

# The Eighteenth Annual Undergraduate Research Symposium

Conference Program  
April 12, 2025

*Undergraduate Research Symposium*



Sam Houston State University  
Undergraduate Research  
Symposium

Hosted by the Elliott T. Bowers  
Honors College Student Ambassadors  
Edited by Jesika Miller



**Honors Ambassadors are the face of the Elliott T. Bowers Honors College. During special Honors events, the Ambassadors play important roles as hosts and greeters, table leaders, or panel participants.**

**Being an Ambassador involves taking on certain responsibilities--the willingness to give up time, often in the evenings or weekends--in the interest of supporting Honors College events. Ambassadors need to be able to represent the college and the university well, both in deed and word. There are 22 ambassadors representing every class and every academic college at the University.**

Sam Houston State University  
**SH** Undergraduate Research  
Symposium  
Honors College

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<b>Sessions:</b>	<b>10</b>
A- Oral-Media-Panel Presentations	
B- Oral-Media-Panel Presentations	
C- Poster Presentations	
D- Oral-Media-Panel Presentations	

**ALL ORAL-MEDIA SESSIONS WILL BE HELD ON THE SECOND FLOOR OF THE LSC.  
THE POSTER SESSION WILL BE HELD ON THE THIRD FLOOR OF THE LSC.**



Sam Houston State University

# Undergraduate Research Symposium

Honors College

Schedule at a Glance

Schedule at a Glance

- |   |  |
|---|--|
| <b>8:00-8:45 AM</b>                           | Registration & Breakfast<br>LSC: Orange Ballroom   |
| <b>8:45-8:55 AM</b>                           | Welcome and Opening Remarks<br>LSC: Orange Ballroom  |
| <b>9:00-10:20 AM</b><br><b>10:30-11:50 AM</b> | Session A, Oral-Media Presentations<br>Session B, Oral-Media Presentations<br>LSC: 2nd floor |
| <b>12:00-1:15 PM</b>                          | Lunch<br>LSC: Orange Ballroom  |
| <b>1:30-2:50 PM</b>                           | Session C, Poster Session<br>LSC: 3rd floor  |
| <b>3:00-4:20 PM</b>                           | Session D, Oral-Media Presentations<br>LSC: 2nd floor  |
| <b>4:30-5:00 PM</b>                           | Closing and Awards Ceremony<br>LSC: Orange Ballroom  |

**ALL ORAL-MEDIA SESSIONS WILL BE HELD ON THE SECOND FLOOR OF THE LSC.  
THE POSTER SESSION WILL BE HELD ON THE THIRD FLOOR OF THE LSC.**

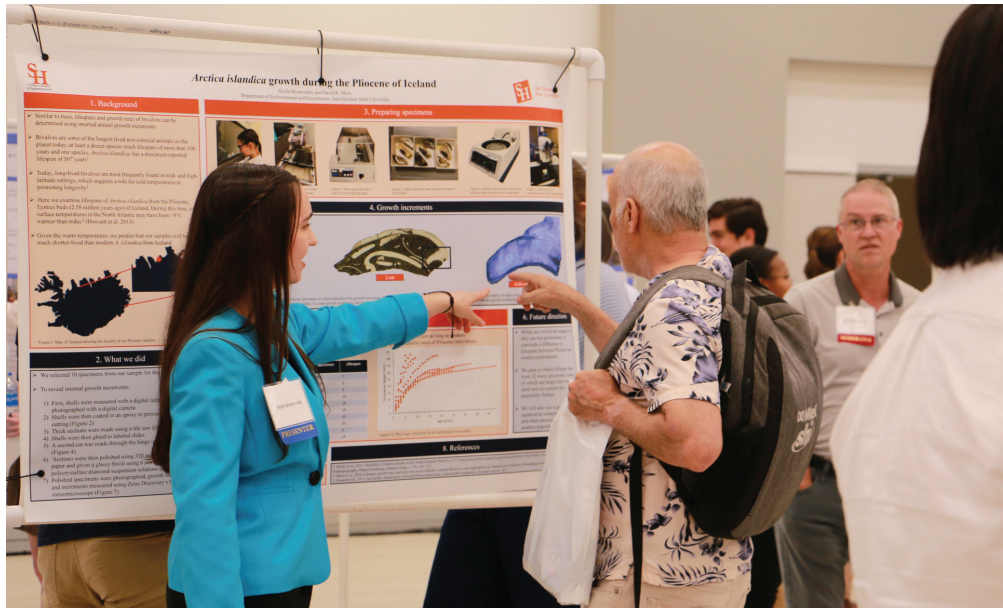
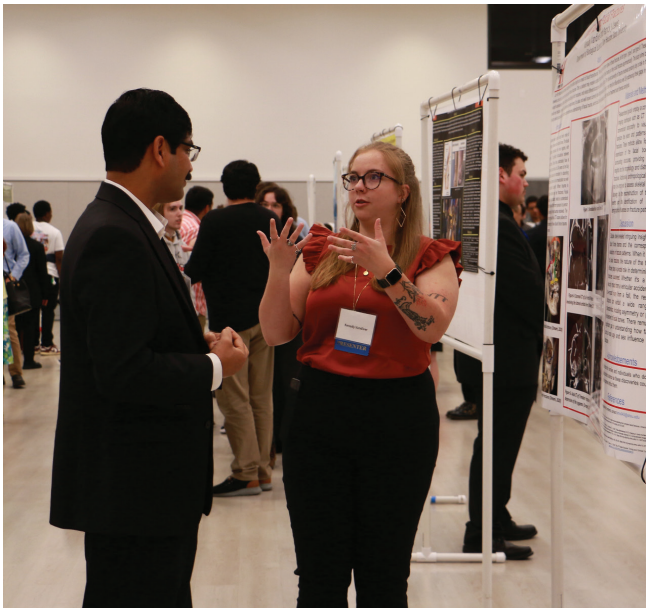




## The Undergraduate Research Symposium Is Sponsored By:

Elliott T. Bowers Honors College  
Sam Houston State University

The URS especially thanks Dr. Hiranya Nath  
for his generous Assam Scholarship.



