Earth Science Undergraduate Major

Informal Advising Sheet for the
Environmental Geology Track

This track is designed to provide specialization and experience in atmospheric sciences (meteorology and climatology) within the Earth Science major for a Bachelor of Science degree.

General Information
The basic course requirements for the track are listed below. The total credit hours needed are 63. The courses ES 110/111 (Introduction to Earth Science and its Lab, to be taken concurrently) are a prerequisite for the ES and GO courses listed below.

Required for the Major: 33 credit hours (CH)
Course: CH: 
CH123/124 Chemistry I & Chemistry I Lab....................5
CH126/127 Chemistry II & Chemistry II Lab..................5
ES319 Meteorology or ES365 World Regional Climatology..3
ES333 Environmental Geology.......................................3
ES351 Introduction to Geospatial Analysis...................3
GO324 Rocks and Minerals...........................................3
GO325 Earth History..................................................3
GO326 Plate Tectonics.................................................3
GO547 Field Geology..................................................5

Required for the Track: 17 CH
ES339 Soil Science and Laboratory...............................4
GO570 Sedimentation and Stratigraphy..........................3
GO571 Hydrogeology....................................................4
GO572 Contaminant Hydrogeology.................................3
GO580 Environmental Field Methods.............................3

Electives for the Track: 5 CH
ES254 Physical Geography.....................................3
ES319 Meteorology..................................................3
ES320 Severe and Unusual Weather................................3
ES331 Ice Age Environments......................................3
ES341 Wetland Environments......................................3
ES365 World Regional Climatology..............................3
ES366 Natural Hazards..............................................3
ES367 Topics in Earth Science.................................1-3
ES439 Independent Study in Earth Science....................1-4
ES470 Internship in GeoSpatial Analysis......................3
ES475 Senior Thesis...............................................1-5
ES518 Space Science.............................................3
ES545 Geomorphology.............................................3
ES546 Field Geomorphology..................................2-5

Course: CH:
ES567 Topics in Earth Science.................................1-4
e.g.: Dinosaurs..................................................2
Earth Resources....................................................2
Environmental Geochemistry.................................3
Geocarchaeology & Paleoseismology.........................2
Geochemistry of Natural Resources..........................3
Geowriting and Geoliterature..................................2
Global Environmental Change..................................3
Human Evolution and the Fossil Record......................2
Origin of Life.....................................................2
Quaternary Geology................................................3
ES703 Seminar in Physical Geography.......................1-3
e.g.: Environmental Soil Science.................................3
ES767 Topics in Earth Science.................................1-4
e.g.: Advanced Tectonics.........................................3
Applied Hydrogeology Seminar...............................1
ES771 Remote Sensing.............................................4
ES775 Advanced Image Processing.............................3
GO340 Gemstones and Geology.................................2-3
GO521 History of Geology........................................3
GO548 Field Stratigraphy.........................................2
GO568 Structural Geology........................................3
GO569 Invertebrate Paleontology.............................3
GO570 Sedimentation and Stratigraphy......................3
GO571 Hydrogeology................................................4
GO572 Contaminant Hydrogeology.............................3
GO580 Environmental Field Methods..........................3
GO769 Vertebrate Paleontology.................................3

Recommended for the Track:
- Geospatial Analysis minor
- Physics minor
- A basic statistics course (MA 352 or PY 520 or MA 341)

Elective Associated Courses:
Elective courses in associated sciences and mathematics. Specific courses must be approved by the student’s faculty advisor.

EMPORIA STATE UNIVERSITY.
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