Research Experiences in Solid Earth Science for Students (RESESS)

RESESS is an 11-week summer research internship program dedicated to increasing the diversity of students entering the geosciences. RESESS encourages applications from many college juniors and seniors who are members of a group that is historically underrepresented in the Earth sciences, including students with disabilities, non-traditional students, military veterans, students who are Black or African American, American Indian or Native Pacific Islanders, Hispanics, or others.

- Multi-year, 11-week paid summer internship
- Opportunity to return for a total of 3 summers
- Upper level undergraduates
- Interns mentored by faculty, researchers, peers, and graduate students from a variety of institutions - research mentors and communications mentors
- Professional development

Career exploration via local field trips, graduate student mentor round table

- Writing and communicating workshops
- Graduate school application support (including GRE workshops, personal statements, and CVs)
- Interns present their work at end of summer UNAVCO intern colloquium and poster session hosted by UCAR

Funding available to attend scientific conferences to interact with RESESS alumni and broader scientific communities. Funding provided by grant from the ExxonMobil Foundation.

Table 1. UNAVCO’s internship programs

<table>
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<tr>
<th>Program</th>
<th>Target Audience</th>
<th>Activity</th>
<th>Support Structures</th>
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<tr>
<td>GLP</td>
<td>ZYC students from Colorado</td>
<td>Research-ready skills</td>
<td>Travel, housing, child care, summer salary, professional development, near-peer mentoring</td>
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<tr>
<td>RESESS</td>
<td>Upper level undergraduates from underrepresented populations</td>
<td>Research experience</td>
<td>Travel, housing, child care, summer salary, professional development, near-peer mentoring</td>
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<tr>
<td>USIP</td>
<td>Upper level undergraduates/graduate students</td>
<td>Work experience</td>
<td>Summer salary, work experience, business, near-peer mentoring, professional development</td>
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Geo-Lauchpad Internship Program (GLP)

Geo-Lauchpad is an eight-week summer internship program dedicated to increasing the diversity of students entering the geosciences by engaging students from two-year colleges.

- 8-week paid summer internship for 2-year college students in Colorado
- Interns work in pairs, each pair mentored by a UNAVCO Project Manager and 2 engineers
- Weekly communications seminar (with RESESS), research-ready skills workshop, and alternating Career Circle professional development discussions
- Interns participate in overnight trips with GLP interns and CU faculty and graduate students
- Interns present their work at end of summer colloquium at UNAVCO and the end of summer poster session

UNAVCO Student Internship Program (USIP)

USP interns gain real-world work experience in a professional setting, collaborate with teams towards a common mission, and contribute their knowledge, skills, and abilities to the UNAVCO community.

- Upper level undergraduates and graduate students
- Real-world experiences related to students’ majors or career goals; intern’s work supports UNAVCO GAGE scope
- Participate in joint activities with other interns at UNAVCO
- Professional development opportunities
- Interns work across UNAVCO groups: Business Affairs, Geodetic Infrastructure, Geodetic Data Services, External Affairs, and Education and Community Engagement

Internship Interactions

Adventures and shared experiences throughout the summer help the students connect with each other within each internship cohort as well as among cohorts. This opportunity to interact with interns of different programs provides a unique experience and perspective. Students further align their academic career (RESESS and USIP) mentor students who are earlier in their academic career (GLP). The GLP students directly see opportunities available for them.

UNAVCO organizes joint activities for all interns and for multiple cohorts. These activities provide an informal way for students to interact with each other. For example, UNAVCO staff work as well as learn more about the local area. For example, UNAVCO staff organized an afternoo field trip for all interns to local geologic points of interest including Dinosaur Ridge, Red Rocks, and Morrison, Colorado early in the summer. Additionally, Geo-Lauchpad and RESESS interns participate in an overnight field trip to the University of Colorado (CU) Mountain Research Station led by CU faculty and graduate students.

After the end of the summer, interns maintain communication through social media, text messages, and in-person meetings with peers, including interns from professional conferences such as the Geological Society of America Annual Meeting, the Fall AGU Meeting, the American Indian Science and Engineering Society, the Society for Hispanic, Chicano, and Native American Scientists in Science and the National Association of Black Geoscientists Annual Technical Conference.

Intern Perspectives

Not only did I feel better prepared for taking on a RESESS internship in the future, I also learned quite a bit from individuals projects during presentation session. Some concepts have come up during my courses this semester that I grasped more easily because I had encountered them and pieces from other intern’s research projects. I also feel like I will be able to do research and effectively communicate it after watching others struggle, improve, and succeed. I strongly support close interactions between the Geo-Lauchpad and RESESS groups in the future.

Recommendations

- Where possible, provide interns with a cohort with which to experience the summer - facilitate cohort activities
- Where possible, strive to provide interns with a cohort with which to experience the summer - facilitate cohort activities

Evaluation Results

A post-summer survey was sent to participants from all three 2015 internships. Three of five GLP interns responded, seven of nine RESESS interns responded, and four of six USIP interns responded. Results indicate that interns valued participating in their internship as part of a cohort. Additionally, interns shared advice on the skills that prepared them for the professional workforce.

My experience with interns in other internships was great because we had each others’ backs and understood what was at stake. Everyone was working on a team, and we all worked well together as a group. I think it is important to have a mentor to discuss things with. The key to success is to stay involved and to ask questions as much as possible.

- RESESS intern

It’s always great to interact with the younger interns. They have a lot to teach me just as I have a lot to teach them.

- USIP intern

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