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## URS History and Mission Statement

In 2008, the Honors College Student Ambassadors began the Undergraduate Research Symposium (URS). The goal was two-fold: to share research with fellow students and to gain experience in preparation for future conferences. Today, the URS continues to provide a forum where all SHSU undergraduate students can present their research to others in a professional environment while giving students the opportunity to gain expertise in their field and to receive feedback from other scholars and members of the academic community. Additionally, the URS offers three \$500 awards: The Assam Scholarship for Honors Research Award, The Honors College Award for Best Overall Oral-Media Presentation, and the Honors College Award for Best Overall Poster. Other awards include honorable mention awards, the E.U.R.E.C.A. Award for Best FAST Oral Media Presentation, and the E.U.R.E.C.A. Award for Best FAST Poster. The URS is supported by the faculty and staff of the Elliott T. Bowers Honors College.

## A Message from our Co-Chairs

Welcome to the Eighteenth Annual Undergraduate Research Symposium! We would like to thank everyone for your continuous sponsorship and participation in this year's event. Because of your support, we can create an environment for students to build a foundation of excellence in a professional setting. Along with our fellow Honors Ambassadors, we are excited to share with you the astounding achievements of our students. We would also like to recognize staff, faculty, and audience members.

Developing the professional skills of undergraduate students is one of the forefront goals of the symposium. For many, this is the first step into the domain of research and the professional world. We sincerely hope that the symposium serves as a springboard for students into the world of research-based academia as well as an opportunity to cultivate experience that can serve as a strong foundation for students' future endeavors. We also anticipate that the students who present improve public speaking skills, network with peers and faculty, and then emerge as professionals at the university and in the field.

Over the past 18 years, we have seen the number of presenters at this conference skyrocket. It is truly incredible to see our numbers grow so much, especially within the past few years, and it fills us with delight to see the interest in research bloom at a university-wide level. By presenting both ongoing and completed research while at Sam Houston State University, students take pride in and show their passion for the work they have accomplished over the course of their college career.

This year's symposium would not have succeeded without the help of every single person who contributed their time and effort. From new and returning presenters, volunteers, Honors Ambassadors, faculty members, advisors, administrators, respondents, or supporting audience members, each person plays an integral role in the creation of a unique, exciting atmosphere for the event each year. On behalf of the entire team, the Co-Chairs would like to thank each and every one of you for your countless contributions to the Eighteenth Undergraduate Research Symposium, and we greatly look forward to seeing both students and the conference thrive for many years ahead.



**Hanna Northway**  
URS Co-Chair



**Jessica Bilsing**  
URS Coordinator



**Kade Brackin**  
URS Co-Chair

## A Message from our Faculty Advisor

Welcome to the Eighteenth Annual Undergraduate Research Symposium, hosted by the Ambassadors of the Elliott T. Bowers Honors College! This conference provides a professional environment in which student scholars can share their past, current, and ongoing research. Several of our past participants have gone on to experience inspiring professional endeavors which have had their foundation at this conference. For those faculty who have worked closely with their students during preparation for the URS, this accomplishment is a source of enormous gratification. The URS also underscores Sam Houston State University's designation as an R2 institution, one which is dedicated to research.

The current coordinator Jessica Bilsing, co-chairs Hanna Northway and Kade Brackin, and the Honors Ambassadors have spent this past year hard at work organizing workshop sessions and practice sessions, encouraging participation, and making sure this live event marks a celebration of SHSU undergraduate research. Their passion for this event, their dedication to research, and their hard work stands as a hallmark for future Ambassador co-chairs. I thank them for their continuing support and guidance.

Our motto reads: The intricate path to discovery begins with research. If you look closely at the image of the URS maze, you will recognize that there is one consistent path to the

center, no matter how convoluted it might seem at first glance. Consider that this image represents both the research process as well as the attendant self-discovery within that process. Through research we not only question, discover, and create scholarship, but we also come to understand our own potential within scholarly communities. Symbolically we enter the maze, make the turns, and work our way to the center, to discovery.

These students are not the only ones who have dedicated themselves to furthering what is a nation-wide effort to promote undergraduate research. Others have been just as vigorous in their support, including faculty advisors who have helped students with their research, family and friends who have come to show their support, faculty and graduate student volunteers who have devoted their Saturday to giving presenters feedback, and staff members who have been working overtime to ensure that everyone is fed, given gift bags, directed to the right rooms, and checked in properly. The Honors College and generous support from SHSU fund this event because promoting and participating in undergraduate research is powerful and affirming. We recognize and deeply appreciate their active support of this endeavor. Finally, we would like to thank Dr. Hiranya Nath, Professor of Economics, for his very generous Annual Assam Scholarship Award.

