

Internship/research opportunities in the Geosciences

- Why they are useful
- Searching for the right one
- Getting in
- What to expect

Feb 5th, 2009
Nathan A. Toke

Internships/Research Experiences Provide:

- In depth knowledge and practical training for a particular subfield of the geosciences
- Cross-generational networking
- Unique educational experiences
- An opportunity for self reflection on your interests
- Mentoring opportunities
- Sometimes financial compensation
- An item that stands out on a resume or CV

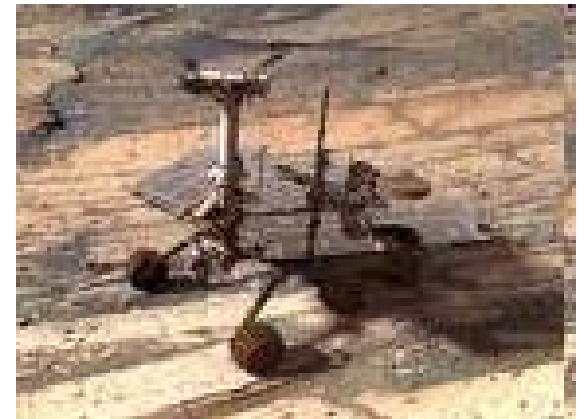
THEY ARE A VERY VALUABLE USE OF TIME





Types of Opportunities

- Working with a Professor or research team (graduate students) from your home institution.
 - May or may not be paid
 - Could stem from a class project
 - Need to develop a working relationship with a professor/grad student somehow
 - Could be just the summer or ongoing (senior thesis?)
- Attending a summer internship
 - Paid vs unpaid
 - Exotic locals vs local companies
 - Field vs laboratory/museum based
 - Interdisciplinary/outreach opportunities

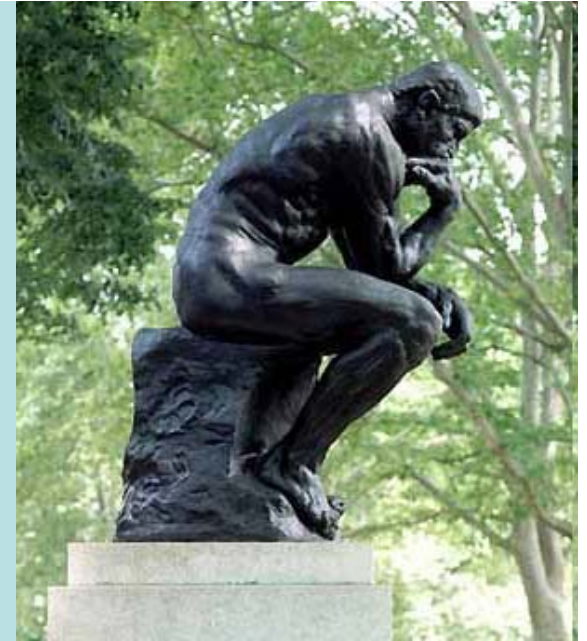


Examples

- http://www.azhydrosoc.org/internship_Bouwer.html (paid)
- <http://talc.geo.umn.edu/orgs/camp/hydrocamp/> (unpaid, field course)
- <http://www.geosociety.org/grants/> (research grants)
- <http://www.earthmagazine.org/earth/section/studentopportunities/all>
- http://www.nsf.gov/crssprgm/reu/reu_search.cfm (NSF sponsored)

What type of experience should I look for?

- What is your financial situation?
- Do you have summer or continual commitments? (classes, family, etc.)
- How busy are your semesters?
- Have you already identified a specialized field of interest?
- Do you have any medical restrictions or other factors to consider?



How to apply

- Start thinking about it early!
(we're already a little late)
 - Letter(s) of reference/support from profs.
 - Application
 - Resume/CV
 - Letter of interest
 - transcripts
- Many deadlines have past (Feb 1 or 2), but many are upcoming (Feb 15-March 15).
- Good idea to contact the application reviewer with questions about the application/process (via email) so they will know your name ahead of time and your interest in the program (don't be shy, but do construct a well written email grammatically and with some logical thought to it).

Who to get letters of reference from?

- Someone who will be recognizable to the application reviewers (either by title or reputation)
- Someone who can write you an excellent letter (because a so-so letter is a BAD letter)
 - A prof. who knows you well from a class you did well in and were an active participant in.
 - Or it could be an employer/supervisor (hopefully in a job related to the internship).
 - A senior graduate student could be used if you know they can write really well about your abilities and have been participatory in their field.
- Someone who has time to do it (ask them with some time to spare, profs are very busy, but sometimes surprisingly willing to help at the last minute)

What to say on your letter of interest?

- Describe your background and what you can bring in terms of expertise (do you know some software such as GIS or are you an expert in field geophysical methods)
- Describe your career goals as best you can and aim high.
- Describe why this internship/REU will be really great for your interests and expertise!
- Most Importantly write about what they ask you to.

Generally you should have these ready.

- Know how to get your **transcripts** out. (I think ASU charges for each one, but there is a way to have them sent online)
 - I like to keep a few on hand in their university sealed envelopes so I can send them out for a last minute deadline
- Have a CV/resume ready and up to date.
 - You may want to tailor it to the application.
- Establish a professional or mentoring relationship with a professor(s) at ASU who you could rely on for a good letter of recommendation.

What to put on your CV/extended Resume

- Name + Contact info (address, phone, fax, email, your professionally-relevant website).
- Education
 - B.S. in Geological Sciences (2005-In Progress), School of Earth and Space Exploration, Arizona State University.
 - HONORS PROJECT X with Professor Y
- Research and Teaching Experience
 - Worked in so and so's lab (dates). What did you do and why?
 - Teaching Assistant Introductory labs (spring 2009)....
- Honors and Awards
 - WHATEVER SCHOLARSHIP
- Presentations and Publications
 -(last author on some presentation)
- Memberships (AGU, GSA, GEOCLUB)
- Relevant Courses (if hydro camp then Hydrogeology, geomorphology...)
- Technical Skills (html programming, microsoft office, GPS/GIS tools, C++,