Undergraduate Research Scholars Thesis Program

Annabelle Aymond, Associate Program Director Office of Undergraduate Research



Undergraduate Research

April 2025

Definition



"

A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge."

- Council on Undergraduate Research

EXAMPLES

- Evaluating, improving, testing, building, creating, expanding, etc.
- Finding new uses for tools, materials, processes, etc.
- Applying new perspectives to questions, ideas, or experiences





Undergraduate Research and Capstones Collection: http://hdl.handle.net/1969.1/3365

- Walk Across Texas: An Analysis of the Economic Impact of an Online, Community-Based Physical Activity Program by Jordan Moore, a Public Health major
- Applications of Neural Architecture Search to Deep Reinforcement Learning Methods by William Allen, a Mathematics major
- Effect of Omega-3 and Omega-6 Polyunsaturated Fatty Acids on Gene Expression by Sophia Valdez, a Biomedical Sciences major
- A Flexible Tether Management Model for Heterogeneous Marsupial Robot Systems by Carson Duffy, a Computer Engineering major

Student Benefits



There is an endless possibility for bettering yourself"

Peter Elhajj '25, Psychology
Undergraduate Research Ambassador

PERSONAL AND PROFESSIONAL

- Refine communication and time management skills
- Learn independence, resilience, and positive failure
- Improve leadership skills
- Build a supportive network
- Connect coursework to real-world settings and get specialized training
- Simulate graduate and professional school experiences

Misconceptions



ONLY FOR STUDENTS GOING TO GRAD SCHOOL

Undergraduate research teaches you transferrable skills that all employers are looking for.



ONLY FOR Students with The Best Grades

Anyone is capable of doing undergraduate research, and participating in research activities often helps students improve their grades!



LIMITED TO STEM* DISCIPLINES

Undergraduate research happens in every field, and research looks different for everyone!





Overview: Purpose

- Supplements Existing Research Experiences
- Provides Thesis and Publication Support
- Provides Presentation Experience
- Grows your Network
- Recognizes Honors- and Graduate-level Work

Overview: Requirements



- Find an Eligible Faculty Research Advisor
- Commit to Fall 2025 and Spring 2026 Semesters
- Work through the Application and Proposal Approval Process
- Work through the Specific Program Requirements
- Make a Public Presentation
- Produce a Written Undergraduate Research Scholars Thesis (minimum 5,500 words)
- Work through the Final Thesis Approval Process

Overview: Considerations



XXXX 291/491 Preferred course for research experiences.

XXXX 285/485 Acceptable course for research experiences.

XXXX 297/497 Acceptable course for capstone-related research experiences.

Talk to your academic advisor and your faculty research advisor about enrollment, expectations, and credit hours!

Overview: Considerations



HONORS IS **NOT REQUIRED TO PARTICIPATE**

Honors and Capstone Credit

☑ University Honors/Honors Academy

☑ College and Departmental Honors Programs

Talk to your Honors Advisors AND Academic Advisors to determine associated requirements

Overview: Eligibility

☑ Any major

- ☑ Existing research project with eligible Faculty Advisor
- ☑ Commit to fall 2025 and spring 2026 semesters
- ☑ 12+ credit hours from classes taken at Texas A&M
- \boxdot 90+ credit hours from classes in total
- ☑ 3.0+ GPA cumulative
- ☑ Teams up to 5 are OK
- Ineligible: December 2025 Graduates

Ineligible: Honor Code or Student Conduct Code Violations



Overview: Perks



- ☑ University-Level Honors Distinction
- ☑ Transcript Designation
- ☑ Graduation Regalia
- ☑ Recognition in Commencement Program
- Eligibility for Outstanding Thesis Award
- ☑ Priority Registration in Spring 2026
- ☑ Possible Eligibility for Travel Awards or Free Poster Printing
- Eligibility to Register for UGST 405: Thesis Writing Class
- ☑ Publication of Thesis in Permanent Library Collection

Program Timeline



FALL 2025

Timeframe	Program Item
June-August	Application Period
August-September	Application Acceptances
September-October	Orientation Period
Mid-October	Small Group Meeting 1
Early-November	Orientation Quiz
Mid-November	Small Group Meeting 2
Late-November	Progress Report 1

You are Working on Research, Writing, and Seeking Feedback from Your Faculty Advisor at ALL Times