*Tracy E. Bilsing*

**Dr. Tracy Bilsing**  
URS Faculty Co-Chair

*Associate Dean of the Elliott T. Bowers Honors College*





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# Session A

## 9:00 - 10:20

### ROOM 230 A

#### Investigating the Needs of Children and Adolescents

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***Alexithymia in the Autism Spectrum***

**Madison Banks**

Faculty Advisor: Dr. Susan Duncan

***The impact eating disorders in the Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, Plus (LGBTQIA+) Communities: A Narrative Literature Review***

**Bryanna Robinson**

Faculty Advisor: Dr. Rosanne Keathley

***Early Childhood Adversities and how they Impact Adult Development***

**Kalie Sorrells**

Faculty Advisor: Dr. Hillary Langley, Dr. Kimberly Bell

***I Need You: Child Maltreatment, Teacher Social Support, and Romantic Relationship Outcomes***

**Audrianna Torres**

Faculty Advisor: Dr. Andia Azimi

### ROOM 230 B

#### Forgotten History and Current Problems in Texas

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***Mis Vecinos, Los Cártels: Northeastern Mexico Drug Cartel Alliances, Rivalries, Their End, and How It Affects Texas***

**Mario Alvarado**

Faculty Advisor: Dr. Nathan Jones

***Avocados & The Cartel***

**Hope Bloecher**

Faculty Advisor: Dr. Tracy Bilsing

***The History of Accounting: Unveiling Its Roots in Slavery***

**Jonnie Hart**

Faculty Advisor: Dr. William Strawser

***Hidden in Plain Sight: The French Influence in Texas***

**Arnesha Young**

Faculty Advisor: Dr. Miriam Akoto

# Session A

## 9:00 - 10:20

### ROOM 241 A Improving Awareness in Obstacles to Education

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#### **Deaf-Blindness**

**Isabel Arreaga, Emma Le**

Faculty Advisor: Dr. Prasopsuk Pinto

#### **Learning Through Writing: How Journal-Writing Benefits the Agricultural Classroom**

**Olivia Casas**

Faculty Advisor: Dr. Rebecca Wentworth

#### **Behavior in Education**

**Karina Chavarria**

Faculty Advisor: Dr. Susan Harte

#### **How Cognitive Behavioral Issues Effect Psychological Assessment**

**Omari Sandifer**

Faculty Advisor: Dr. Adam Natoli

### ROOM 241 B Psychology and the Complex Nature of Diagnosis

---

#### **A Brief History of Personality Psychology**

**Emma Elliott**

Faculty Advisor: Treston Smith

#### **Why is schizoaffective a disputed diagnosis?**

**Sidney Smith**

Faculty Advisor: Dr. Susan Duncan

#### **Predicting Psychological and Social Quality of Life Among College Students Raised in Urban vs Rural Communities with Invariance Testing of Anger and Aggression Constructs**

**Catarina Torres**

Faculty Advisor: Dr. Adam Natoli

#### **The Cycle of Divorce: Analyzing Marital Outcomes for Children of Divorced Parents**

**Ally Treat**

Faculty Advisor: Dr. TzeLi Hsu

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# Session A

## 9:00 - 10:20

**ROOM**  
**242** Active Body and Active Mind

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***Fluctuations in functionality: How Structural Changes During Pregnancy Affect Mental Health Postpartum***

**Jessica Bilsing**

Faculty Advisor: Dr. Jeffrey Anastasi

***Comparison of Position-Specific Body Composition in Female Division I Soccer Players to Established Norms***

**Mya Hughes**

Faculty Advisor: Dr. Mike Spillane

***Integrated Psychological Care in Plastic Surgery***

**Minji Kim**

Faculty Advisor: Dr. George Scott

# Session B

## 10:30 - 11:50

**ROOM**  
**230 A** Philosophical Inquiry and Moral Complexity

---

***Phenomenological Sketch on Interpellation***

**Dominic Brandolini**

Faculty Advisor: Dr. Thomas Meagher

***Gordon's Account of Racism as Bad Faith: A Case Study***

**Kelly Hampton**

Faculty Advisor: Dr. Thomas Meagher

***Spiderman vs Batman: Moral Weight***

**Samuel Harrison**

Faculty Advisor: Dr. Maria Botero

***Rethinking Kuhn: Making Space for Immature Science***

**Calvin Kelly**

Faculty Advisor: Dr. Janella Baxter

***Carbon Sequestration and Soil Remediation: Two Birds, One Bean***

**Lily Terflinger**

Faculty Advisor: Dr. Tracy Bilsing



# Session B

## 10:30 - 11:50

### ROOM 230 B Detoxing the Baeyer-Villiger Oxidation

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***Synthesis of Dicarbonyl Scaffolds and Standards to Investigate Oxidation Outcomes***

**Elizabeth Bloss**

Faculty Advisor: Dr. Meagan Hinze

***Prochiral substrate synthesis and biocatalytic oxidations to access acyloin scaffolds and natural products***

**Reagan Carter**

Faculty Advisor: Dr. Meagan Hinze

***Expression and reactivity of the BVMO biocatalyst phenylacetone monooxygenase from *Thermobifida fusca****

**Savannah Reyes**

Faculty Advisor: Dr. Meagan Hinze

***Exploring the reactivity of Baeyer-Villiger enzymes on diketone scaffolds***

**Katrina Santos**

Faculty Advisor: Dr. Meagan Hinze

### ROOM 241 A Machinery and Mathematics

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***Augmented Reality and Endangered Species***

