Accessible text-version of the Geology Skills infographic.

Title of the image: A subset of data that highlights significant disparity between skill appraisal and student preparation.

The AGI logo is found on the upper-right side of the image.

Below the title and logo is an image split into two hemispheres. On the left it says, “Technical Skills,” and on the right it says, “Non-technical Skills.” In the center there is a title labeled, “Geology” and a black vertical line that separates the “Technical” and “Non-Technical” sections. Within each hemisphere, there are sets of circles. Each main circle has another concentric, smaller circle nested inside of it. So, each main circle is actually a set of two concentric circles with different colors to distinguish one from the other. If the larger circle is yellow, that indicates students’ preparation in the skill. If the larger circle is teal, that indicates the importance of that skill according to employers. The relative size of the pairs of circles indicate the magnitude of the preparation or importance of that skill compared to the other nested circles.

In the “Technical Skills” section, there are eight nested circles. The following describes each of the eight nested circles:

1. The nested circles labeled “Structure, tectonic, seismic investigations” is medium in size compared to the other nested circles. This one has a larger yellow circle and a smaller teal circle nested in it, indicating that students have more preparation in this skill compared to what employers use in the workforce.
2. The next set is “Deformational history” and is a similar size to the previous set of circles. Similar to before, this set has a larger yellow circle with a smaller nested teal circle.
3. The third set of circles is labeled, “Paleontology” and again is similar in size to the previous two nested pairs of circles. It also has a larger yellow circle and a smaller teal circle.
4. The fourth set of circles is labeled, “Sediment/soil age relationships” and is similar in size to the other sets of circles. It also has a larger yellow circle compared to its nested teal circle.
5. The fifth set of circles is much larger than the previous ones. It is labeled, “Health, safety regulations, QA/QC” and has the teal circle much larger than its nested yellow circle inside. This means that the skill is very important in the workforce, but that students don’t feel prepared in this topic.
6. The sixth set of circles is similar in size to the initial four and is labeled, “Tectonic/geologic modeling.” It has the yellow circle larger than the teal circle.
7. The seventh nested set is the largest of all the circles in this section. It is titled, “Preparation of geological investigations,” and has the teal circle larger than its nested yellow circle.
8. The last and smallest circle in this section is labeled, “Earthquake mechanisms and seismic hazards.” The yellow circle is bigger than the teal circle, but overall they’re both relatively small compared to all the others.

At the bottom left side of this page right under this “Technical Skills” section, there is the key to the graphic. It has a very small, single yellow circle and says, “Student preparation indicated by faculty and students (n=89).” Under that, there is a very small, single teal circle of the same size that says, “Importance of skill in professionals’ current position (n=72).” Under that there are three black outlines of concentric, nested circles of different sizes and it says, “Diameter indicates magnitude of importance/preparation.” Below the key, it describes the data source that says, “Data source: Geoscience Career Master’s Preparation Survey Report, by Heather R. Houlton, American Geosciences Institute. Technical and non-technical skill names adapted from the ASBOG Task Analysis Survey, and the AAG EDGE Geography and Career Planning Survey, respectively.

Moving across the image to the right side of the “Geology” center line is the “Non-technical Skills” section. This section has 10 pairs of nesting circles. ALL of the sets have a larger teal circle and a smaller yellow nested circle. The following describes each of the 10 nested pairs of circles:

1. This pair is labeled, “Fiscal Management.” It is medium in size overall, but the larger teal circle is much, much larger than its small yellow nested circle inside.
2. “Self-awareness” is the next set and is only slightly bigger than Fiscal Management. The smaller yellow circle nested inside is about half the size of its larger teal circle.
3. The third is “Ethical practices” and is a bit larger than the previous two sets of circles. The larger teal circle is about double the size of its smaller yellow circle.
4. Fourth is “Adaptability” and is the same size as “Ethical Practices” with similar larger teal and smaller yellow circles making up the set.
5. The fifth is the smallest set of circles and is labeled, “Entrepreneurial” and has a relatively much larger teal circle compared to its yellow circle.
6. The sixth is “Relationship-building” and is similar in size to “Ethical Practices” and “Adaptability.”
7. The seventh is “Visioning” and is slightly smaller in size to “Relationship-building.”
8. The eight set of circles is “Supervising” and is the second smallest set of circles in this section.
9. The second to last set is labeled, “Time Management” and it is the largest of all the sets of circles in both “Non-technical” and “Technical” skills.
10. The last and 10th circle in this section is “Project Management” and is about the same size as “Adaptability” and “Ethical Practices.”

Below these non-technical skills, there is an explanatory paragraph that reads:

“The relative sizes of the circles can only be compared within the same category of either technical skills or non-technical skills. Skills selected for this graphic displayed statistically significant disparity between student preparation and rated importance, as indicated by the Geoscience Career Master’s Survey Data Analysis (i.e. larger teal circles indicate that professionals found these skills to be more important than the overall preparation of students when graduating from their Master’s programs). The preparation of students was determined by aggregating data of student and faculty responses.

End of graphic.