

## Summary of undergraduate program discussions

- Fifteen years since basic structure of curriculum established
- Last summer: - 1 day retreat (~15 faculty, staff, grad students)
  - review strengths/weaknesses;
  - brainstorm on possible changes
- Fall:
  - meeting with chair, & curriculum committee
  - all-hands meeting of core-class faculty
  - 4ish working groups met on some resulting action items
- Purpose of presenting this:
  - please contribute if you're interested & not already engaged.
  - more detailed outline coming in December faculty meeting for 'approval to develop plans'

## Summary of undergraduate program discussions

- Majors as of now:

Bachelor of Science	#
Geology option:	84
Environmental option:	26
Biology option:	26
Physics option:	54
Bachelor of Arts:	22
Total:	<u>212</u>

## Quick review of current requirements in geology option

Current:

### Geology option (100 – 106 credits total)

- 36-40 cr: supporting science (math, phys, chem); ESS418 (communications)
- 21x core: (ESS211 physical processes; ESS212 Earth Materials; ESS213 Earth Evolution)
- 31x core: 3 of 4: (ESS311 geodynamics; ESS312 Geochem; ESS313 Geobio; ESS314 Geophys)
- 18-20 elective credits – any 4xx class
- Either: ESS400 (6wk field camp); or ESS401 (3wk field, 3wk GIS)

## Strengths and Weaknesses of current degree structure

### Key strengths:

- Students get good exposure to modern Earth Science (e.g., geochem, geobio)
- We serve a broad range of students

### Key Weaknesses:

- Students are taking low pre-req electives, so missing out on advanced geology training (e.g., petrology, structure, sedimentology).
- Inadequate preparation for field camp, poor writing skills.
- Purpose of different options is unclear to students.
- 212 (Earth Materials, or minearology&petrology) an impossible task in one quarter (say both students and faculty, perennially)

## Strengths and Weaknesses of current degree structure

- Goals moving forward:
  1. Raise the standards/more focused requirements in Geology Option (well-trained graduates for professional geology, ASBOG, geology-oriented graduate programs).
  2. Maintain a flexible general track for those wanting a general BS degree in Earth Sciences, or wanting to build their own specialized array of elective options.

## What's being discussed:

- Revised geology option:
  - revised 21x series
    - new 212 class with more physical geology, and some minearology
    - coordinate content/learning goals with existing 211,213
  - new 31x Earth Materials core class (required for geology option)
    - expand and extend minearology/petrology.
    - Cailey Condit part of the development.
  - Elective options
    - restrict the elective options to advanced geology classes.
    - require the six-week field camp.
    - add fieldwork-relevant prereq. for field camp.
- But also retain a more flexible generation option:
  - flexible 31x core options,
  - flexible elective options,
  - either 6wk field camp, or 3&3 option
  - implications for current environmental option

## Timeline moving forward:

### December faculty meeting

- sketches of revised core classes & requirements
- results from u-grad survey.
- seek approval from whole faculty to develop formal plans.

### Winter quarter, 2019

- developing and finalizing courses and requirements.

### Spring quarter, 2019

- submitting to greater powers for approval/quibbling

- Implementation in 2020/21 academic year..

But wait there's more!

## Miscellaneous on-going conversations:

- GIS-based 3&3 week field camp ultimately being a local capstone experience
- Think about
  - physics option (e.g., space physics & geophysics),
  - biology option (e.g., adding microbiology elective options)
- Developing a geospatial analysis option