**Catherine Benton**

Faculty Advisor: Dr. Michael Dakeev

***Making Things Go Boom With Finite Difference Methods***

**August Bradshaw, Maximo Matanzo Breton**

Faculty Advisor: Dr. Tiffany Fruge Jones

***Designing Custom Circuit Boards (abridged)***

**Michael Johnson-Moore**

Faculty Advisor: Dr. Iftekhar Basith

***12 Volt Portable AC Unit***

**Lance Palmer, Reese Richert, Alex Maher, Vicente Lombardo**

Faculty Advisor: Dr. Michael Dakeev

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# Session B

## 10:30 - 11:50

### ROOM 241 B Literature: Searching for Identity

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#### ***My Heavy Heart Oblomov***

**Ivan Gorman**

Faculty Advisor: Dr. Michael Demson

#### ***The Shifting Symbol of Raymond Carver's "Cathedral"***

**Bryan Litchford**

Faculty Advisor: Dr. Robert Donahoo

#### ***"What will become of the boy?": The Impact of Familial Acceptance on Self Identity in Mary Shelley's Frankenstein and Maurice***

**Alivia Ragsdale**

Faculty Advisor: Dr. Kandi Tayebi

#### ***Game and Identity: Looking at the Labyrinths in "The Assembly of Ladies"***

**Paige Ross**

Faculty Advisor: Dr. Kimberly Bell

### ROOM 242 The Workplace: Good, Bad, and Ugly

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#### ***Hawthorne Experiment***

**Javier Burkholder, Christopher Cavanaugh, Bryce Clay, Rashid Elabor**

Faculty Advisor: Dr. Terry Waugh

#### ***Incentives and Motivation in the Workplace***

**Aurora Chacon Rivera**

Faculty Advisor: Dr. Terry Waugh

#### ***The Applications of DEI and its Consequences***

**Earston James**

Faculty Advisor: Dr. Terry Waugh

#### ***A Simple Guide to Microinjecting Zebrafish and Medaka Eggs for Gene Studies***

**Alicia Mendoza**

Faculty Advisor: Dr. Sharmin Hasan

#### ***The Effectiveness of Internal Controls in Preventing Fraudulent Activities***

**Virginia Patton**

Faculty Advisor: Katie Harris

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# Session C

## 1:30 - 2:50

### Agricultural Science - LSC 320

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**Hydroponic Economics: Comparative Analysis between Nutrient Film Technique and Bato Bucket Systems**

**Kenneth Agapito**

Faculty Advisor: Dr. Kaitlyn Hopkins, Dr. Shayam Nair

**Factors influencing Redemption of Women, Infants, and Children (WIC) Program Benefits**

**Cole Bohuslav, Cheyenne Cashdollar, Aubree Lancial**

Faculty Advisor: Dr. Shyam Nair

**Oh SNAP! The Factors Influencing Supplemental Nutrition Assistance Program**

**Hannah Cater, Cameron Roberts, RaeLeigh Taylor**

Faculty Advisor: Dr. Shyam Nair

**Student Consumption Preferences of Various Meat and Meat-type Products: A University Wide Survey**

**Charle Cooper, Kaylynn Wise**

Faculty Advisor: Dr. Carly Hoffmann

**Analysis of Food Security in the United States**

**Kenneth Schauer, Travis Westinghouse, Heather Dean**

Faculty Advisor: Dr. Shyam Nair

**Factors Influencing Household Expenditure at Restaurants**

**Mia Davis, Bailey Hauff, Tayte Karl**

Faculty Advisor: Dr. Shyam Nair

**Growing Beyond Soil: Evaluating Lettuce Growth in Hydroponics**

**Priscilla Maldonado**

Faculty Advisor: Dr. Kaitlin Hopkins

**Influence of Demographic Variables on County-wise Diabetes Rate in the US**

**Cynetha Looper**

Faculty Advisor: Dr. Shyam Nair

**The Cornspiracy: Analyzing the Effects of Overcultivation of Zea Mays on Soil Health, Livestock, and American Diet in the Upper Midwest**

**Lily Terflinger**

Faculty Advisor: Dr. Tracy Bilsing

**Smart Food Consumption Study**

**Jazmin Vences**

Faculty Advisor: Dr. Danhong Chen

**What Makes Us so Dependent on Fast Food?**

**Marlies Cummings, Clay Hurt**

Faculty Advisor: Dr. Shyam Nair

**Why Do We Have The Highest Population of Obese People?**

**Zachary Sanderson, Timothy Sjolander, Mackenzie Terrell**

Faculty Advisor: Dr. Shyam Nair

### Art - LSC 325

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**Still Life #2**

**Faith Duncan**

Faculty Advisor: Dr. Tracy Bilsing

**A Hard Pill to Swallow**

**Anastacia Hippely**

Faculty Advisor: Robby Wood

# Session C

## 1:30 - 2:50

### Biological Sciences and Chemistry - LSC 320

#### ***Expressional Analysis of Profilin Gene Isoforms in Zebrafish Embryos***

**Leslie Mendez**

Faculty Advisor: Dr. Sharmin Hasan

#### ***Dual Infection of Campylobacter jejuni and Salmonella enterica in Galleria mellonella: A Novel Oral Infection Model***

