

2024 Summer Research Experiences for Undergraduates (REU) Program

## **Smart and Sustainable Construction in the Digital Era**

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Work on impactful research in the construction science fields through a summer Research Experiences for Undergraduates (REU) program at Texas A&M University.

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# Smart and Sustainable Construction in the Digital Era

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## 01. Program Overview

Welcome to a unique opportunity to be a part of the inaugural class of the Research Experience for Undergraduates (REU) program hosted by the Texas A&M University Department of Construction Science. Funded by the National Science Foundation, the first cohort will engage in a paid, 10-week on-site program, collaborating with leading researchers.

The overarching theme of the REU program is **“Smart and Sustainable Construction in the Digital Era.”**



The construction industry sector offers significant growth opportunities with rapid digital technology applications, automation, machine learning, artificial intelligence, and smart materials and processes for enhanced construction safety, productivity, and sustainability. You will participate in highly innovative research projects sponsored by federal and state funding agencies, as well as industry sponsors. As part of this cohort, you may explore emerging digital technologies and computational processes such as drones, virtual reality (VR), 3D printing, digital twins, robotics, smart materials, energy simulation, machine learning (ML), and artificial intelligence (AI) from the context of construction.

Our REU program features both individual and group activities that will be reinforced with enrichment and professional development activities, as well as a continuous mentorship plan. This includes weekly meetings where principles of scientific investigation, ethical aspects of research, and career development topics will be discussed.



During your 10-week experience, you will develop analytical, independent thinking, and collaborative skills necessary for developing, testing, and validating digital technologies and sustainable solutions for construction. Presentations at weekly REU group meetings and the REU Student Research Symposium will enhance your oral communication skills. Additionally, participants will learn about ethics and expected behavior in the research environment, as well as general research skills such as formulating research questions, generating hypotheses, and conducting research tasks. As you progress in your assigned project, you will gain insight into how research informs, predicts, and transforms current construction practices.

This new REU site for the construction science discipline is part of the nation’s largest higher education program in construction. It is home to 1,124 undergraduate students, 148 M.S. degree students, and 28 Ph.D. students. This program will provide a unique and stimulating research experience for undergraduates who are interested in a construction-related professional career. At the end of the summer program, our goal is for you to feel competent in conducting research and build professional confidence for your future career path in STEM fields.



## 02. Stipend Payments

REU students must be enrolled in the TAMU 499 course (0-credit hours). TAMU Scholarships & Financial Aid will utilize the course rosters for TAMU 499 to facilitate the payment of stipends.

The total amount of the stipend is disbursed over multiple payments once you reach each major milestone. The approximate timeline is

1. 1/3 early June
2. 1/3 early July
3. 1/3 late July

**More details to follow.**

If you have any questions concerning enrollment and stipend disbursement, please contact Ms. Bree Wright via email [bwright@tamu.edu](mailto:bwright@tamu.edu), or Dr. Julie Hartell via email [Julie.hartell@tamu.edu](mailto:Julie.hartell@tamu.edu).



### 03. Transportation Options

#### 03.1 Transportation to College Station

College Station is situated between major cities such as Dallas, Houston, and Austin, offering various transportation options depending on your departure location. If you are flying from another city, consider the following options 1-5.

When opting for air travel, it is important to consider the total travel time, including ground transportation to and from the airport, potential wait times, and layovers for connecting flights. Additionally, compare ticket prices and flight schedules to choose the most convenient and cost-effective option for your journey to College Station.

- **Option 1. Arriving at Easterwood Airport, College Station, TX (airport code: CLL)**

Easterwood Airport, located approximately 3 miles southwest of the city center, serves as the nearest airport to College Station. American Airlines operates flights between Easterwood Airport and Dallas Fort Worth International Airport (DFW). Please check flight availability and schedules in advance as options may be limited compared to larger airports.

- **Option 2. Arriving at George Bush Intercontinental Airport, Houston, TX (airport code: IAH)**

George Bush Intercontinental Airport, situated about 90 miles south of College Station, is the primary international airport serving the Greater Houston area. From IAH, you can rent a car, use shuttle services like Ground Shuttle, or use ridesharing apps such as Uber or Lyft to travel to College Station. The journey by car typically takes 1.5 to 2 hours, depending on traffic conditions.

Ground Shuttle Service: Offers direct transportation between IAH and College Station with multiple daily departures. Advance reservations are usually required. For bookings and additional information, visit [Ground Shuttle](#).

