

Earth Science

Major

Teaching certification option

Coordinator:

D. Duckson, Professor and Chair, Department of Geography

Participating Faculty:

Professors:

D. Duckson (Geography), Howard (Biology), Small (Geography), Yoder (Biology)

Associate Professors:

G. Brewer (Biology), Doyle (Physics), Precht (Geography), Tam (Physics)

Assistant Professors:

Bowe (Biology), Saku (Geography), Xu (Geography)

Instructors:

Neave (Geography)

- This is a multidisciplinary program jointly administered by the Departments of Geography, Physics, Biology and Chemistry.
- An optional internship is available in Earth Science.
- You may pursue Earth Science middle/secondary teacher certification. Contact the Chair of the Educational Professions Department.
- There is no minor in Earth Science.

	For Major	For Teaching Cert. Option
Hours Required in Geography:	27-33	30
Hours Required in Other Fields:	11-17	59.5
Total Hours Required:	44	89.5

Summary of Requirements for Major in Earth Science

1. Introductory Level Courses:

(7 hours)

GEOG 103 or 113 Physical Geography (*GEP LAC Group C*)

GEOG 275 Introduction to Spatial Analysis

2. Required Advanced Courses:

(26 hours)

GEOG 307 Advanced Physical Geology

GEOG 308 Advanced Historical Geology

GEOG 310 Map Interpretation and Cartography

GEOG 335 (or SCIE 335) Oceanography or GEOG 440 Introduction to Soils*

GEOG 380 Research Methods and Field Techniques

GEOG 430 or 431 Fluvial or Glacial and Pleistocene Geomorphology*

MATH 209 Elements of Applied Probability and Statistics (*GEP BR Math*)

PHSC 205 Descriptive Meteorology or GEOG 405 Climatology*

3. Required Supporting Science Sequence:

(8 hours)

Complete one of the supporting Science Sequences:

BIOL 149-150 General Biology (*149-GEP LAC Group C*)

CHEM 101-102 General Chemistry (*101-GEP LAC Group C*)

PHYS 215-216 General Physics I and II (*215-GEP LAC Group C*)

PHYS 261-262 Principles of Physics I and II (*261-GEP LAC Group C*)

4. Elective:

(3-6 hours)

*Select at least one of the following courses (two for teaching certification)***

BIOL 305 Dendrology

BIOL 314 Plant Taxonomy

BIOL 340 Ecology

BIOL 411 Invertebrate Zoology

BIOL 426 Vertebrate Zoology

GEOG 406 Conservation of Natural Resources

GEOG 413 Remote Sensing—Aerial Photo Interpretation

GEOG 432 Hydrology

GEOG 441 Soil Analysis

GEOG 445 Biogeography

GEOG 460 Natural Hazards in the Physical Environment

PHSC 210 Descriptive Astronomy

PHSC 220 The Solar System

*Courses not selected to meet requirements, may be used as electives.

**Some of these courses may require additional prerequisite course work.

Summary of Requirements for Teaching Certification Option in Earth Science

If you wish to complete a Maryland State approved program in teaching Earth Science, you must:

- Complete the BA/BS in Earth Science.
- Meet the phase admissions requirements summarized in the Educational Professions section.
- Complete the professional education sequence described in Education: Secondary School Programs.
- Select the following courses to complete your major: PHSC 205, PHSC 210 or PHSC 220, GEOG/SCIE 335, and GEOG 406 or GEOG 460.