**Alondra Lugo**

Faculty Advisor: Dr. Todd Primm, Dr. Anand Karki

#### ***Accelerating Texas State Conservation Assessment Using Deep Learning***

**Emilia Gonzalez, Anna Maloney**

Faculty Advisor: Dr. Christopher Randle

#### ***Analysis of Lithics from Abiar Miggi, a Middle Stone Age locality in Libya***

**Jesika Miller**

Faculty Advisor: Dr. Patrick Lewis

#### ***Antibiotic Susceptibility Tests of Local Foodborne Enterococcus isolates***

**Dale Staggemeier, Jesus Alvarez**

Faculty Advisor: Dr. Anand Karki, Dr. Todd Primm

#### ***Characterization of The Role of dennd5b During Embryonic Development***

**Alicia Mendoza**

Faculty Advisor: Dr. Sharmin Hasan

#### ***Cockroach Eating Habits***

**Sadie Gylling**

Faculty Advisor: Dr. James Harper

#### ***Comparing and Analyzing Types and Core Genes of Campylobacter plasmids***

**Aurelio Del Carmen**

Faculty Advisor: Dr. Anand Karki

#### ***Developing a Model System for Campylobacter Gut Infections***

**Layla Behrens**

Faculty Advisor: Dr. Todd Primm, Dr. Anand Karki

#### ***Development of an Environmental DNA (eDNA) Based Tool for Early Detection of Invasive Aquatic Fish Species***

**Caden Thompson, Amira Mandy, Ayla Beard**

Faculty Advisor: Dr. Sharmin Hasan

#### ***Digital Microscopic Imaging of Bees in the Lasioglossum Genus***

**Emily Machac**

Faculty Advisor: Dr. John Pascarella

#### ***Effects of Microgravity on the Growth and Physiology of Rhodobacter sphaeroides and Campylobacter jejuni***

**Alexis Ho**

Faculty Advisor: Dr. Anand Karki, Dr. Madhusudan Choudhary

#### ***Germination and Early Growth of Sympatric Hibiscus (Malvaceae) Species From East Texas***

**Rebeka Garcia**

Faculty Advisor: Dr. John Pascarella

#### ***Increasing Ethanol Concentrations in Increments Can Detrimentally Affect Yeast Cell Viability: Modeling Alcohol Toxicity in Animal Cells***

**Logan Olguin**

Faculty Advisor: Brennen Leidy



# Session C

## 1:30 - 2:50

***Influence of *Enterococcus faecalis* as a Co-contaminant on the Resilience of *Campylobacter* Under Adverse Environmental Conditions***

**Marbella Canaca, Marwa Hemri**

Faculty Advisor: Dr. Anand Karki, Dr. Todd Primm

***Investigation of CG3961's Role in Phenotypic Variations in Head and Eye Development***

**Cody Griffin, Shandelyn Poulsen**

Faculty Advisor: Dr. Mardelle Atkins

***Molecular Profiling of *Enterococcus faecalis* in Retail Liver Products Through Whole Genome Sequencing***

**Madison Schultz**

Faculty Advisor: Dr. Anand Karki, Dr. Todd Primm

***Morphological Differences in Among Populations of Amphisbaenians from Puerto Rico***

**Minji Kim**

Faculty Advisor: Dr. Juan Daza

***Pollinator Effectiveness on Long- vs. Short-Style Phenology in *Gelsemium sempervirens****

**Kaitlyn Davis**

Faculty Advisor: Dr. John Pascarella

***Predicted Habitat Invasions of Invasive Species *Eichhornia crassipes* in Response to Climate Change***

**Gabriel Ramos, Lexi Peterson**

Faculty Advisor: Dr. Christopher Randle

***Skeletal Morphology of *Tetracheilostoma carla* (Leptotyphlopidae, Serpentes, Squamata), the World's Smallest Snake***

**Caleb Shoemaker**

Faculty Advisor: Dr. Juan Daza

***Teaching Assistant Influence on Undergraduate Lab Grades***

**Paris Ewing**

Faculty Advisor: Dr. Steven Koether

***The Effect of Ants on Human Decomposition: Their Behavior and Interaction with Diptera***

**Sarah Davis**

Faculty Advisor: Dr. Sibyl Bucheli

***The Impact of Microbial and Insect Diversity on Carrion Decomposition***

**Angela Escamilla**

Faculty Advisor: Dr. Sibyl Bucheli

***Tumor-bearing *Drosophila* Larvae Exhibit Degradation of Microtubules in Cachexic Muscle***

**Chrislynn Harris**

Faculty Advisor: Dr. Mardelle Atkins

***Investigating the Role of Waterproof (*wat*) in Eye-Antenna Development Using Targeted Gene Knockdown in *Drosophila****

**Alannah Wheeler**

Faculty Advisor: Dr. Mardelle Atkins

***Nondestructive Spectroscopic Analysis of the Compounds in a Pre-Civil War Medicine Kit***

**Ramon Castaneda**

Faculty Advisor: Dr. David Thompson

***Gathering A Basis Set of UV-Vis Spectra in support of future studies of the interactions between Dimethyl Trisulfide and Albumin***

**Fernando Esterellas Marquina**

Faculty Advisor: Dr. David Thompson, Dr. Ilona Petrikovics

# Session C

## 1:30 - 2:50

### Communication Studies - LSC 325

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#### ***Family Types and Communication: A Comparative Analysis***

**Macey Schank**

Faculty Advisor: Dr. Colton Krawietz

### Criminal Justice and Criminology - LSC 323

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#### ***Kids Killing Kids: A Literary Review on Juvenile- Perpetrated Homicide***

**Hannah Coronado**

Faculty Advisor: Dr. Stuti Kokkalera

#### ***Environmental Influences on Gender and Sexual Victimization: Analyzing Experiences and Resource Accessibility Across Rural, Suburban, and Urban Areas***

