

# THE NINTH ANNUAL UNDERGRADUATE RESEARCH SYMPOSIUM

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Conference Program  
April 23, 2016



Hosted by the Elliott T. Bowers  
Honors College Ambassadors



 **UNDERGRADUATE  
RESEARCH SYMPOSIUM**

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<b>Sessions:</b>	
A - Oral-Media-Panel Presentations	<b>18</b>
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<b>Abstracts:</b>	
Oral Media	<b>30</b>
Poster	<b>42</b>

**ALL ORAL-MEDIA SESSIONS WILL BE HELD IN THE CHSS BUILDING  
THE POSTER SESSION WILL BE HELD IN THE LSC BALLROOM**

**SH**™ | **UNDERGRADUATE  
RESEARCH SYMPOSIUM**

<b>8:00-8:45</b>	Registration
<b>8:45-8:55</b>	Welcome and Opening Remarks Room C070
<b>9:00-10:15</b>	Session A, Oral-Media Presentations
<b>10:30-11:45</b>	Session B, Oral-Media Presentations
<b>12:00-1:30</b>	Lunch with Speaker Dr. Tami Cook, Director of E.U.R.E.C.A. LSC Ballroom
<b>1:45-3:00</b>	Session C, Poster Session LSC Ballroom
<b>3:15-4:30</b>	Session D, Oral-Media Presentations
<b>4:45-5:00</b>	Closing Ceremony Room C070

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**The Undergraduate Research Symposium  
Is Sponsored By:**

Elliott T. Bowers Honors College  
College of Criminal Justice  
College of Education  
College of Fine Arts and Mass Communication  
College of Health Sciences  
College of Humanities and Social Sciences  
College of Sciences  
E.U.R.E.C.A. Center  
Office of Research and Sponsored Programs  
Professional and Academic Center for Excellence

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





## The Texas State University System Board of Regents, 2016

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### Honors Council

Kimberly Bell	Chair, English
Frank Fair	Philosophy
William Hyman	Health & Kinesiology
Victoria Lantz	Theatre
Brian Loft	Mathematics
Joyce McCauley	Education
Kenneth McIntyre	Political Science
Holly Miller	Criminal Justice
Valerie Muehsam	Business
Janet Mullings	Criminal Justice
Jeff Wozniak	Biology
Pamela Zelbst	Management
Rick Bello	Communication Studies
Michelle Martinez	Newton Gresham Library



## A Message from Our Faculty Advisor

Welcome to the Ninth 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. Because national studies have shown that undergraduates who participate in research are better communicators and more effective leaders, the URS acts as a springboard for post-graduate success. 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 in preparation for the URS, this accomplishment is a source of enormous gratification.

The Honors Ambassador co-chairs Shealynn Vogan, Sarah Kavanagh, and Everett Moore have worked extraordinarily hard over the past year to make this conference an ongoing success. This wonderful team worked over the summer to overhaul the URS website and registration module to ensure ease of navigation during the registration process. To encourage student success, they provided information links that covered the varied etiquettes of conference presentation, from dress to poster design. Additionally, they have organized several information sessions and sent out information packets to every faculty member on campus; they have formed ambassador committees for abstract review, communication dissemination, and conference logistics; they have chosen new merchandise, planned meals, and made decisions about next year's event. Ambassador Kristyn Couvillion has also worked single-handedly on the design and organization of this year's program, providing invaluable advice and guidance. Again, this conference would not be possible without the combined effort of this highly motivated and professional corps of Ambassadors.

But these students are not the only ones who have dedicated themselves to furthering what is now a nationwide 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, 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, College Deans, the Professional and Academic Center for Excellence (P.A.C.E), the Office of Research and Sponsored Programs (O.R.S.P.), and the Center for Enhancing Excellence in Research Experiences and Creative Activities (E.U.R.E.C.A) have generously paid for this event because they believe in promoting undergraduate research and in supporting the URS. We recognize and deeply appreciate their active support of this endeavor. Finally, we especially thank Dr. Tami Cook, Director of E.U.R.E.C.A. and Professor of Biology, for her enthusiastic willingness to serve as our luncheon speaker, and Dr. Hiranya Nath, Professor of Economics, for his very generous Annual Assam Scholarship Award.