- **Option 3. Arriving at William P. Hobby Airport, Houston, TX (airport code: HOU)**

William P. Hobby Airport (HOU) is another airport option in Houston. Upon arrival, you can rent a car from available rental agencies at the airport and drive approximately 100 miles northwest to College Station. The drive typically takes around 2 hours, depending on traffic conditions.

- **Option 4. Arriving at Dallas Fort Worth International Airport, Dallas, TX (airport code: DFW)**

Dallas Fort Worth International Airport (DFW) offers a wide selection of rental car agencies. Upon arrival, you can rent a car and drive approximately 185 miles south to College Station. The drive typically takes 3 to 3.5 hours, depending on traffic and road conditions. Ridesharing services such as Uber and Lyft are also available at DFW Airport. Public transportation options from DFW Airport include the Dallas Area Rapid Transit

(DART) light rail and Trinity Railway Express (TRE) commuter rail, although these may not provide direct service to College Station.

- **Option 5. Arriving at Austin-Bergstrom International Airport, Austin, TX (airport code: AUS)**

Austin-Bergstrom International Airport, located approximately 100 miles southwest of College Station, offers a wide range of domestic and international flights. Ground transportation options to College Station from AUS include rental cars and ridesharing apps. The drive typically takes 1.5 to 2 hours. Please note that there are no direct flights from AUS to CLL.

Transportation Options					
Item	CLL	IAH	HOU	DFW	AUS
Approx. driving time	15 min.	1.5 hours	2 hours	3 hours	2 hours
Shuttle Service	-	0	X	X	X
Direct flight to College Station	-	X	X	0	X
Ride share (Uber/Lyft)	-	0	0	0	0
Rent a car	-	0	0	0	0

### 03.2 Getting around Bryan/College Station

While transportation is not provided by the program, there are several options available both on and off-campus for navigating Bryan/College Station:

- **Texas A&M Bus Information:**

For updated route maps and departure times, visit Aggie Spirit Bus Routes. Ensure you have your Texas A&M ID ready to show the driver when boarding buses at off-campus stops.

- **Zip Car**

Join and book a car at Zipcar to receive student discounts.

- **VeoRide**

Texas A&M Transportation Services has partnered with Veo to provide sustainable alternative modes of transit around campus. With over 1,800 pedal bikes and throttle e-bikes available, students, faculty, staff, and visitors can easily get around campus.

Riders are required to lock Veo bikes to a rack or approved parking device before ending their rides to avoid fines up to \$75 and account suspension. For complete program details, visit VeoRide.

## 04. Lodging and Meal Plan Information

### 04.1 Housing Information

For those students that indicated they require housing during the duration of the program, that housing is Davis-Gary Hall. **Davis-Gary Hall** is one of the traditional college dorms located on the Northside of the campus near various dining choices. It has community bathrooms and two private showers on each floor. It is 9 minutes walking distance (0.4 mi) from the COKE Building and 12 minutes (0.6 mi) from the Francis Hall, where your office is located.

#### **Davis-Gary Hall**

210 University Drive,  
College Station, TX 77840



Davis-Gary Hall includes community-style bathrooms with dressing rooms. They will be cleaned daily and toilet paper will be provided. You can use the community lounge space and community kitchen. There are laundry facilities within the hall.

For more information, please visit the link below.

<https://reslife.tamu.edu/davisgary/>

### 04.2 Dimensions

- **Room Dimensions**

11' x 14' living area

17' to door and closet area  
 Ceiling Height: 8' -6"

● **Furniture Dimensions**

Bed Style: Full  
 Mattress Size: 53.5" x 74.5"  
 Bed Size: 54" W x 75" L  
 Closet Size (2): 34" x 34" x 50" to wall (closets have 5 shelf units)



**04.3 What to Pack**

- Bedding: Sheets for a full size mattress, pillow and blanket (mattress size: 53.5" x 74.5")
- Mattress topper (if wanted)
- Casual clothing for lab/office work
- Business formal clothing for Research Day at the end of the program
- Clothing for outdoor activities (plan for +100°F sunny weather)
- Personal hygiene items & toiletries
- Towels, washcloths, bath mat
- Snack food and drinks (if wanted)
- Plates, cups and utensils for any personal snacks or food
- Computer and any work essentials needed

Please refer to the link below for more information:  
[https://launch.tamu.edu/getmedia/3987e7ea-4ebb-4e90-bef4-ea2071bccdc4/03-2324\\_REU-SURE\\_Reslife\\_Packing-List\\_Nov2023.pdf](https://launch.tamu.edu/getmedia/3987e7ea-4ebb-4e90-bef4-ea2071bccdc4/03-2324_REU-SURE_Reslife_Packing-List_Nov2023.pdf)

**04.4 Meal Plan Option**

Davis-Gary Hall is conveniently located near the Sbisa Dining Complex, with a five-minute walking distance. A limited number of restaurants are available on campus during the summer. In addition to the on-campus dining, many off-campus restaurants can be found near the Davis-Gary Hall in walking distance. Please refer to the link to the on-campus dining hours of operation.