**Emma Bush, Meagan Henry**

Faculty Advisor: Dr. Kathleen Ratajczak

#### ***Love in Lockup: The Power of Prison Nurseries in the United States***

**Saira Melendez**

Faculty Advisor: Dr. Stuti Kokkalera

#### ***Understanding Motivations for Age/Identity Fraud in European Sports***

**Munachi Mogekwu**

Faculty Advisor: Dr. Stuti Kokkalera

#### ***Human Trafficking Across Borders: A Comparative Analysis of Legislation in New Mexico and Texas***

**Jazzett Herrera**

Faculty Advisor: Dr. Stuti Kokkalera

#### ***How Sexual Assault Survivors are Harmed by the Abortion Banned in the United States***

**Bailey Surby**

Faculty Advisor: Dr. Kathleen Ratajczak

### Economics and International Business - LSC 323

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#### ***Inflation Across US Cities***

**Taylor Crosby**

Faculty Advisor: Dr. Hiranya Nath

### Educational Leadership - LSC 321

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#### ***Applying Culturally Responsive Pedagogy in High School Classrooms: A Review of Theory and Implementation***

**Alexis Argueta**

Faculty Advisor: Dr. Kandi Tayebi

#### ***The Garden Project: A STEM Initiative for High School Autistic Students***

**Leslie McSpadden, Sadie Gylling, Macy Spratlan**

Faculty Advisor: Dr. Jordan Clark

#### ***Daniel Pink***

**Taylor Bailey, Alison Jarry, Asher Palma, Erin Reyes**

Faculty Advisor: Dr. Terry Waugh

# Session C

## 1:30 - 2:50

### Engineering Technology - LSC 324

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#### **All Terrain Device for Hiking Boots**

**Talinee Srichomthong**

Faculty Advisor: Dr. Syed Hasib Akhter Faruqui

#### **Design of a SAE Micro class Aeroplane**

**Joice Hill, Francis Coker, Addym Jackson, Emma Robles**

Faculty Advisor: Dr. Ali Dinc, Dr. Iftekhar Basith

#### **Drone Deployed GPS Tracker**

**Devin Brennan, Shane Forrester, Andy McComas-Baker**

Faculty Advisor: Dr. Junkun Ma

#### **Edge-Device-Enabled Camera-Based Gait Analysis: A Machine Learning Approach**

**Hayden Behrens**

Faculty Advisor: Dr. Syed Hasib Akhter Faruqi

#### **Experimentation in Control and Communication Methods for Neuron-based Adaptable Robotics**

**Michael Johnson-Moore**

Faculty Advisor: Dr. Iftekhar Basith

#### **Fluid Mechanics Pump Lab**

**Christopher Cavanaugh, Chelsea Sutherland, Joseph Adeboye**

Faculty Advisor: Dr. Derli Amaral Junior

#### **Hydraulic-assisted Standup Kayak Seat**

**Connor Brett, Zachary Davis, Angel Moreno, Benjamin Marshall, Connor Geodel**

Faculty Advisor: Dr. Junkun Ma

#### **KaseCab: Assembly Line**

**Margaret Chacon, Elizabeth Daely, Valentin Navarro, Wilfredo Pineda, Madeline Serna**

Faculty Advisor: Dr. Michael Dakeev

#### **Lead Wire Coiler**

**Jhoana Alfaro, Moyosoluwa Orundami, Lana Stepanski, Jasmine Dybala**

Faculty Advisor: Dr. Junkun Ma

#### **Mammoth Submersible**

**Kevin Martinez, Emmanuel Wobo, Abraham Nambos**

Faculty Advisor: Dr. Junkun Ma

#### **Micro Mouse**

**Tychell Parrish, Gage Vickrey, Alexandra Martinez, Isaac Talaga**

Faculty Advisor: Dr. Junkun Ma

#### **Non-Invasive Flow Meter in Hydronic Balancing with PurgeRite**

**Devonn Mendoza-Ballard, Abdul Sadiq, Denton Young, Sydney Cummins**

Faculty Advisor: Dr. Derli Amaral Junior

#### **RC Surveillance Tank**

**Preston Clark, Rabin Mahat**

Faculty Advisor: Dr. Junkun Ma, Dr. Iftekhar Basith

#### **Satellite Refueling Performance Nozzle**

**Corbin Olson, Luis Cruz, Conner Canta, KeSean Raven, Jurral Cormier, Will Ash**

Faculty Advisor: Dr. Iftekhar Basith

#### **Smart Kitchen Drawer**

**Afolarin Faluyi, Oscar Jarmon, Freddy Martinez**

Faculty Advisor: Dr. Iftekhar Basith

# Session C

## 1:30 - 2:50

### **Solar-Mediated Dry Kiln**

**Colin Aheron, Pristine Hysten, Mindy Whitco, Wyatt Lehmann**

Faculty Advisor: Dr. Iftekhar Basith, Dr. Junkun Ma

### **Standalone Solar Panel System**

**Tevin Boulton, Aysun Deblanc, Alexis Portillo, Robert Dale, Ayomiposi Philip King**

Faculty Advisor: Dr. Faruk Yiddish, Dr. Iftekhar Basith

### **Stirling Engine Generator**

**Jakson Keys, Dennis Noll, Brandon Mohammed**

Faculty Advisor: Dr. Suleiman Obeidat

### **The Innovative History of Manual Wheelchairs**

**Bridget Compton**

Faculty Advisor: Dr. Rachel Scherer

### **UAV based learning kit for Future High School Outreach**

**Amber Maynor, Brandon Parker, Michael Bamisebi, Lorena Rodriguez Estrada**

Faculty Advisor: Dr. Ali Dinc, Dr. Iftekhar Basith

### **Vintage motorcycle electric conversion**

**Barry Hinds**

Faculty Advisor: Dr. Reg Pecan

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## **English - LSC 321 & 324**

