

**Suki Smaglik**  
**Central Wyoming College**

What have you found to be most successful in broadening participation in the geosciences at your institution and what made it successful? Consider what aspects of this success are translatable to other two-year colleges.

It's hard to believe that when I arrived at Central Wyoming College ten years ago that geology had not been taught here for almost twenty years, and then only occasionally. Here we sit in the place that many geology camps bring their students to learn their field skills. There were two courses on the books: Physical and Historical. The year prior, the University of Wyoming (our only public 4-year institution) removed the prerequisite for Historical and made them both entry-level courses. While we don't have to follow everything that UW does, it makes transfer easier for our students to transfer if we do follow much of it. As at most institutions, entry-level geoscience courses serve a mixed population of potential majors to general studies, and it is always challenging to make the information relevant to all. (But that is the topic of a different essay.)

In order to broaden participation in the geosciences I decided that I needed to offer some other courses that would interest more people and turn them on to the awesome world around them. With the other half of my load in chemistry, I didn't have much leeway to add other courses. So, I decided to focus on field experiences and introduced three short courses that allowed enough flexibility for me to stay engaged while teaching and the students while learning.

One course is a 3-day 1-credit field-trip course to Grand Teton and Yellowstone National Parks at the end of September each year. The course varies routes and students can earn up to 2 credits by repeating. It is run in conjunction with Student Activities and often draws more than 20 students, from traditional freshmen to senior citizens. We stay in motels rather than camp as many of our international students want to attend but have never camped, and it can get quite cold at that altitude in the fall. Another course is a variable credit course entitled "Geologic Field Excursion: <you name the place>". We have had trips to the Big Horn Mountains, Red Desert, Wind River Mountains, Grand Tetons and many other parts of our state, ranging from 4 - 10 days. Out-of-state trips to the Black Hills, Death Valley and Hawaii but have been offered but never garnered enough students to make the course go. All cited the expense so I am working on some creative ways for financing future trips. For two years CWC has tagged along with the UW Geology Rocky Mountain field trip that is sponsored by ConocoPhillips. That brings the cost down enough for students to attend. It also gives CWC students the chance to meet with professors, upper division geology majors and graduate students at the school they are most likely to transfer to. The other course offering is a "topics" course called "Geology of Wyoming: <you name the topic>" that is variable up to 3 credits and is usually offered as an evening course in the second half of the semester for students needing to pick up some credits to remain full-time, or in the summer as educator courses. Topics range from Energy, Volcanoes, Rocks, etc. to regional geology of specific localities. There is usually a half-day or one-day trip involved.

None of the above courses have prerequisites. Do I like this? Certainly I do not. I wish each student had to have some background in rocks, stratigraphy and tectonics, but I would never have enough students to take the course if that were the case. So, they are all “just in time” teaching courses. Those that do have some background appreciate what they know even more. This can make the course both challenging and rewarding. The “excursion” course is at the sophomore level and requires a fair amount of writing; the other two courses are at the freshman level and concentrate on making observations before interpretations.

Has this strategy worked to increase participation? Absolutely. Attendance has more than doubled and many students take more than one of these courses or take them more than once. Those who are interested in geoscience as a career take everything we have to offer. This may not be enough for them to be juniors in their major when they transfer but it keeps them in touch with why they are interested in geoscience. The easiest thing about using this strategy was the “build it and they will come” approach. Out west here, most people enjoy the outdoors. Those that venture to the Rocky Mountains from other parts of the country or to America from far-away lands have a romantic sense of adventure and are looking for opportunities to see and understand what the rocks and landscapes mean. However, without the support of the CWC administration, this growth in our program may not have been possible. At least one-third of my load is now composed of these smaller, shorter classes. It often makes my load appear lighter than some others. Anyone who has run a field trip knows what added work logistics and safety bring. In this time of decreasing budgets and a push toward larger class size, my academic dean is getting pressure to delete courses such as these from the offerings. Thankfully, he realizes that these smaller classes are what hook students into taking the longer courses, and maybe even science careers and thus appreciates their value to the CWC mission to “provide lifelong learning opportunities beyond the boundaries of time and place.” And, they’re fun to teach!