<https://dineoncampus.com/tamu/hours-of-operation>.

If you want to request a meal plan, you are eligible if you enrolled for TAMU 499 (0-credit hours). You will need to request your own meal plan either by logging into <https://mealplans.tamu.edu> or by emailing the Meal Plan Office at [dining@tamu.edu](mailto:dining@tamu.edu). You can only access meal plans and/or dining dollars using a TAMU ID. Students do not need to have a TAMU ID before they purchase their meal plan, but they must have a physical ID to utilize the meal plan.

Visit <https://dineoncampus.com/tamu/camps-and-conferences#Summer%20Meal%20Requests> and view the "Summer Meal Requests" section for information about Summer dining.

Click the option to "Submit a Meal Request Form" or visit <https://form.jotform.com/220606296159055> to submit your dining request.

**05. Weekly Activities**

**05.1 In-person Weekly Activities**

This program consists of group activities that involve all REU students including (1) regular group meetings and (2) enrichment activities / professional development activities. Each student will have one-on-one regular research meetings with his/her faculty mentor on a weekly basis.

The REU program is organized around three major milestones to emphasize the importance of time management skills:

**Milestone 1. Week 3: Research Proposal Presentation**

REU students must complete their research proposals by Week 3. Each student will present their proposal at the Wednesday regular group meeting scheduled on 6/12.

**Milestone 2. Week 7: Mid-term Research Report Presentation**

By Week 7, each REU student must submit a mid-term research report. The report should summarize the literature review and preliminary findings from data collection or experiments. Students will deliver an oral presentation of their mid-term report at the Wednesday meeting scheduled on 7/10.

**Milestone 3. Final Week: Submission of Final Report and Presentation**

The final week marks the culmination of the program. REU students must complete their research and submit the final report. Each student is expected to participate in the Undergraduate Research Summer Poster Session offered by LAUNCH. Also, each student will give a final presentation at the meeting scheduled on 8/1.

REU students will have at least three formal research presentation opportunities through these milestones.

Additionally, during other regular group meetings, half of the REU students will take turns presenting their research progress. This arrangement allows for discussions and feedback from peers, graduate student mentors, and faculty mentors, providing ample opportunities to enhance oral communication skills.

Calendar invitations for all program activities will be sent via Google Calendar to ensure timely reminders and organization.

College Station and the surrounding area have plenty of recreational activities. Mentors will also organize optional weekend activities to aid with socializing and building relationships between peers and mentors. A farewell dinner in Week 10 that will be arranged by the Department of Construction Science will offer another opportunity for the REU students to celebrate their accomplishments and build long-term relationships between the participant students, faculty, and graduate student mentors. With the consent of participants, major REU activities including seminars, presentations, field trips, and social events will be recorded, and used in improving subsequent promotional material such as REU recruitment videos as well as other marketing opportunities.

2024 REU Weekly Activities							
Week	Date	Time	Location	Title	Organizer/presenter	Note	Link to the signup sheet
Week 1	5/28 (Tue)	9:00 AM	COKE201	Welcome Orientation and Program Overview	Dr. Jeong		
	5/28 (Tue)	5:30 PM - 7:30 PM	MSC2404	Welcome Dinner	All		<a href="#">RSVP Link</a>
	5/30 (Thu)	11:00 AM - 12:00 PM	ILSB Auditorium	Title IX Training	Title IX Office		
Week 2	6/5 (Wed)	11:30 AM - 1:30 PM	COKE206A	[Seminar] "Overall Research Process from Start to End"	Dr. David Jeong	Lunch will be provided.	
	6/7 (Fri)	11:00 AM - 1:30 PM	ILSB Auditorium	LAUNCH Professional Development Seminar			
	6/7 (Fri)	2:00 PM - 3:30 PM	COKE206A	Workshop for Milestone 1 - What? Why? How?	Dr. Hartell		
	6/7 (Fri)	Evening	Social Event	First Friday Downtown Bryan	All	Optional	
Week 3	6/12 (Wed)	10:00 AM - 12:30 AM	COKE206A	Milestone 1 Presentation	REU Students		

