Undergraduate Research at Texas A&M

Annabelle G. Aymond
Interim Associate Director for Undergraduate Research
LAUNCH

ugr.tamu.edu
ugr@tamu.edu
A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge.

- The Council on Undergraduate Research (CUR)

- Test a novel hypothesis
- Investigate a question
- Solve a problem
- Design a machine
- Develop a new procedure
- Create a performance
- Write a creative work
Misconceptions about Research

- Limited to STEM* disciplines
  (undergraduate research happens in every field)

- Only for seniors
  (you can do research in any year, even as a freshman)

- Only for the top students
  (undergraduate research is about learning)

- Only pursuing graduate school
  (industry values undergraduate research, too)

- Takes too much time
  (can range from 3-18 hours per week)

- Faculty are scary
  (they are here for you)

*STEM: Science, Technology, Engineering, Mathematics
Benefits of Undergraduate Research

• Learn resilience and fail productively
• Experience meaningful interactions with faculty and others in network
• Connect learning to real-world settings that are beyond the classroom
• Work on a team and collaborate with mentors and peers alike
• Manage time in the scope of a large project
• Challenge yourself to think in new ways and respond to novel situations
• Advance your career through mentoring relationships, stronger applications, and possible job offers
Getting Started in Research

- Verbalize **passions** and determine preliminary **goals**
- Find **opportunities** and what to ask about/for
- Learn what **success** looks like in your area
- Maintain professional **relationships**
- Maximize **experience** (through LAUNCH programs)
- Identify **transferable skills** needed beyond undergrad
- Run with it, and don’t forget to **pass it back**!
Ways to Do Undergraduate Research

- Course credit: 0-4 hours, e.g., 491
- Student worker ($)
- Study abroad/field courses
- **Summer programs**: NSF-REU & SURE
- Internships (can be paid)
- Scholarships and Fellowships
- National or international experiences
- **Examples**: companies, universities, labs, hospitals, institutes, government careers, museums, and parks
Why Summer?

Fewer distractions
• Can concentrate full-time
• Broader experiences

Can leave town
• Access different resources and locations
• Develop contacts at other institutions
• “Test” a place you might want to go for graduate or professional school
• Live and explore somewhere else
Finding Research Opportunities

Research Opportunities Database

To submit an undergraduate research opportunity to our database, fill out a Research Opportunity Submission Form.

Quick Tips for Searching
1. Check the filters that are relevant to your search
2. If you still need the search to be more narrow, use the search box
3. Click on the name of the opportunity for more detailed information
4. Changes to the filters and the search box appear in real-time when the deadline has passed, the opportunity will no longer appear

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Deadline</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>15th Annual Pathways Student Research Symposium</td>
<td>Symposium</td>
<td>9/10/2018</td>
<td>Interdisciplinary symposium open to students in the Texas A&amp;M System conducting faculty-mentored research</td>
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<tr>
<td>Academic Support Initiatives in Residence Life</td>
<td>Program, Research Position</td>
<td>None</td>
<td>Student interns will work with a Research Team and gain valuable experience directly tied to their field of interest.</td>
</tr>
<tr>
<td>Aggie Research Scholars Program</td>
<td>Program</td>
<td>None</td>
<td>Aggie Research Scholars perform research in teams led by an experienced undergraduate student or postdoctoral fellow.</td>
</tr>
<tr>
<td>APE Challenge</td>
<td>Program</td>
<td>None</td>
<td>A program that engages engineering undergraduates with interdisciplinary team projects related to the engineering challenges facing society.</td>
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<tr>
<td>American Geophysical Union's AGU Virtual Poster Showcase</td>
<td>Conference, Symposium</td>
<td>10/2/2018</td>
<td>An online presentation competition for undergraduate research in Earth or space science</td>
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<tr>
<td>Capital of Texas Undergraduate Research Conference</td>
<td>Conference</td>
<td>9/14/2018</td>
<td>Students run conference for undergraduate researchers in all majors and schools in Texas to present their original discoveries</td>
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<tr>
<td>Clinton Global Initiative University (CGI)</td>
<td>Funding, Symposium</td>
<td>4/23/2018</td>
<td>Meeting of students, university representatives, experts, and celebrities to discuss solutions to global challenges</td>
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<tr>
<td>Council on Undergraduate Research (CUR) REU Symposium</td>
<td>Symposium</td>
<td>8/15/2018</td>
<td>A presentation opportunity for undergraduates who participated in summer REU programs</td>
</tr>
</tbody>
</table>

Filters

By Category:
- Research Position
- Program
- Conference
- Symposium
- Funding

By Other:
- On Campus
- Off Campus
- Summer Research
- GPA Requirement
- Individual Project
- Team Project
- Interdisciplinary
- STEM
- Arts, Humanities and Social Sciences

• Research Opportunities Database ([http://tx.ag/ROdatabase](http://tx.ag/ROdatabase))
• Undergraduate Research Ambassadors ([http://tx.ag/AskUsAboutUGR](http://tx.ag/AskUsAboutUGR))
• Events
  - Undergraduate Research Expo
  - Undergraduate Research Scholars Symposium
  - Summer Poster Session
  - Getting Started in Research Workshops

Connect with us—we can help! Email ugr@tamu.edu.
Finding Research Opportunities

- Department websites and faculty profiles
- Classes—ask your professors and TAs!
- Student Organizations (seminars and invited speakers)
- Conferences, Symposia, & Fairs
- Seminars and presentations: Check TAMU Calendar, your email, Career Center Website
- Team-based projects through the Aggie Research Program (http://aggieresearch.tamu.edu)

**RESEARCH CENTERS**
The College of Geosciences is home to nine research centers and consortiums that focus on interdisciplinary and collaborative research aimed at addressing global issues that affect our everyday lives. Researchers and collaborators from Texas A&M include the College of Agriculture, College of Architecture, College of Engineering, Texas A&M Galveston, and Texas A&M Corpus Christi.

- Beck-Hughes Center for Petroleum and Sedimentary Systems
- Center for Atmospheric Chemistry and the Environment
- GEOSAT
- Geochemical and Environmental Research Group
- International Ocean Discovery Program
- Office of the State Climatologist
- Center for Tectonophysics
- Texas Center for Climate Studies
- Texas Sea Grant
Get Started

Prepare
• Critical classes, good grades, develop interests
• Self assessment, brief resume, understand your time commitments
• What do you want to do? Where do you want to go?

Find out what’s available
• Research faculty interests
• Summer: Apply between December and February
• Be ready to interview in the spring

Talk to faculty
• Motivation, interests, capabilities, questions, expectations

Remember the keys to success
• Communicate, participate, interact
• Be reliable, dedicated, enthusiastic
Take it a Step Further

- **Write a Thesis**: Undergraduate Research Scholars
- **Volunteer**: Undergraduate Research Ambassadors
- **Publish**: Explorations: The Texas A&M Undergraduate Journal
Resources

- UGR Staff – ugr@tamu.edu and https://ugr.tamu.edu
- UGR Events – Expo, Symposium, Workshops, Informationals
- Database – https://tx.ag/ROdatabase
- ARP – https://aggieresearch.tamu.edu/project-list/
- UGR Ambassadors – https://tx.ag/AskUsAboutUGR
- Journal – https://explorations.tamu.edu
- Departmental Websites and Faculty Pages
- Email Bulletins and the University Calendar
- Summer Programs
- 291/491, 285/485, 497 Courses
Questions?

annabelle@tamu.edu
ugr@tamu.edu
https://ugr.tamu.edu

https://calendar.tamu.edu/ugr
https://launch.tamu.edu