Today's conference celebrates what is best about Sam Houston State University: our students, our commitment to excellence in education, and our dedication to undergraduate research.



### **Dr. Tracy Bilsing**

*Faculty Advisor, Co-Chairs and URS Faculty Committee Chair  
Assistant Dean, Elliott T. Bowers Honors College*

## URS History and Mission Statement

In 2008, the Honors 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. The URS is supported by the faculty and staff of the Elliott T. Bowers Honors College.



## A Message from Our Co-Chairs

Nine years ago, the Ambassadors of the Elliot T. Bowers Honors College came together to organize an event that would allow undergraduate students the opportunity to share and receive feedback on their work. At the 9th Annual Undergraduate Research Symposium, we are proud to continue this tradition with more presentations than the conference has seen in years past.

While the Undergraduate Research Symposium has all of the trimmings of a professional conference- the faculty moderators with helpful feedback, an attentive audience, a chance to hone presentation skills- it also serves as a friendly venue that offers free food, giveaways, a chance for awards, and an environment that encourages you to grow as a presenter, researcher, and academic, and also shows you

the incredible projects that the undergraduate students of Sam Houston State University are capable of. We hope that your day spent at the 9th Annual Undergraduate Research Symposium is one that you remember well whether you participate as a presenter, audience member, faculty moderator, or volunteer. Remember the amazing projects you witness. Remember the advice that your peers and faculty offer you. Remember what it is like to help an event like this, an event that can be so critical in developing essential skills for students as they walk their own unique paths. The co-chairs are humbled and honored to have helped to host this incredible event, and we want to thank each and everyone one of you for your participation. Thank you for taking part in a life-changing experience, and we hope to see all of you again next year!

**Shealynn Vogan**  
URS Co-Chair

**Sarah Kavanagh**  
URS Co-Chair

**Everett Moore**  
URS Co-Chair



## Honors Faculty and Staff

Dean	Kimberly Bell, Ph.D.
Associate Dean	Maria Holmes, Ed.D.
Associate Dean	Patrick Lewis, Ph.D.
Assistant Dean	Tracy Bilsing, Ph.D.
Administrative Coordinator	Connie Rodriguez
Undergraduate Student Assistant	
Ambassador President, URS Co-Chair	Shealynn Vogan
Undergraduate Student Assistant	Kristyn Couvillion
Undergraduate Student Assistant	Gaby Rangel
Undergraduate Student Assistant	Conner Rousseau
Undergraduate Student Assistant	Enriqueta Cruz

