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When considering the strategies our program has used to meet some of the challenges associated with teaching at a two-year college, our effective use of non-traditional courses and transfer agreements immediately came to mind. I have only been teaching at the community college level for a couple of years, so I was not the first to initiate these tactics here at Red Rocks Community College, but I have found them to be very effective and think they're practices worth continuing and sharing with others who work in a similar setting.

One of my concerns when deciding to change jobs from a university with a geoscience department and plenty of geology majors to a community college was related to the fact that I would no longer have the opportunity to teach specialized upper-level courses. Along with that, I also feared that I would only be able to teach the same two courses over and over again, leading to boredom. Physical Geology and Historical Geology are indeed the only two geology classes that we currently offer that are typically easily transferable to universities to count for equivalent coursework. In fact, they are guaranteed to transfer to all public schools in Colorado. On the other hand, our other courses usually end up transferring as electives. Since most students taking science courses at our institution are intending to transfer to another school to earn a 4-year degree, they are usually reluctant to take courses that may not fulfill a specific requirement for their degree, because they do not see the immediate benefit. Since there are minimum enrollment requirements for our courses, traditional 3- and 4-credit courses are therefore usually not viable if they are not part of a transfer agreement. As is true at most 2-year colleges, students also don't remain at our school long enough for us to be able to teach upper-level courses.

Therefore, as a way of adding variety and specialization to our course offerings, boosting enrollments in geology courses, and helping to meet our students' needs and wishes, we instead offer a number of introductory (no-prerequisites) 1-credit and 2-credit weekend classes on a wide variety of very specific geologic topics. For example, the courses "Gems, Crystals and Minerals", "Rock and Mineral Identification", "The Great Ice Age", "Continental Drift", "Introduction to Global Positioning Systems", and the "Geology and Evolution of Caves" are currently on the books for the Colorado Community College System (although we may be the only school to teach some or all of them). I am continuing the practice of scheduling them either once a year or every semester. We also offer special topics courses in that same format. This coming fall, "Survey of Mars" and "The Geology of Rocky Mountain National Park" are scheduled. Students are more willing to take these courses out of interest, whether or not they will meet a specific requirement, than they are likely to register for a higher credit course which meets for many more hours. They are also popular as "schedule fillers", for students who just need 1 or 2 more credits to have full-time student status for the purpose of financial aid, etc. Furthermore, because of the condensed weekend time frame, they are popular with people who are working full-time and/or with non-degree seeking students who have an interest in the subject matter. The two mineral classes are particularly useful for K-12 teachers who need a refresher or who are seeking a certificate of specialization. We also schedule one of them just before the big Denver Gem & Mineral show every fall, and both the show and the class typically attract a number of interested "rockhounds" in the local community. Since enrollments are up college-wide and classroom space is at a premium and fully booked during the week, these classes also have the advantage of allowing us to offer more courses than we would otherwise be able to if we taught only traditional courses during weekdays.

From the teaching perspective, one of the nicest things about these short courses is that they can be scheduled so that full-day field trips are possible. They are also ideal for focusing on local geologic features that might not get full attention in broader introductory courses. They add a welcome variety to teaching duties and allow instructors to focus on areas that they are specialists in and/or find particularly interesting. In addition, they are great ways to give students the chance to learn from local experts, and they help build ties between our school and the organizations that employ geologists in the local community. For example, many federal agencies have offices close by, and our caves class has been taught for many years by the head of the caves program for the National Park Service, and our Mars class is being taught by a planetary geologist at the USGS.

The other way we add variety to our course listings and teaching assignments - and manage to attract students to courses that don't fulfill specific requirements - is through our very successful field course program. We offer a 3-credit "Geology of Colorado" class on weekends every summer. More unusually for a community college, I have continued with an ongoing long-term collaboration with others in the Science Department to teach extended field geology/biology courses, in which we have preparatory class meetings during the spring semester and then travel during the time between the end of the spring semester and the beginning of the summer session. Last year we took a group to Hawaii and this year we are going to Costa Rica. The students earn 7 credits, have life-changing experiences, and often become inspired by the hands-on nature of field work to pursue further coursework or even careers in science. Instructors get to work closely with colleagues in an interdisciplinary setting and become knowledgeable about the geologic and biologic features of various different locations. I have particularly appreciated the fact that I get to focus on my area of expertise and teach about coastal geologic processes in these classes, in a way that I normally can't do effectively in the landlocked state of Colorado, where there hasn't been a sea for many millions of years.

The second challenge I would like to briefly address is the need to do everything possible to make sure that our "primary" courses (not the electives I described above) do indeed transfer to 4-year schools and fulfill requirements at those institutions, and therefore meet the needs of our students. As mentioned previously, our Historical Geology and Physical Geology courses are guaranteed to transfer as those same courses to all public institutions of higher education in the state of Colorado. Environmental Science (which I also oversee) does, as well, and I hope to work toward this same status for Environmental Geology. Many students taking science classes at our school have the intention of transferring to Colorado School of Mines (CSM). In fact, we are the largest "feeder" school to that institution. Although that school does not offer courses with any of the above titles, it does require EVERY undergraduate student to take a 4-credit lecture/lab course called "Earth and Environmental Systems" (SYGN 101). So our faculty, administrators, and advisors worked to form a transfer agreement directly with them. For many years, the agreement required students to take two of our 4-credit classes (Physical Geology and Environmental Science) to count for that one course. Last year, to the benefit of our students, the agreement was changed so that now only Physical Geology is required. The assurance of transferability is invaluable in attracting students to that course. The main point here is the importance of general transferability OR, if that is not possible, creating relationships with individual universities to which a lot of students want to transfer.

As described above, transfer agreements and offering non-traditional courses such as our extended field trips and 1- and 2-credit weekend courses have both been effective strategies at making the geology program a strong one at our institution. Other schools could also benefit from these approaches. Anything that can be done to demonstrate that a discipline is viable and in-demand helps to strengthen the case for its continued existence at an institution, even when cutbacks are being made.