	6/12 (Wed)	1:00 PM - 3:00 PM	COKE206A	[Invited Presentation] Autodesk "Autodesk's R&D"	Dr. Tonya Custis	Lunch will be provided.	
Week 4	6/21 (Fri)	11:30 AM - 1:00 PM	COKE206A	[Seminar] "Effective Oral and Written Communication Skills"	Dr. Phil Lewis	Lunch will be provided.	
Week 5	6/28 (Fri)	9:00 AM - 5:00 PM	Field trip	[Field Trip] DPR Construction, Houston	All	Lunch will be provided.	<a href="#">RSVP Link</a>
Week 6	7/3 (Wed)	2:00 PM - 4:00 PM	COKE206A	Workshop for Milestone 2	REU Students		
Week 7	7/10 (Wed)	9:00 AM - 11:30 AM	COKE206A	Milestone 2 Presentation	REU Students	Lunch will be provided.	
	7/10 (Wed)	11:30 AM - 1:00 PM	COKE206A	[Invited Presentation] REU Seminar- Suffolk	Delia Chaloux	Lunch will be provided.	
Week 8	7/15 (Mon)	-	-	LAUNCH Undergraduate Research Summer Poster Session <b>Registration Deadline</b>			<a href="#">Link to Registration</a>
	7/17 (Wed)	11:30 AM - 1:00 PM	COKE206A	[Seminar] Careers with Graduate Degrees, How to Apply for Graduate Programs	Dr. Ashrant Aryal and Dr. Zofia Rybkowski	Lunch will be provided.	
	7/19 (Fri)	3:30 PM - 7:00 PM	Social Event	Bowling Night at Grand Station	All		<a href="#">RSVP Link</a>
Week 9				No Activities / Focus on finalizing research			
Week 10	7/30 (Tue)	10:00 AM - 12:00 PM	COKE206A	Milestone 3 Presentation	REU Students		
	7/31 (Wed)	TBD	ILSB Lobby	LAUNCH Undergraduate Research Summer Poster Session		Registration : Jun. 9 - Jul. 15	<a href="#">Link to Registration</a>
	8/1 (Thu)	2:00 PM - 3:30 PM	COKE206A	Meeting with Dr. Jackie Stillisano	REU Students		
	8/1 (Thu)	6:00 PM - 8:00 PM	TBD	Farewell Dinner	All		<a href="#">RSVP Link</a>

\* Note: Cells in pink indicate social / non-academic activities.

\*\* There are two major events in College Station that may affect your weekend plans. Please be aware of alternate transportation options and heavy traffic congestion due to the major events (June 8, Saturday, Mexico vs. Brazil soccer match at Kyle Field & June 15, Saturday, George Strait concert at Kyle Field).

### 05.2 Online Activities

In addition to in-person activities, TAMU and other sources offer a variety of online activities. REU students will receive continuous professional development guidance from their faculty and graduate student mentors. Optional professional development activities, announced during regular Friday group meetings, will be available throughout the summer. Registration information will be coming soon.

2024 REU Program - Online Activities	
Title	Organizer/presenter
General Laboratory Safety Training*	Envir. Health & Safety

### 05.3 Potential Conferences

Opportunities will arise for REU students to present and publish their final results at renowned conferences in the field of construction science. The following is a list of potential conferences where students may submit their final reports and give presentations. Interested students should discuss participation with their faculty and student mentors:

Potential Conferences		
Conference	Date	Location
61st Annual Associated Schools of Construction International Conference 2025 (ASC 2025) <a href="https://ascweb.org">https://ascweb.org</a>	April 22 - 25, 2025	Calgary, Alberta, Canada
CRC Conference (joint conference with CSCE)	TBA	Montreal, Canada



I3CE 2025	TBA	TBA
CI&CRC Joint Conference 2026	TBA	San Antonio, TX
33 <sup>rd</sup> Annual Conference of the International Groups for Lean Construction (IGLC 2025) <a href="https://www.iglc.net">https://www.iglc.net</a>	TBA	Osaka, Japan

## 06. Organizational Chart

Dr. David Jeong will serve as the principal coordinator of the REU program. He is responsible for overseeing all aspects of the program management including participant recruitment, coordination of all research-related activities, enrichment, and professional development activities. Dr. Julie Hartell is a co-coordinator for the She will co-lead the program with

## 07. Things to Do in Bryan/College Station

### 07.1 Visitor's Centers

Visit the following websites for a lot of information from the Bryan and College Station Visitor's Centers:

- **College Station Visitor's Center:**

<https://visit.cstx.gov/things-to-do/>

- **Bryan Visitor's Center:**

<https://www.destinationbryan.com/things-to-do/downtown-bryan/>

### 07.2 Fun Activities in College Station

- **TAMU REC Center**

MUST HAVE AGGIE CARD! follow the directions on website to get Aggie Card:

<https://myaggiecard.tamu.edu/>

Website: <https://recsports.tamu.edu/>

- **First Friday in Downtown Bryan**

First Friday of each month Live Music, Food, Bars, Artwork, Movie Screenings etc.