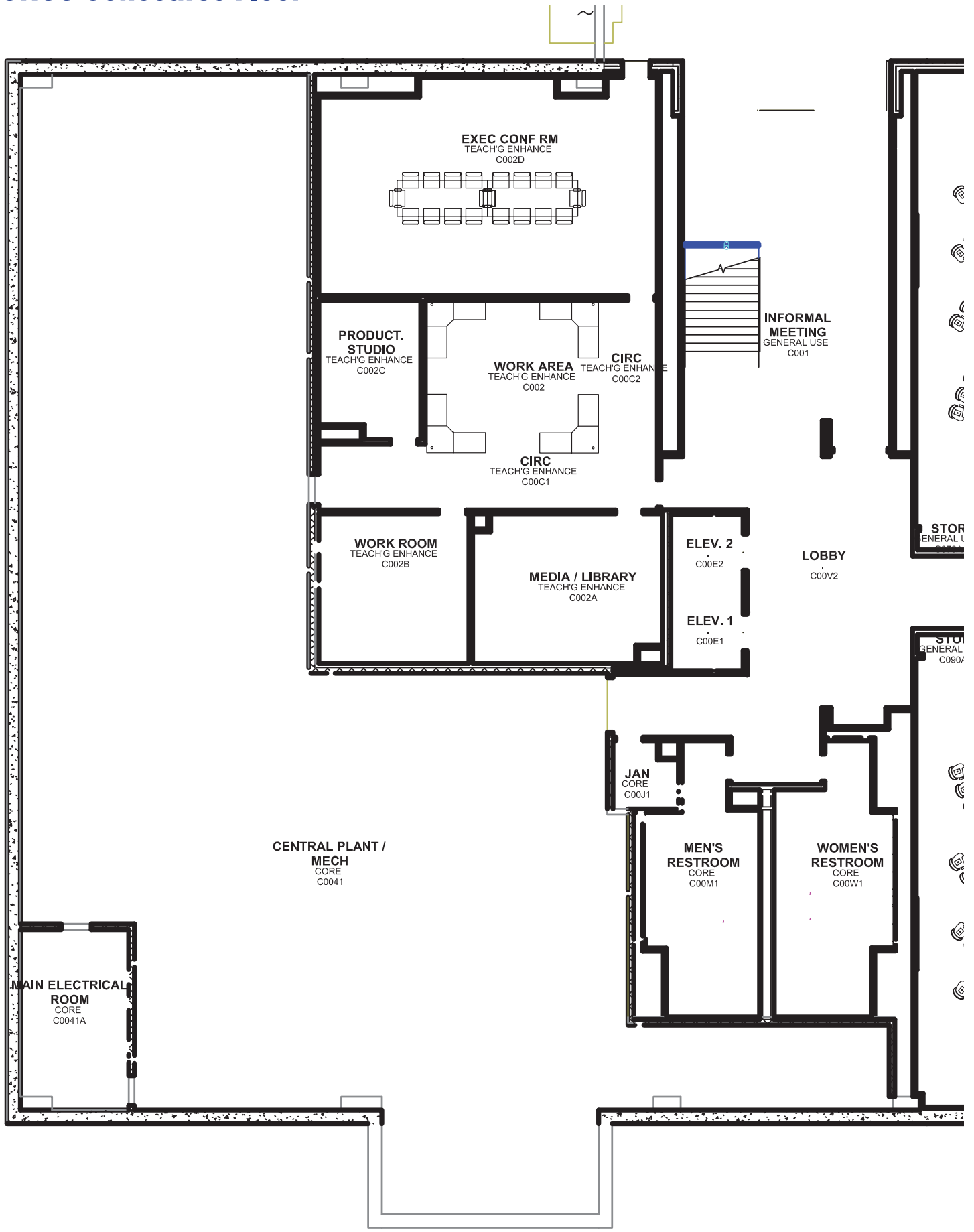
## The Undergraduate Research Symposium Faculty Committee

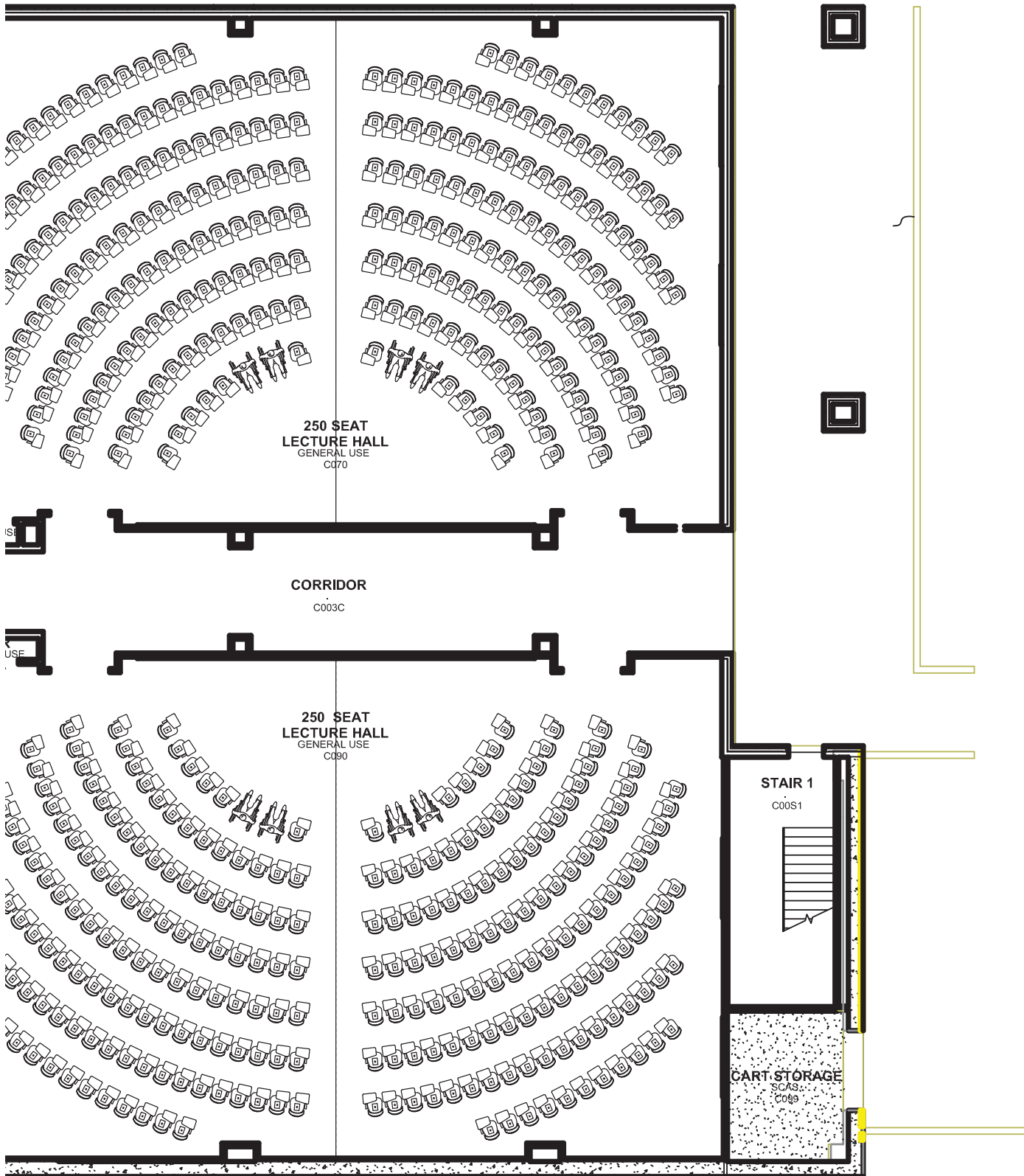
Dr. Tracy Bilsing  
Dr. Lydia Fox  
Dr. Maria Holmes  
Mr. John Jordan  
Dr. Patrick Lewis  
Dr. Pamela Zelbst