### **Exploring Texas BBQ Foodways - LSC 321**

**Anna Borich**

Faculty Advisor: Dr. Michael Demson

### **AI - Technology's Newest Challenge for Technical Writers - LSC 324**

**Theresa Mullins**

Faculty Advisor: Dr. Shyam Pandey

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## **Family and Consumer Sciences - LSC 321**

### **Exploring the Influence of Nutrition Education on Teenagers' Food Purchasing and Consumption Behaviors**

**Juliza Barron**

Faculty Advisor: Dr. Dangong Chen, Dr. Berna Abed el Sater

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## **Geography and Geology - LSC 320**

### **Field Studies at Cave Spring Cave and Gunnels Cave**

**Briana Garcia**

Faculty Advisor: Dr. William Godwin

### **The Summer Severity of Extreme Heat Across Southeastern Texas During 2023**

**Paige Looper**

Faculty Advisor: Dr. Joshua Gilliland



# Session C

## 1:30 - 2:50

### History - LSC 323

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#### Unit 731

**Annaliese McCabe**

Faculty Advisor: Dr. Barbara Kaminska

### Kinesiology - LSC 321

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***The Impact of Driving Experience on Reaction Time and Cue Recognition: A Comparative Study of Inexperienced and Experienced Drivers***

**Trista Alvarado**

Faculty Advisor: Dr. Jennifer Didier

***The Impact of Neural Gliding for the Management of Carpal Tunnel Syndrome***

**Zola Brice**

Faculty Advisor: Dr. Mayrena Hernandez

***Kinesiology Taping of the Ankle***

**Aidan Davis**

Faculty Advisor: Dr. Mary Williams

***Geographic Disparities in Physical Therapy Accessibility Among Texas Communities: A Comparative Analysis of Rural, Town, Suburban, and City Areas***

**Zoe Powell**

Faculty Advisor: Dr. Mayrena Hernandez

***Hyperkyphosis - Does therapeutic exercise reduce hyperkyphosis in adults older than 40 years old?: A Critically Appraised Topic***

**Julian Villanueva**

Faculty Advisor: Dr. Mary Williams

***Muscle Potentiation Ability of Isometric Holds***

**Daniel Gil**

Faculty Advisor: Dr. Matthew Wagner

### Management Information Systems - LSC 324

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**Daniel Pink**

**Zane Koenig, Skylar Wiggins, Paul Wong, Alexis Lozano**

Faculty Advisor: Dr. Terry Waugh

***Beyond Binary: Where McGregor's Theories Meet***

**Diego Cortez, Oscar Astolfo Hernandez Paz, Adam Okonkwo**

Faculty Advisor: Dr. Terry Waugh

### Political Science - LSC 323

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***Analyzing Political Bias in the Media***

**Alyssa Rodriguez**

Faculty Advisor: Dr. Stacy Ulbig

# Session C

## 1:30 - 2:50

### Population Health - LSC 321

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***The Role of Oral Health in Detecting Early Signs of Systematic Diseases***

**Gabriella Akaba**

Faculty Advisor: Ivys Fernandez Pastrana

***Assessment of College Age Student's Knowledge and Prevention of STDs and STIs: A Pilot Study***

**Aashae Davis**

Faculty Advisor: Dr. Rosanne Keathley

***pH Level and Public Health Assessment***

**Migabo Rango**

Faculty Advisor: Dr. David Thompson

***Prenatal Metal Exposure and Early Neurodevelopmental Risks***

**Dean Stephens**

Faculty Advisor: Dr. Shiblur Rahaman

### Psychology - LSC 325

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***Gut-Brain Balance: The Key to Mental Wellness***

**Alexandra Andrews**

Faculty Advisor: Dr. Matthew Fuller

***Does identification procedure type influence perceptions of eyewitness credibility?***

**Olivia Hernandez**

Faculty Advisor: Dr. Daniella Cash

***Evaluation of the Phytochemical Curcumin for Anxiolytic and or Antidepressant Effects in the Chick Anxiety-Depression Model***

**Bobbie Jo Hurt**

Faculty Advisor: Dr. Stephen White

***Perceptions and Expectations About Child Sexual Abuse***

**Lindsey Lanman**

Faculty Advisor: Dr. Daniella Cash

***Mastered and Misleading: Warnings About Practiced Statements Do Not Improve Deception Detection Accuracy***

**Ajax Nguyen**

Faculty Advisor: Dr. Daniella Cash

***Beyond DNA: Understanding the Influence of Adoptive Parenting on Child Development***

**Victoria Camarillo**

Faculty Advisor: Dr. Hillary Langley

***Assessing the Relationships between Demographic Factors, Chronic Health Conditions, and Healthcare Access in Undergraduate Students Sam Houston State University Students***

**Taylor Resweber**

Faculty Advisor: Dr. Chelsea Ratcliff

***Assessing effects of environmental enrichment on BDNF levels in stress-vulnerable aves***

**Abby Ruehlen**

Faculty Advisor: Dr. Stephen White

***Emotion Differentiation in Individuals with Social Anxiety Disorder***

**Dillon Wheeler**

Faculty Advisor: Dr. Susan Duncan

# Session C

## 1:30 - 2:50

***“Intergenerational Anxious Attachment in the Black Community: The Lasting Impact of Childhood Wounds on Adult Relationships”***

