



Department of Geosciences

BS in Earth Science

Education, Research, and Service in Geography, Geology, and Earth Science

Applied Earth Science Option

Student's Name _____ Advisor _____ Date _____

University Baccalaureate Core Course (BCC) Requirements (48 credits + WIC course)

Courses must be from BCC approved list. No single course may be used to satisfy more than one area of the Baccalaureate Core even though some courses are approved for more than one area. Up to 15 credits required in the major can also be used to satisfy BCC requirements.

Skills (15 credits)

- (9) ___ WR 121 ___ WR II ___ Writing/Speech III
- (3) ___ MTH 105 or higher (MTH 251 required)
- (3) ___ Fitness
- ___ Writing Intensive Course (WIC) (included in credits within the major; GEO 409 required)

Perspectives (27 credits; must be from BCC approved list; no more than two courses from the same department)

- (4) ___ Physical Science with Lab (GEO 101 or 201 required)
- (4) ___ Biological Science with Lab
- (4) ___ Physical or Biological Science with Lab (GEO 102 or 202 required)
- (3) ___ Western Culture
- (3) ___ Cultural Diversity
- (3) ___ Literature and the Arts
- (3) ___ Social Processes and Institutions
- (3) ___ Difference, Power and Discrimination

Synthesis (6 credits; upper division courses from BCC approved list and from different departments)

- (3) ___ Contemporary Global Issues
- (3) ___ Science, Technology, and Society (CSS/GEO 335 required)

Earth Science Major Requirements (81-85 credits)

Substitutions to these requirements can only be made with the written approval of the Head Advisor. Any substitutions should be noted in your file.

Basic Science Skills (30-32 credits):

- (4) ___ MTH 251
- (4) ___ ST 351 or ST 314
- (4) ___ ST 352 or MTH 252
- (10) ___ CH 121 or CH 221 ___ CH 122 or CH 222
- (8-10) ___ PH 201 or PH 211 ___ PH 202 or PH 212

Geosciences Core Courses (25-26 credits):

- (4) ___ GEO 101 The Solid Earth or GEO 201 Physical Geology
- (4) ___ GEO 102 The Surface of the Earth or GEO 202 Earth System Science
- (4) ___ GEO 322 Surface Processes
- (4) ___ CSS 305 Principles of Soil Science
- (3) ___ CSS/GEO 335 Water Science and Policy
- (3) ___ OC 331 Intro to Oceanography
- (3-4) ___ ATS 210 Intro to Atmospheric Sci (3) or GEO 203 Evolution of Planet Earth (4) or GEO 323 Climatology (4)

Earth Science Techniques (7-8 credits):

- (4) ___ GEO 301 Map and Image Interpretation
- (3-4) ___ GEO 365 Introduction to GIS (4) or GEO 265 GIS Practicum (3)

Upper Division Earth Science (15 credits, with at least 2 courses from one focus):

Geology Focus:

- (4) ___ GEO 310 Mineralogy
- (4) ___ GEO 315 Petrology
- (4) ___ GEO 340 Structural Geology
- (4) ___ GEO 430 Geochemistry

Soil Science Focus:

- (4) ___ CSS 435 Physics of Soil Ecosystems
- (4) ___ CSS 445 Geochemistry of Soil Ecosystems
- (4) ___ CSS 455 Biology of Soil Ecosystems
- (4) ___ CSS 466 Soil Morphology and Classification

Oceanic and Atmospheric Sciences Focus:

- (4) ___ ATS 420 Atmospheric Science
- (3) ___ GEO 431 Applied Climatology
- (3) ___ OC 332 Coastal Oceanography
- (3) ___ OC 430 Physical Oceanography
- (3) ___ OC 440 Biological Oceanography
- (3) ___ OC 450 Chemical Oceanography
- (3) ___ OC 460 Geological Oceanography

Water Science Focus:

- (4) ___ CE 412 Hydrology (note the prereqs) or FE 430 Watershed Processes
- (3) ___ GEO 432 Applied Geomorphology
- (5) ___ FW 456 Limnology
- (3) ___ GEO 483 Snow Hydrology
- (4) ___ GEO 487 Hydrogeology

Capstone Experience (4 credits)

- (1) ___ GEO 407 Professional Seminar
 - (3) ___ GEO 409 Contemp. Earth Sci. Issues (WIC)
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Applied Earth Science Option (35 credits)

Advanced Earth Science Techniques from list: (8 credits)

- (3)___ ENVE 456 Sustainable Water Resources Development
- (4)___ GEO 360 Cartography
- (3)___ GEO 444 Remote Sensing
- (3)___ GEO 445 Computer-Assisted Cartography
- (3)___ GEO 465 Geographic Information Systems
- (3)___ GEO 466 Digital Image Processing

Choose a Minor (27 credits)

All minors are 27 cr. and contain at least 12 cr. of upper division work. Choose one of the minors listed below, which integrate well with the ESBS or are professionally supplementary to the ESBS.

Note that students may not double-count courses between the option and the minor. In other words, the same course may not be used to meet the requirements above under "Advanced Earth Science Techniques" and the requirements of the minor. Courses **may** be double-counted between the minor and other courses in the ESBS.

Accepted Minors:

- Agricultural Sciences**
- Anthropology**
- Biology**
- Business Administration**
- Chemistry**
- Earth Information Science and Technology (EIST)**
- Environmental Engineering**
- Environmental Sciences**
- Fisheries and Wildlife**
- Forest Management**
- Forest Recreation Resources**
- Mathematical Sciences**
- Mathematics**
- Microbiology**
- Military Studies¹ - one of Air Force Studies, Military Science, or Naval Science**
- Natural Resource and Environmental Law and Policy**
- Natural Resources**
- North American Environmental Sciences**
- Oceanography**
- Physics**
- Resource Economics**
- Soil Sciences**
- Statistics**
- Zoology**

OSU Graduation Requirements

- ___ 180 total credits
- ___ 60 upper division (course numbered 300 or higher) credits
- ___ 2.00 minimum overall GPA
- ___ 24 upper division credits within the major
- ___ 2.00 minimum GPA in major
- ___ Foreign Language (2 years high school or 2 terms college)
- ___ 15 of the upper division credits in the major from regularly listed courses
- ___ Residence requirement--last 45 credits of course work must be from OSU

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¹ Offered via the Reserve Officer Training Corps (ROTC) program.