## Honors College Ambassadors

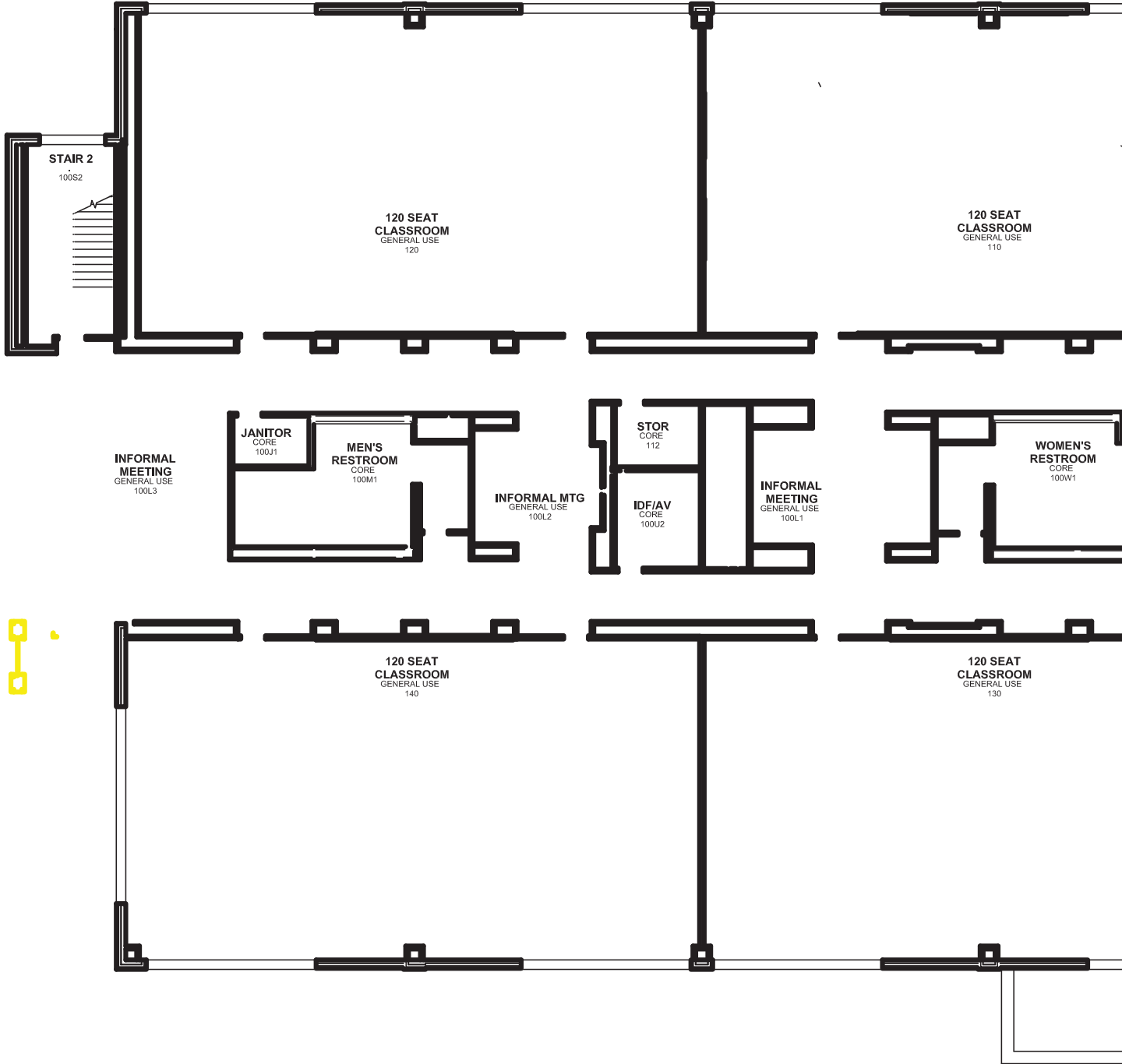
Lorenzo Anderson	Sarah Landsman	Shealynn Vogan
Merary Bautista Ordonez	Joshua McGinty	Rebecca Wood
Kristyn Couvillion	Denisa Micliuc	Lixin Zhang
Alondra Garza	Margaret Mitschke	
Haven Gomez	Everett Moore	
Addie Goodson	Grace Ngo	
Amie Kas	John Pinard IV	
Sarah Kavanagh	Ashley Platero	
Bailey-Anne Kaytar	David Porter	