SPRING 2026

Timeframe	Program Item
Mid-January	Thesis Formatting Quiz
Mid-January	Progress Report 2
Late-January	Draft Installment 1 (1,375 words)
Late-January	Small Group Meeting 3
Mid-February	URS Symposium
Mid-February	Progress Report 3
Early-March	Draft Installment 2 (4,125 words)
Late-March	Small Group Meeting 4
Early-April	Presentation Report
Early-April	Final Thesis Due (5,500+ words)

• M	odule 1
Ĩł.	Welcome and Introduction
Ĩ.	Get to Know the URS Program Staff
Ĩ.	Roles and Responsibilities
Ĩ.	Student Rules
ÎI.	Attendance, Participation, and Grading
ſII.	Professional Etiquette
Ĩ	Technology Requirements
Ĩ.	Time Management and Suggested Milestones
Ĩ.	Small Group Meetings
ÎI.	UGST 405: Thesis Writing Course
ÎI.	Public Presentation Expectations
ÎI.	Research Compliance and Ethics
Ĩ.	Choosing a Thesis Template
ĨI.	Thesis Template Downloads
Ĩ	Thesis Organization Overview
F	Citation Basics



▪ Fo	rmatting Guide Module
Ø	2425 URS Thesis Formatting Guide.pdf
Ē	Formatting Basics: Document Page Specifications
H	Formatting Basics: Text and Font Specifications
F	Formatting Basics: Paragraph Specifications
F	Formatting Basics: Additional Text Specifications
F	Preliminary Pages: Title Page
F	Preliminary Pages: Research Compliance Certification
F	Preliminary Pages: Table of Contents
Ē	Preliminary Pages: Abstract Page
F	Preliminary Pages: Dedication Page
F	Preliminary Pages: Acknowledgements Page
F	Preliminary Pages: Nomenclature Page
F	Main Body: Headings
F	Main Body: Subheadings
Ē	Main Body: Paragraphs, Lists, and Block Quotes
III)	Main Body: Figures



GENOMIC EVOLUTION OF ANTIBIOTIC RESISTANCE UNDER

SELECTIVE PRESSURE IN TREATED CANCER PATIENTS

An Undergraduate Research Scholars Thesis by MEGAN MAHON

Submitted to the LAUNCH: Undergraduate Research office at Texas A&M University in partial fulfillment of requirements for the designation as an

UNDERGRADUATE RESEARCH SCHOLAR

Approved by Faculty Research Advisor:

Dr. Jessica Galloway-Peña

May 2024

Majors:

Biochemistry Genetics

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What is an installment?



The purpose of this program is to help you:

- Write your thesis in progression
- Prepare a professional document that matches university standards

You submit your draft thesis template for review twice before the final thesis.

Each installment submission is checked by a document reviewer for writing progress and document formatting.

Application: Basics



- Multi-step Process
- Requires an "Intent to Apply"
- Requires a formal, multi-part "Thesis Proposal"
- **3-Part Approval Process:** UGR Office, Proposal Reviewer, and Your Faculty Advisor



Application: Proposal

- Project Summary
- Introduction
- Objectives/Goals
- Methodology/Theoretical Framework
- Bibliography/References/Works Cited
- Research Compliance Acknowledgement
- Contingency Plan
- Timeline: September and October Goals
- Timeline: November and December Goals
- Timeline: January and February Goals
- Timeline: March and April Goals



Application: Example 1

Section 2: Proposal

Section 2.1: Project Summary

FOR EVERYONE:

In **250-300 words**, describe the overarching research project over the course of the eight-month program and how you propose to accomplish the objectives of the research project. The project summary should contain:

- 1. A statement of your motivation, problem, and research question.
- 2. A justification and importance of your research topic.
- How does your project differentiate itself in the current research field and how does it build on previous research in your broader discipline? Make sure you understand the previous research that has been done in your broader discipline and in your specific subfield. <u>Be specific throughout</u>.
- 4. The expected outcome(s) of the research project and its associated objectives.

IN ADDITION:

FOR CREATIVE WORKS:

Creative Works theses combine critical and creative modes. In the critical mode, you should explore previous research in your field and concentrate on how your project applies innovative methods to existing mediums and/or uses established modes to develop new knowledge through its application. This research will help you design a specific motivation, problem, or question you want to answer through your Creative Artifact. As part of the creative mode, you should develop a Creative Artifact that is appropriate for the genre or medium that you are exploring. Your Creative Artifact should answer your research question and will be further developed through exhibition and reflection throughout the academic year. The Creative Work thesis is the combination of your analysis, artifact, and reflection.

