

Beginning a Geoscience Program at a Two-Year College
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I teach at Patrick Henry Community College, which resides in a fairly rural and economically depressed part of Virginia. Many of our students are first generation college students and are coming back to school for retraining after having lost a factory job. With the exception of earth science (GOL110), which is not a transferrable science course for general studies students and thus never had any significant enrollment, PHCC has only offered geology classes for four years. Having started the geology program at PHCC, there are three main areas upon which I am focusing to support geoscience students: introduction to the value of geoscience and access, transfer and career option, and training with workforce and transfer skills.

For non-traditional students, at the time they attended public school, earth science was either not offered at all, or not a requirement for graduation, thus it was not taken; even for traditional students, for whom earth science was a graduation requirement, many students had this class when they were in eighth grade, thus they have no working memory of it. A significant side effect of this is many students find no value in geosciences. Geosciences are perceived as either unimportant (“It’s a middle school class,” or “I didn’t even need it to graduate.”) or as a “baby” science, one not worthy of a college student. This may have been reinforced with the college offering only earth science, which again, did not transfer. By starting courses in physical geology and historical geology (which are transferable) students see that colleges do recognize and appreciate geosciences. For those who take the course, they find it is indeed rigorous and academically challenging. In four year geology courses have grown from not filling one section of one course, to now offering two courses (one section each) each semester.

Another important aspect for promoting student success is training in career skills. To help with this I am getting training to prepare myself to teach vital skills such as GIS. It waits to be seen how the implementation of GIS skills will go, but in the fall semester it will be incorporated into physical geology. Students will generate data sets, using hand held GPS units for self-selected projects, and map the results of their findings. I anticipate this project will be well received by students and will benefit them greatly. After talking with representatives from VAMLIS and The Timmons group, broad-scale knowledge of how to use GIS to solve problems, rather than heavy emphasis on the tools themselves, is most critical for prospective employees. After using these tools in multiple courses our students should be employable, and for many entry-level careers, a two-year degree will get them in the doors. Another element of incorporating GIS skills will be to tell students about what career options they have in both the private and public sectors.

Not only have students not had geoscience courses; they have had only limited exposure to science and frequently have science phobias. One of the most important things I try to do to support my students is train/encourage them to think critically and collaboratively about problems. One of the greatest complaints that I hear when talking to employers is that potential employees don’t have the skills to work with a group to solve a problem. By providing my students with opportunities both to use current technologies and use these tools to solve real world problems with their peers, they will also be receiving training that will help them to pursue employment or to transfer to a four-year institution.