

## **EES Course Changes – November 2015**

**YELLOW HIGHLIGHTING = Beginning of New Item**

**RED TEXT = Old Listing**

**BLUE TEXT = New Listing**

**Courses that will be removed from catalog (no longer have faculty to teach these):**

ERTH 446 (reflection seismic data interpretation)

ERTH 457 (reflection seismic data processing)

ERTH 103Lab (is confusing, so will be replaced everywhere with 101 Lab)

GEOL 507 (ore deposit seminar)

GEOL 537 (volcanology field trip)

GEOL 528 (carbon capture and storage)

GEOL 554 (volcanology seminar)

GEOL 566 (practical aspects of mass spectrometry)

**Catalogue Minor requirements changes (typos**

**Current listing**

**Minor in Petroleum Geology**

*Minimum credit hours required — 17 - 18*

*The following courses are required:*

- ERTH 101 (3), ERTH 101L ~~or 103L~~ (1), ERTH 203 (4), ERTH 447 (3), ERTH 460 (3)
- One class from the following list: ERTH 445(3), ERTH 453 (4), ERTH 461 (3)

**New listing**

**Minor in Petroleum Geology**

*Minimum credit hours required — 17 - 18*

*The following courses are required:*

- ERTH 101 (3), ERTH 101L, ERTH 203 (3), ERTH 447 (3), ERTH 460 (3)
- One class from the following list: ERTH 445(3), ERTH 453 (4), ERTH 461 (3)

## Catalogue change (typo and minor change)

### Current listing

#### Bachelor of Science in Earth Science with Mineral Resources Option

*Minimum credit hours required—130*

*In addition to the General Education Core Curriculum Requirements (page 7), the following courses are required:*

- EARTH 101 with associated lab (4)
- Earth Science core [EARTH 200 (4), EARTH 201 (4), EARTH 202 (4), EARTH 203 (3), EARTH 204 (4), EARTH 205 (1), EARTH 325 (3), EARTH 340 (3), EARTH 390 (3)]
- EARTH 380 (4), EARTH 431 (3), EARTH 453 (4), EARTH 462 (3),
- EARTH 480 (6), EARTH 4xx (3) [Environmental Geochemistry of Mining Activities]
- ME 320 (2), ME 340 (3)
- Technical electives, minimum 3 credit hours from courses numbered 300 or above from the following fields:  
mathematics, biology, computer science, physics, chemistry, and engineering.
- Earth science and mineral engineering electives, 12 credit hours from the following classes: EARTH 360 (2), EARTH 407/  
GEOC 507 (3), ~~EARTH 431/GEOC 531 (3), EARTH 465/GEOC 565~~  
(3), ME 522 (3), ME523 (3), ME 551 (3)
- ~~Electives to reach 130 credit hours~~

### New listing

#### Bachelor of Science in Earth Science with Mineral Resources Option

*Minimum credit hours required—130*

*In addition to the General Education Core Curriculum Requirements (page 7), the following courses are required:*

- EARTH 101 with associated lab (4)
- Earth Science core [EARTH 200 (4), EARTH 201 (4), EARTH 202 (4), EARTH 203 (3), EARTH 204 (4), EARTH 205 (1), EARTH 325 (3), EARTH 340 (3), EARTH 390 (3)]
- EARTH 380 (4), EARTH 431 (3), EARTH 453 (4), EARTH 462 (3),
- EARTH 480 (6), EARTH 4xx (3) [Environmental Geochemistry of Mining Activities]
- ME 320 (2), ME 340 (3)
- Technical electives, minimum 3 credit hours from courses numbered 300 or above from the following fields:  
mathematics, biology, computer science, physics, chemistry, and engineering.
- Earth science and mineral engineering electives, 12 credit hours from the following classes: EARTH 360 (2), EARTH 407/  
GEOC 507 (3), GEOC 565  
(3), ME 522 (3), ME523 (3), ME 551 (3)

**Catalogue change (typos)**

**Current listing**

**ERTH 360, Earth Resources and Environmental Issues, 2 cr,  
2 cl hrs, 3 lab hrs**

*Prerequisites: Any 200-level ~~ERETH~~ class with associated lab*

*Offered fall semester, on demand*

Overview of the economics, geologic occurrence and extraction of earth resources. Coverage includes metallic, non-metallic, and energy resources, soils and groundwater, and the environmental impacts related to their use and extraction. Field trip.

**New listing**

**ERTH 360, Earth Resources and Environmental Issues, 2 cr,  
2 cl hrs, 3 lab hrs**

*Prerequisites: Any 200-level ~~ERETH~~ class with associated lab*

*Offered fall semester, on demand*

Overview of the economics, geologic occurrence and extraction of earth resources. Coverage includes metallic, non-metallic, and energy resources, soils and groundwater, and the environmental impacts related to their use and extraction. Field trip.