Creative Works project summaries must also answer the following questions:

- 5. How does your anticipated Creative Artifact build on previous research in your genre or medium? What processes or medium-specific tools will it incorporate; why?
- 6. What form will the anticipated Creative Artifact take and what new knowledge will it produce?



Application: Example 2

Section 2: Proposal

Section 2.1: Project Summary

FOR EVERYONE:

In **250-300 words**, describe the overarching research project over the course of the eight-month program and how you propose to accomplish the objectives of the research project. The project summary should contain:

- 1. A statement of your motivation, problem, and research question.
- 2. A justification and importance of your research topic.
- How does your project differentiate itself in the current research field and how does it build on previous research in your broader discipline? Make sure you understand the previous research that has been done in your broader discipline and in your specific subfield. <u>Be specific throughout</u>.
- 4. The expected outcome(s) of the research project and its associated objectives.

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Application: Example 3

Section 5.2 Examples: November and December Goals

> Jump to Section 5.2 Instructions

STEM EXAMPLE

November

Week 1: Seed HUVEC and A2780 spheroids in the aTME-Chip. Prepare Fall progress report.

Week 2: Attend small group meeting with thesis reviewer. Continue culture of aTME-Chip, add Bevacizumab, and live cell fluorescence microscopy imaging every 48 h.

Week 3: Thanksgiving Break

Week 4: Finalize and submit Fall progress report.

December

Week 1: Process images and data.

Week 2: Process images and data.

Week 3: Winter Break/Write first thesis installment.

Week 4: Winter Break/Write first thesis installment.

Jump to Section 5.2 Instructions

ARTS, HUMANITIES, AND SOCIAL SCIENCES EXAMPLE

November Goals

- o Week 1: November 1-11
 - Submit Presentation on Nov. 1 to be finalized for the Symposium.
 - November 3: Attend POWER Writing Productivity Session
 - November 8-10th: Deliver presentation at Never Forgotten: Conflict Archaeology and Military History at Texas A&M Symposium.
 - Identify a publisher and begin writing an abstract.



Application: Research Compliance

The steps to clear your research compliance status are the following:

- Discussion with Faculty Advisor
- Submission of application with completed RCB acknowledgement (appears in application template)
- Approval by advisor and UGR Staff
- Once accepted, if your project changes, notify faculty advisor BEFORE you collect any data to determine if you need compliance training or approval
- Submission of final thesis with completed RCB acknowledgement (appears in thesis template)

Direct questions about obtaining compliance to the appropriate RCB Committees:

Human Subjects: Institutional Review Board (IRB)

Vertebrate Animals: Institutional Animal Care and Use Committee (IACUC)

Biological Hazards: Institutional Biosafety Committee (IBC)

Application: Contingency Plan



Students are required to apply with a contingency plan that describes how the URS project will be completed if you are unable to follow the scope of the original project proposal.

Depending on the project, this contingency plan could address, but is not limited to, the following:

- Lack of physical access to research space, data, or other resources
- Inability to obtain equipment, permission, data, or other resources
- Limited and/or restricted travel
- Inability to hold in-person meetings
- Partial or incomplete data, trials, experiments, reviews, analyses, design, etc.
- Virtual project completion if moved fully online

Give a detailed description of a contingency plan that will guide you as you plan ahead for potential disruptions and/or unanticipated impacts on your URS thesis. The purpose of this contingency plan is to help you complete the URS thesis program on time and to fulfill graduation or other program requirements, such as Honors.

URS Resources

Repository of URS Theses

https://tx.ag/URSthesis

https://oaktrust.library.tamu.edu/handle/1969.1/3367

URS Outstanding Thesis Awards

https://launch.tamu.edu/Undergraduate-Research/URS/Outstanding-Thesis-Awards

New website, application system, and submittal system in progress.

UGR Resources



EXPLORATIONS AND JLS

https://explorations.tamu.edu

https://launch.tamu.edu/underg raduate-research/jls

RESEARCH OPPS DATABASE

https://tx.ag/ ResearchOpportunities



U G R A M B A S S A D O R S

https://tx.ag/AskUsAboutUGR





THANK YOU

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