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

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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.