**Catalogue change:**

**Current listing**

**ERTH 103L, Earth Processes Laboratory for Non - Majors, 1 cr, 3  
lab hrs (do not need to have a separate lab for non-majors because it does not  
differ at all from the other labs)**

*Corequisite: EARTH 101*

Laboratory to accompany EARTH 101 for students not majoring in the Earth sciences. Identification of rocks and minerals, maps and map reading, and measurement and interpretation of geologic features.

**Catalogue change: new listing to replace current 101L listing**

Current listing

**ERTH 101L, Earth Processes Laboratory, 1 cr, 3 lab hrs**

*Corequisite: EARTH 101*

For students majoring in Earth sciences. Identification of rocks and minerals, maps and map reading, and measurement and interpretation of geologic features. Field trips. [NMCNNS GEOL 1114: General Education Area III]

**New listing (ERTH 101L only)**

**ERTH 101L, Earth Processes Laboratory, 1 cr, 3 lab hrs**

*Corequisite: EARTH 101*

*Offered fall semester*

Laboratory to accompany EARTH 101. Identification of rocks and minerals, maps and map reading, and measurement and interpretation of geologic features. Field trips. [NMCNNS GEOL 1114: General Education Area III]

**Catalog change EARTH 325**

**Current listing**

**ERTH 325, Near - Surface Geophysics, 3 cr, 2 cl hrs, 3 lab hrs**

*Prerequisites: PHYS 121; a 100-level EARTH course and associated lab*

*Offered fall semester, even-numbered years.*

Theory and practice of geophysical methods for exploring the shallow subsurface, with emphasis on electromagnetic methods including resistivity, EM conductivity, ground-penetrating radar, and magnetic field strength. Applications to environmental hazards, hydrogeological features, and/or archaeology are emphasized in a hands-on, field-oriented approach.

**New listing**

**ERTH 325, Near - Surface Geophysics, 3 cr, 2 cl hrs, 3 lab hrs**

*Prerequisites: PHYS 121; a 100-level EARTH course and associated lab*

*Offered spring semester, even-numbered years.*

Theory and practice of geophysical methods for exploring the shallow subsurface, with emphasis on electromagnetic methods including resistivity, EM conductivity, ground-penetrating radar, and magnetic field strength. Applications to environmental hazards, hydrogeological features, and/or archaeology are emphasized in a hands-on, field-oriented approach.

## CHANGE IN HYDROLOGY OPTION REQUIREMENTS

### Current Listing

**Bachelor of Science in Earth Science with Hydrology Option** *Minimum credit hours required: 130 In addition to the General Education Core Curriculum*

*Requirements, (page 7) the following courses are required:*

- A 100-level EARTH course and associated lab (4)
- Earth Science core [ERTH 200 (4), EARTH 201 (4), EARTH 202 (4), EARTH 203 (3), EARTH 204 (4), EARTH 205 (1), EARTH 325 (3), EARTH 340 (3), EARTH 390 (3)
- EARTH 384 (1), EARTH 440 (3) and 440L (1), EARTH 441 (1), EARTH 442 (1), EARTH 443 (1), EARTH 483 (2), EARTH 484 (2)
- Math 231 (4), Math 283 (3), Math 335 (3)
- Earth science electives, minimum 11 credit hours in courses numbered 300 and above
- CHEM 311 & 311L (4), ENVS 412 (3), CSE 113 & 113L (4)
- Electives to complete 130 credit hours

### New Listing

**Bachelor of Science in Earth Science with Hydrology Option** *Minimum credit hours required: 130 In addition to the General Education Core Curriculum*

*Requirements, (page 7) the following courses are required:*

- A 100-level EARTH course and associated lab (4)
- Earth Science core [ERTH 200 (4), EARTH 201 (4), EARTH 202 (4), EARTH 203 (3), EARTH 204 (4), EARTH 205 (1), EARTH 325 (3), EARTH 340 (3), EARTH 390 (3)
- EARTH 384 (1), EARTH 440 (3) and 440L (1), EARTH 441 (1), EARTH 442 (1), EARTH 443 (1), EARTH 483 (2), EARTH 484 (2)
- Math 231 (4), Math 283 (3), Math 335 (3)
- Earth science electives, minimum 11 credit hours in courses numbered 300 and above
- CHEM 311 & 311L (4), ENVS 412 (3), CSE 107 (4)
- Electives to complete 130 credit hours