

How do we prepare the next generation of geoscientists in this technology-driven world? We need to attract them in the first place.

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First of all, we need to have geoscience students in our classrooms in order to start to prepare them. Therefore, we need to start young. Kids love rocks; some collect rocks from the time they can crawl. The question we might ask is: Why does this interest stop rather than expand? Only a few of us who discovered our connection to Earth at a young age become geologists. We need to make it known that being a geoscientist is a good career. Geoscientists with an emphasis on environmental issues will always be employable, from field technicians to industry consultants. We have spent nearly two centuries despoiling North American resources. Problems related to resource extraction will take at least another century to set right. It is geoscientists who will be leading the way.

Geoscience programs at 2YCs serve three functions: 1) General studies science courses (w/ or w/o a lab); 2) AAS for direct employment and 3) AS for transfer to higher degree(s). A quick Google search reveals no comprehensive career advice sites for aspiring environmental technicians, geoscientists or related career paths. What are we doing in our programs to advise students on their career path. Do we need help? Yes, indeed. It may be that one of the results of this workshop will be the development of a career advice site for 2YC degree students of geoscience. Do you think anyone actually uses the term “geoscientist” besides us? Unlikely. I fear they are still using the terms “geologist” and “environmental scientists (or engineer).”

In the past 12 years at Central Wyoming College (CWC) I have offered geology courses, developed or helped develop three new programs, and made articulation agreements with our sole University (UWyo). We hired an Environmental Science and Technology instructor. None of these efforts has been rewarded with a huge increase in geoscience majors. How is that so, in a state rich in, and dependent upon, geologic resources? The University certainly has plenty of geology majors. However, only 3 of our 7 community colleges (CCs) even offer a geology course, although a couple of others offer some “geo-related” course (Earth Science, Astronomy or Oceanography). Only one of our CCs has more than one sophomore-level course. There is a perception in this state that choosing a career in geosciences requires direct enrollment at our 4-year institution, or going out-of-state (not necessarily a bad thing).

We have had a few students successfully continue with their 4-year degrees at UWyo. A few more have found a better fit at other state’s universities (CO, ID, MT, SD, UT). Perhaps, that is all the success that I can count, but I am not satisfied. What I need is a plan that correlates well with attracting students to the geosciences. I am hoping to get some good ideas from this workshop.

Besides general education geoscience-related courses, what we have at CWC are two transfer programs and a technical degree:

- 1) Earth & Environmental Science (AS): Includes one introductory-level geology course (physical, environmental or historical), two semesters each of college-level math and chemistry, one Earth System Science course and a few other options in science, plus 34 credits of general education. There is no room for more, although we are trying to find a way to “plug into” energy resources.
- 2) Environmental Science and Leadership (AS): Combines most if the above (only one semester of math and one other science, but a full year of chemistry) plus a semester in outdoor leadership with the National Outdoor Leadership School (NOLS).
- 3) Environment, Health & Safety – Environmental Technician (AAS): Requires a few safety courses, some lower-level non-majors science courses, including Environmental Science, and some technical courses designed to introduce the students to the real equipment and procedures that they will use in their work (GIS, Law, Toxicology, Soils, Water). In addition, they take a smaller selection of general education courses.

We have also had a strong undergraduate research program for the past six years. All students are allowed/encouraged to join this program. It is competitive and selective but it has yet to produce a true geoscience transfer student, although several have transferred into biology, chemistry and education programs.

Given all of this, we look good on paper, but how are we going to move beyond that to have students who go on to geoscience careers and be prepared for them? That is our dilemma.