Website: <http://www.downtownbryan.com/>

- **Spirit Ice Arena**

Dr. Jeong, and together build relationships with partnering institutions and industry supporters. Ms. Bree Wright will assist the faculty as an administrative coordinator. She is responsible for managing stipend payments, arranging travel for students, and coordinating college and university social events for the REU students along with Dr. Hartell.

Ten research-intensive faculty members, who have strong records of advising undergraduate students, have committed to working as faculty mentors for the REU Site program. It is anticipated that REU participants form a relationship with their assigned mentors. All research mentors are committed to continuing open communication beyond the scope of the REU project.

Come join us at the rink, the coolest place in town! Public Skating Sessions provide everyone with the opportunity to enjoy the sport of ice skating. Skaters of all ages can skate during the designated Public Session times.

Price: \$15 for Admission and Skate Rental

When: Monday - Friday (Exceptions found on Website)

Time: 4:15-5:30 PM

Website: <http://spiriticearena.com/>

- **Stone Co. Climbing**

Stone Co. exists to build strong community through climbing. That means fostering strong relationships, belonging, creativity, growth, and helping you achieve your health goals.

Founded by a couple of business professionals turned entrepreneurs, Stone Co. aspires to have deep impact in Aggieworld and beyond. Beyond bouldering, we also offer yoga classes, a fitness area, a retail shop, and plenty of hangout space for before or after your workout!

Website: <https://stonecoclimbing.com/#>

- **Cinemark**

Watch all of your favorite movies with the ultimate theater experience!

Price: Varies When: All Week Time: Book ticket on website

Website: <https://www.cinemark.com/theatres/tx-college-station/cinemark-movies-18-and-xd>

- **Grand Station**

Entertainment Bowl! Play! Party! Bowl on 1 of our 40 certified lanes! Enjoy our brand new system and mini-games on BES X! All while sitting comfortably on our recently updated couch seating! Explore the newly renovated lasertron arena! Compete with friends over a game of billiards or giant jenga in our sports bar and covered patio. Enjoy a variety of 80+ games.

Price: Bowling- Each lane is \$37/ hour (Limit 6 people per lane) Mini Golf- \$7 on Weekdays and \$9 on Weekends Laser Tag- \$7 on Weekdays and \$9 on Weekends When: All Week Time: Sunday - Tuesday: 12PM - 11PM Wednesday & Thursday: 12PM - 12AM Friday & Saturday: 12PM - 1AM

Website: <https://www.grandstationent.com/play>

- **Century Square**

Shop and browse through a curated mix of select retailers for all your style needs! Dine at any signature cafe and restaurant for a dynamic dining experience!

Website: <https://www.century-square.com/>

- **BigShots Golf**

The best golf experience in Bryan, Texas is BigShots Golf. Play on our premier driving range, experience our challenging virtual golf games, or putt a round of mini golf. Wind down with drinks or sample the delicious fare that's made our Anthem kitchen a local favorite.

Website: [https://bigshotsgolf.com/locations/bryan-tx/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=gmb-profile](https://bigshotsgolf.com/locations/bryan-tx/?utm_source=google&utm_medium=organic&utm_campaign=gmb-profile)

## 08. Useful Links

For a minor medical emergency,

- **Integrity Urgent Care (Century Square)**

1289 University Dr, College Station, TX 77840  
979-326-1494

<https://integrityuc.com>

- **Signature Care Emergency Center**

1512 Texas Ave S, Suite 500, College Station, TX 77840  
979-213-5728

<https://ercare24.com/college-station/>

- **Network and Internet Access on Campus**

<https://it.tamu.edu/services/network-and-internet-access/>

<https://it.tamu.edu/services/network-and-internet-access/wireless-connections/tamuwifi/>

<https://it.tamu.edu/services/network-and-internet-access/virtual-private-networks/virtual-private-network-vpn/>

- **Residence Life, Conference & Guest Services**

<https://reslife.tamu.edu/>

<https://reslife.tamu.edu/guests/>

[conference-services@reslife.tamu.edu](mailto:conference-services@reslife.tamu.edu)