

Program Learning Outcomes Geology

Graduates of the UC Davis Department of Geology should be able to:

1. Apply the fundamental principles of geology, mathematics, physics, chemistry and biology to address geological issues.
2. Identify common Earth materials at all spatial scales.
3. Describe the origin of the solar system and Earth and be able to understand our planet in comparison with other planets.
4. Comprehend the 4.6 billion year history of Earth and the evolution of the solid earth, the cryosphere, the hydrosphere and the atmosphere.
5. Understand the chronology of life on Earth and the fundamentals of biologic evolution.
6. Describe the origin and distribution of resources such as water, minerals and energy.
7. Be aware of natural hazards, their impact on civilization and efforts at mitigation.
8. View Earth as a dynamic system of solid, liquid, gaseous and living components, connected through the cycling of matter and energy.
9. Recognize the relatively recent arrival of humans on the Earth and their disproportionate impact on the planet.
10. Understand how science works via inquiry, observation, verification, reason and critical thinking.
11. Synthesize and communicate their knowledge of geological concepts through written, oral and graphical representation.
12. Apply the tenets of professional, ethical and responsible conduct as geoscientists.