

GEO REU Workshop 2016

Working group: Raising career awareness and developing professional skills of REU students

9:30-10:30 am - Friday, Sept. 23, 2016

Leaders: Reggie Blake, Pranoti Asher

This is from a small working group of workshop participants who discussed the topic and made notes on their discussion.

Goals

- To introduce students to a wide variety of careers in the geosciences, including those outside of academia
- To prepare students for graduate school or the workforce
- To assist students in knowing which skills are valued by graduate schools and employers
- To incorporate this kind of training in an REU program

Challenges

- Is it possible to incorporate these things into a ten-week REU program?
- How can it be structured?
- Where can we find information about or people with insight into careers outside of academia
- How do we know which skills are valued by employers and grad schools?
- How can we teach these skills?
- How do we increase awareness about careers in the geosciences?

Responses and ideas for preparing students

- It is possible. Whether you hold weekly lunch meetings or science communication workshops, or just a few workshops during the program, it is possible to include them in your program. And it is important to do so!
- Incorporate a weekly 2-hour workshop into your REU (e.g. 8:30 - 10:30 am on Fridays). Use this time to teach about making a work plan, giving elevator speeches, how to give a talk or make a poster, professional ethics, writing a résumé or CV, and communicating professionally via email.
- It depends on the structure of program and nature of science. E.g. in coastal LA, the students' field work is weather dependent. We tend to front-load a lot of our orientation and training. We otherwise concentrate the rest on Fridays, which frees up most of the rest of the week. We have developed a partnership with a public TV station in Houma, "Future Leaders of America's Gulf" with monthly programming where students are involved. There may be opportunities like this in your community that are excellent for developing professional skills.
- The American Geosciences Institute (AGI) has career packages that you can use, with pamphlets, slides, and more on careers and skills.
 - <http://www.americangeosciences.org/workforce/career-resources>
 - <http://www.americangeosciences.org/workforce/currents/critical-skills-necessary-development-undergraduate-geoscience-students>
- Lina's email on Federal Internship today

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Q: How did you approach the EPA, DOE, and other organizations to have the students visit?

Answers:

Reggie: If you contact the HR department and tell them you have students and they don't need to pay for students, then agencies have been very open. Can get them in through the back door - not competing with students that are vying for paid internships. We do them a favor when bring a cohort of students. They could be adding to their workforce. Send people out to do workshops, open labs for tours. Most of personnel are retiring and there's a need for younger people to engage.

Ideas and Tips

- Have a career panel including people from other sectors, e.g. science writer for a newspaper, instrumental company, geoscience consulting firm, city planning department, coastal management agency
- Help students think of search terms in looking for jobs
- Have someone from career development office review and critique them, how to improve them
- Work on resumes together after giving some tips on using verbs
- Share interview questions
- In job hunting, encourage students to look for news articles on environmental or other issues that interest them
- Important: discuss and help students with email etiquette
Highlight that students should tailor their resume and cover letter to the job that they are applying for

Applying to graduate school

- Share this blog by Callan Bentley with advice:
<http://blogs.agu.org/mountainbeltway/2013/11/07/how-to-apply-for-grad-school-in-geology/>
- To find potential advisors, look up science papers that you are interested in and their authors in looking for grad school options. Now search for those individuals at their departments and see if they are active in their research and if they have grad students. Next step is to email them to introduce yourself and why you find their research interesting. Also consider contacting their students to ask about the faculty member as an advisor.

Solutions and strategies

- Look at list of skills sought by employers and help students see which of those they are getting from their REU. Employers are looking for the soft skills. They feel they can train people on software. They won't get hired if the employers don't see evidence of that in the application and interview.
- Shelley Pressley: We ask students to create a virtual video clips of themselves presenting their posters. These are called e-resumes and are good at helping many students to present themselves. It doesn't work well for everybody. It is a chance to work with students during an REU on giving a short video presentation

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- Video dialog can be like this: “My name is . _____ and I am a student at CUNY, I’m graduating in May and I wanted to tell you about my research.”
- Look to societies for internships, e.g. AGI, AGU, GSA, SACNAS, AISES, NABG (Facebook only).
- Check out the [AGU Virtual poster presentation](#)
- REU Site managers: consider doing a small poster session at your institution or look for local sessions. It is so good for professional development. They can do the poster during the REU. Sending students to prof dev conferences like AMS, AGU has a lot of benefits, too.

Resources

- **Résumé writing resource**
See the page on the GEO REU Resource Center website on resume writing:
<http://scied.ucar.edu/soars/reu/running-an-reu/resume>
- **Conference website: Heads/Chairs on the Future of Undergraduate Geoscience Education**
Sharon Moser (UT Austin) is studying the competencies of graduates and what employers are looking for, and runs a conference on the future of geoscience in undergraduate education:
<http://www.jsq.utexas.edu/events/future-of-geoscience-undergraduate-education/>