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. This minor is an approved minor for individuals seeking licensure to teach in Middle Childhood through Early Adolescence classrooms.

For advising, contact the Education Studies Department.

Required of all MCEA students:

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

AND one of the following: 4-5

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

- **GEOG 106** Earth Science

- **GEOG 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 3
- **BIOL 181** Environmental Biology and Conservation Lab 4
- **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** and 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

- **GEOG 102** Oceanography 3
- **GEOG 178** Conservation of the Environment 3
- **GEOG 304** Introduction to Geomorphology 4
- **GEOG 340** Climatology 3
- **GEOG 361** Environmental Hazards 3

### Geography

- **GEOG 104** The Physical Environment 4
- **GEOG 178** Conservation of the Environment 3
- **GEOG 304** Introduction to Geomorphology 4
- **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

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, majoring in elementary education and leads to licensure to teach General Science in Middle Childhood through Early Adolescence classrooms.