**Tashauana Williams-Thomson**  
Faculty Advisor: Emily McClellan

### **Seminar - LSC 323**

***Modern Day Slavery and Psychological Torture: The Texas Prison System by Kylee Bush***

**Kylee Bush**  
Faculty Advisor: Dr. Jeff Littlejohn

***Intimate partner violence and how restriction on reproductive rights places more victims in danger***

**Karolina Carreon Garcia**  
Faculty Advisor: Dr. Jeff Littlejohn

### **Sociology - LSC 323**

***Management Perspectives on Employee Motivation***

**Joshua Anderson, Xavier Guerra, Israel Lopez**  
Faculty Advisor: Dr. Terry Waugh

***An Analysis of Themes and Perspectives in Female-Hosted Podcasts***

**Isabella Ortiz**  
Faculty Advisor: Dr. Kathleen Ratajca

**Scan For Abstracts**



# Session D

## 3:00 - 4:20

### ROOM 230 A Making Sense of the Natural World

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***Using FTIR Calibration Curves of Five Contaminants in Perchloroethylene to Determine the Cleanliness of Oxygen Gauges***

**Payton Barkman**

Faculty Advisor: Dr. Darren Williams

***Impact of Metal Mixtures on the Adolescent Brain – Research design & Preliminary Findings***

**Karen Carreon Garcia**

Faculty Advisor: Dr. Khalid M. Khan

***Chemistry Meets Art: Investigating Solvent Dynamics in Shellac***

**William Villarreal**

Faculty Advisor: Dr. Adrian Villalta-Cerdas

***Determining Variable Star Periods with Multi-Wavelength Light Curves***

**Hailey Whiteman**

Faculty Advisor: Dr. Scott Miller

### ROOM 230 B Art in All its Variety

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***Avant-Guard Analysis of Charles Peabworth's Mahogany and Metal Wall Sculpture***

**Grace Atchison, Kristen Haas, Jazmynn Trevino**

Faculty Advisor: Dr. Melissa Mednicov

***An Introduction to the World of Irish Dance***

**Bridget Compton**

Faculty Advisor: Dr. Tracy Bilsing

***Choreographers, Composers, and Collaborations***

**Daniela Diaz**

Faculty Advisor: Tyler Orcutt

***Animation of WWII: A Quick Look at WB's Obscure WWII Cartoon***

**Richard Romero**

Faculty Advisor: Dr. Nancy Baker

# Session D

## 3:00 - 4:20

### ROOM 241 A Science and Innovative Research

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***Assessing Muscle Protein Ubiquitination during Tumor Induced Wasting in *Drosophila melanogaster****

**Gabrielle Daughenbaugh**

Faculty Advisor: Dr. Mardelle Atkins

***Formin Binding Protein 1 plays an important role during early embryonic development***

**Ty Franklin**

Faculty Advisor: Dr. Sharmin Hasan

***CG3961 is required for normal cell signaling during *Drosophila* eye development***

**Cody Griffin**

Faculty Advisor: Dr. Mardelle Atkins

***Characterizing new genes regulating *Drosophila* head development***

**Shandelyn Poulsen**

Faculty Advisor: Dr. Mardelle Atkins

### ROOM 241 B Studies in Complex Issues in Law

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***Bridging the Justice Gap: The Role of Artificial Intelligence in Law***

**Jamie Albert**

Faculty Advisor: Dr. Christine Cardinal

***An Examination of TBI as a Risk Factor for Criminal Behavior***

**Haleigh Geiger**

Faculty Advisor: Dr. Eric Connolly

***Memory Wars and the Implication on the Legal System***

**Ashley Kinyon**

Faculty Advisor: Dr. Emily McClellan

***Malware Awareness and Information Security Compliance: Insights from Latin American University Students and GenAI Comparisons***

**Alvin Madathil**

Faculty Advisor: Dr. Kamphol Wipawayangkool

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# Session D

## 3:00 - 4:20

**ROOM**  
**242**

**Nature: Beauty and the Blight**

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***“Floral effectiveness and phenology of *Gelsemium sempervirens* at SHSU Piney Woods Environmental Research Lab”***

**Karolina Carreon Garcia, Kaitlyn Davis, Sarah Davis, Kayla Osbourne**

Faculty Advisor: Dr. John Pascarella

***No Chestnuts Roasting on the Open Fire; The History of the American Chestnut Tree Endangerment***

**Anastacia Hippely**

Faculty Advisor: Dr. Rebecca Howard

***Species Distribution Modeling for *Lymantria mathura****

**Zyra Johnson**

Faculty Advisor: Dr. Christopher Randle

***Preferred Pollen Foraging Patterns for East Texas *Bombus* species***

**Gabriel Ramos**

Faculty Advisor: Dr. Justin Williams

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The Honors College Ambassadors would like to thank our faculty and graduate student moderators for taking the time to share their expertise with our student scholars.

**Kiana Cano**  
**Fei Wang**  
**Alice Ahn**  
**John Pascarella**  
**Diego Rojas**  
**Stuti Kokkalera**  
**Susan Duncan**  
**Peter Lehmann**  
**Lee Courtney**  
**Thomas Meagher**  
**Shyam Nair**  
**Miriam Akoto**  
**Michael Vaughn**  
**Nazanin Sedaghatkish**  
**Kamphol Wipawayangkool**

**Todd Primm**  
**Treston Smith**  
**Anand Karki**  
**Mardelle Atkins**  
**Rosanne Keathley**  
**Tiffany Frugé Jones**  
**Christopher Randle**  
**Jennifer Child**  
**Reg Pecen**  
**Ali Dinc**  
**Derli Amaral**  
**Kimberly Bell**  
**Tracy Bilsing**  
**Justin Williams**  
**Lindsey Rowley**



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