So what does a degree in geology actually mean? An analysis of commonly required courses

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Figure Descriptions

Preliminary Sample Size = 64 Universities. Courses in this study were required major courses within the department.

Figure 1 (left): Frequency chart of courses within super-categories, which are represented by each bar and labeled on the horizontal axis, and sub-categories which are color separated and individually labeled whenever their value is greater than zero.

Figure 2 (below): Frequency chart of courses separated by sub-category, with highlights below showing the super-categories.

Methods

In terms of the classes that are required of geology majors, there is no prescribed uniformity throughout programs across the country. Because of this, we tend to rely on folk understandings of what courses should be required of our majors. Understanding what we expect from our majors is the first step toward preparing them as best we can for future learning (e.g., field camp), the workforce and/or graduate school.

Preliminary trends indicate an emphasis (sum of points in category / number of universities analyzed x100%) on field experiences and structural, sedimentary and introductory geology courses. Other courses with significant (70-90%) frequency are mineralogy, petrology and historical geology.

Next steps are analyzing required courses from remaining 170 universities, review courses that caused disagreement in the binning process with an expert panel, conduct an intra-rater reliability analysis and publish findings.

Future work should characterize the courses deemed “electives” (i.e., the university instructed students to take an additional four geology courses from a list of 20) to determine any trends.