85 years of Geosciences at Pasadena City College

The Geoscience program at Pasadena City College began in 1927 primarily response to a need for a greater number of trained geologists in the local workforce - namely the petroleum industry. Since that time the program has obviously changed in many important ways, yet there are still some core principles which the program continues today. These core ideals include integrated lecture and laboratories, hands-on rock and mineral identification and an emphasis on field experiences in the geologically rich southern California region. In the last decade, what began strictly as a Geology Department has evolved into a much broader Geosciences Department that includes a new Environmental Sciences discipline and Geography (after a friendly acquisition from the Business Department).

Currently the program sees about 600 students annually in its foundational Physical Geology course, about 600 students in introductory Geography courses and roughly 400 students in Environmental Science. The primary goal of these courses in for students to meet their general education requirements in Physical Sciences, however approximately 30 students per year continue as “Geology” majors into upper level classes such as Historical Geology and Mineralogy. Currently the college does not track Geography and Environmental Science “Majors” but many go on to complete an Associates degree in Natural Sciences. In 2012 the college awarded 216 of these degrees.

Because we are a 2-year transfer institution, the primary purpose of the program is to prepare Geology students to transfer, with Junior standing, into Geology Programs at 4-year universities. The majority of our students transfer to the University of California (UC) or State University (CSU) systems however a significant number also transfer to private 4-year institutions. The top 10 transfer schools for the college are (in order):

1. CSU Los Angeles
2. CSU Northridge
3. CSU Pomona
4. UCLA
5. CSU Long Beach
6. UC Irvine
7. USC
8. UC San Diego
9. UC Berkeley
10. UC Riverside

In California, curriculum at 2-year colleges is restricted to freshman and sophomore-level courses offered by 4-year institutions. For example, in order to add a course to our curriculum we must demonstrate that an equivalent course exists at a CSU or UC campus which our students typically transfer to (such as those listed above). This leads to some restrictions to what we can and can’t do with our program.

For example, because most 4-year schools offer introductory field methods in upper division, we were unable (until recently) to offer a course by that name. As a work-around, we have traditionally embedded Introductory field Geology into our Historical Geology courses. Anecdotally our alumni have told us that these experiences have put them above and beyond their indigenous 4-year colleagues and other transfers at both the UC’s and CSU’s. UCLA has recently moved Introduction to Field into lower division and so we can now “come out of the closet” and offer Introduction to Fieldwork as an official class at our institution. We like to believe that the success of our transfer students in the program at UCLA helped lead them to the decision to introduce rocks as they appear in the field to future geologists early in their academic career.

Because the vast majority of our geology majors attend other institutions before entering the workforce, our understanding of where they end up working is sparse. Alumni who have kept in touch and are currently working in the geosciences are employed in the following areas:

* Academia (Stanford, University of Florida, Perdue as examples…)
* Paleontology & Archeology Consulting (e.g. Paleosolutions)
* Environmental & Geotechnical Engineering Firms (Engeo, Converse)
* Petroleum Industry

As a department we feel the most important skills our students take forward from us are scientific critical thinking skills, hands-on experience with earth materials, ability and experience of working as a team (primarily through field work), and an understanding of rocks and earth processes in the field.