

THESE SLIDES WERE PRESENTED AT THE DECEMBER
7th FACULTY MEETING.

THEY WERE USED FOR **DISCUSSION ONLY** AND ARE
NOT THE FINAL CHANGES BEING MADE.

SEE THE MINUTES FOR FACULTY FEEDBACK AND
NEXT STEPS.

Update on Curriculum Changes

December 7th, 2018

Overview

- Working Groups
- Results of an undergraduate survey.
- Review proposed changes to curriculum and degree requirements.
- Seek approval to move forward and sort out the details.

Working Groups

- **21X Working Group** (Juliet and Mike)
- **312/313 Working Group** (Bruce, Mike, John, Fang-Zhen, Drew)
- **Field Camp Working Group** (Alexis, Juliet, Alison, Darrel, Noell, Gerard)
- **Geomorphology Working Group** (Alison, Dave, Brian, John)

Undergraduate Survey

- Objective: Understand how students might respond to changes in the degree options and requirements.
- Administered in mid-November
- Targeted Courses: ESS 211, 313, 314, 420
- 223 respondents

Geology	Biology	Environmental	Physics	BA	Other
35%	14%	12%	28%	5%	7%

Freshman	Sophomore	Junior	Senior	5 th Yr
1%	4%	30%	53%	12%

Survey Questions

- How important are various factors when choosing a degree option?
(Career goals, scheduling, etc.)
- How interested are you in a geospatial informatics degree option?
- Are there course topics that you would like to see better represented?
- General feedback about the ESS degree options or requirements.

Major Survey Findings

- Course topic and marketability drove interest in a particular degree option.
- There is a small (but interested) group focused on becoming a licensed geologist.
- Interest in geospatial informatics degree option was high.
- Students wanted more course offerings in: mineralogy/petrology, GIS/GeoInformatics/data science, space science, technical classes (engineering, applied physics, hydrology).
- Students want more examples of career options/paths, integrated into course content; possibly as a separate seminar.

Motivation for Making Changes

- Students are taking low pre-req electives, so missing out on (or avoiding) 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 mineralogy & petrology) an impossible task in one quarter (say both students and faculty, perennially)

Overview of Proposed Changes

1. Changes to lower-division course structure
2. Changes to Field Camp
3. Changes to degree requirements

This is all a work in progress, not a final plan!
The degree plans are a working document.

1. Changes to lower-division course structure

- **Revise 21X series**
 - Delete 210 (Physical Geology)
 - Redesign 211 (Physical Processes) & 212 (Physical Geology)
 - Better coordinate course topics; Reshuffle course schedule
- **Adjustments to 31X series**
 - Create new 312 (Earth Materials)- expand mineralogy & petrology
 - Renumber 316 (Geochemistry- old 312)
- **Adjust curriculum in other courses to cover missing topics.**
 - For example, cover fluid flow and diffusional topics in 311 & 310.
- **Encourage small writing assignments**

2. Possible Changes to Field Camp

- Consider offering a crash course on field methods (details TBD).
 - Spring break, 3-days before or at the start of field camp.
- Refine the list of prerequisites to improve preparation
 - For example, one of 455, 456, 463, or create a new 3XX class (Sed. Geology).
- ESS 401 (Field Methods w/ GIS).
 - Should we provide a local option for students who can't leave the Seattle area and/or be more accessible for students with disabilities?

3. Changes to Degree Requirements

- Restructure the Geology option as training for becoming a professional geologist or pursuing graduate school.
 - Required to take 312 (**newly-structured** Geomaterials) and 311 (geomechanics)
 - Choose either 316* (geochem), 314 (geophys), 313 (geobiol), 326* (geomorph) (take 3/4)
 - Add more structure to 400-level course requirements; require courses focused on licensing exam.
 - Choose either 400 (Field Camp) or 401 (Field Geology w/ GIS)
- Convert the Environmental Option into a General Geoscience Option
 - Expanded list of 20X courses (take 1)
 - Expanded list of 31X courses (take 2, but additional can also count as an elective)
 - Expand the number of elective credits; greater flexibility in choosing courses.
 - Choose either 400 (Field Camp) or 401 (Field Geology w/ GIS)
- Anticipated Outcomes
 - Students under the Geology Option will be better prepared
 - More students will shift to the General Geoscience Option

* Needs to be sustainable and meet goals of the core curriculum; or explore alternative ways to cover the material.

Comment: The feedback from the faculty meeting was to include 316, 314, 313, and 326 as options for the core, but have students select 3 of 4. However, this is not feasible given overall credit hours. The curriculum committee will need to further evaluate how to make this work.

Moving Forward

- Seeking consensus (get thumbs up/down from the faculty) to:
 - Create a more focused Geology Option, and a broader General Option.
 - Proceed with changes to 21X, 312. (prepare course proposals)
- Continue discussions on:
 - Field Camp preparations for students.
 - Preparation for upper-div geomorphology.
 - Align learning goals for lower-division courses.
 - Sustainability, what to include in the core, and implications of changes.
- Seek final faculty approval in late winter.