- **BIOL 180** Environmental Biology and Conservation 1
- **BIOL 181** Environmental Biology and Conservation Lab 1
- **BIOL 195** Plants and Society 4
- **BIOL 196** Human Nutrition 3
- **BIOL 214** Human Anatomy and Physiology I 4
- **BIOL 311** General Entomology 4

**Chemistry**

- **CHEM 100** Chemistry: Issues and Answers 3
- **CHEM 103** General Chemistry I 4-5
  - or **CHEM 105** General Chemistry I Lecture & **CHEM 106** General Chemistry I Laboratory
- **CHEM 104** General Chemistry II 4
  - or **CHEM 109** General Chemistry II with Lab
- **CHEM 115** Chemical Principles 6
- **CHEM 121** Elementary Chemical Education 1
- **CHEM 127** Chemistry and Climate 3
- **CHEM 150** Survey of Biochemistry 3
- **CHEM 191** Current Topics in Chemistry 1-3
- **CHEM 304** Environmental Chemistry 3
- **CHEM 399** Independent Study - Juniors 1-3

**Geology**

- **GEOL 102** Oceanography 3
- **GEOL 106** Earth Science 4
- **GEOL 115** Environmental Geology 4
- **GEOL 122** The Future of Global Energy 3
- **GEOL 201** Geology of Our National Parks and Monuments 2

- **GEOL 301** Earth Resources 3
- **GEOL 303** Rocky Mountain Field Studies 3
- **GEOL 308** Water Resources 3
- **GEOL 312** Mineralogy and Petrology I 5

**Geography**

- **GEOG 104** The Physical Environment 4
- **GEOG 178** Conservation of the Environment 1
- **GEOG 340** Climatology 3
- **GEOG 361** Environmental Hazards 3

**Physics**

- **PHYS 100** Physical Science 4
- **PHYS 115** Survey of Astronomy 3
- **PHYS 205** Physics of Renewable Energy 4
- **PHYS 211** General Physics 5
- **PHYS 212** General Physics 4
- **PHYS 226** Astronomy-Solar System 4
- **PHYS 229** Astronomy-Stars and Galaxies 4
- **PHYS 308** Science of Musical Sound 3
- **PHYS 315** The Mysterious Universe 3

**Environmental Public Health**

- **ENPH 110** Introduction to Environmental Health 3
- **ENPH 150** Disease Detectives: Epidemics and Data 3

**Environmental Studies**

- **ENV 101** Sustainability Basics and Beyond 4
- **ENV 140** Water Problems, Water Solutions 3
- **ENV 291** Special Topics - Environmental Studies 1-3

1. Only one of GEOG 178 or BIOL 180 may be included in the minor.

This minor is restricted to students in the College of Education and Human Sciences; Education Studies: Option A and leads to licensure to teach General Science in Middle Childhood through Early Adolescence classrooms.