# CHSS Concourse Floor





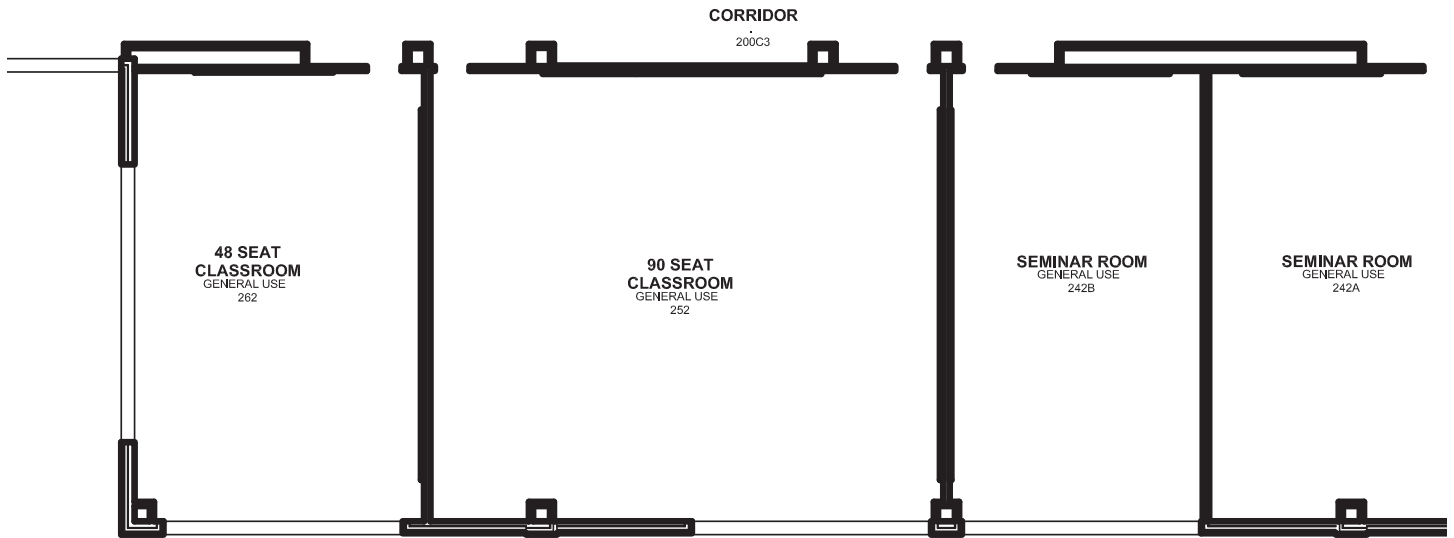
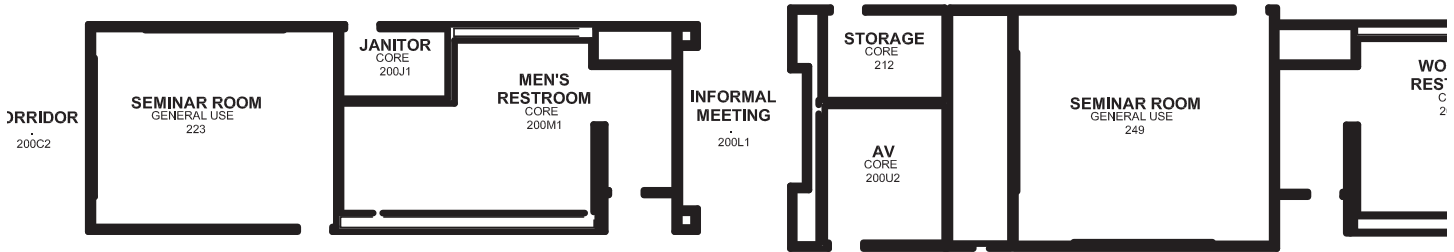
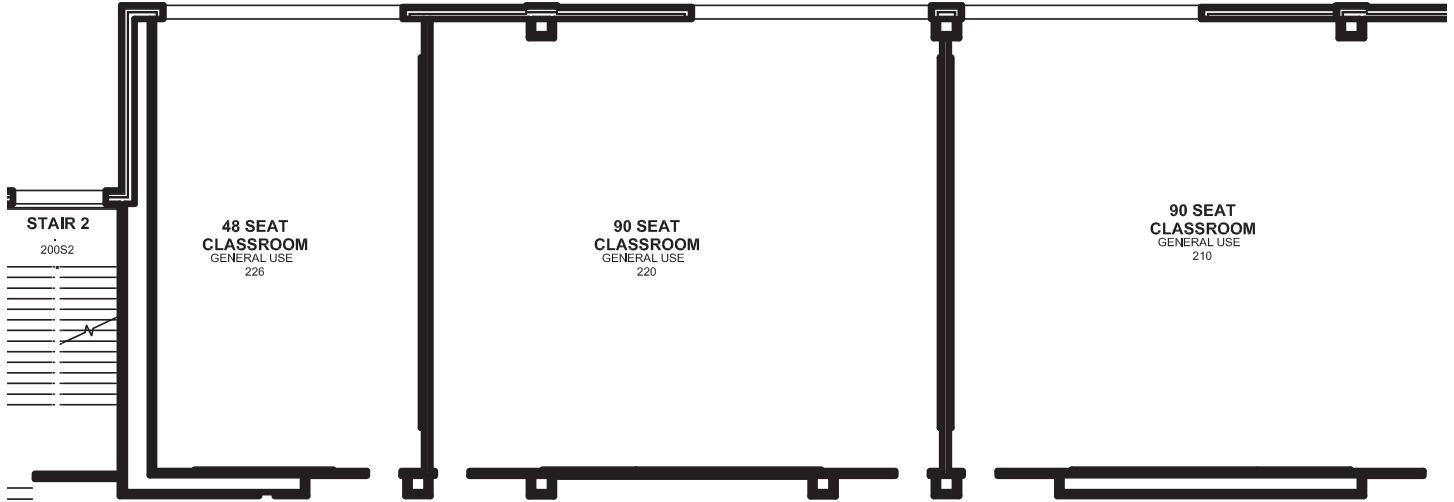
# CHSS First Floor

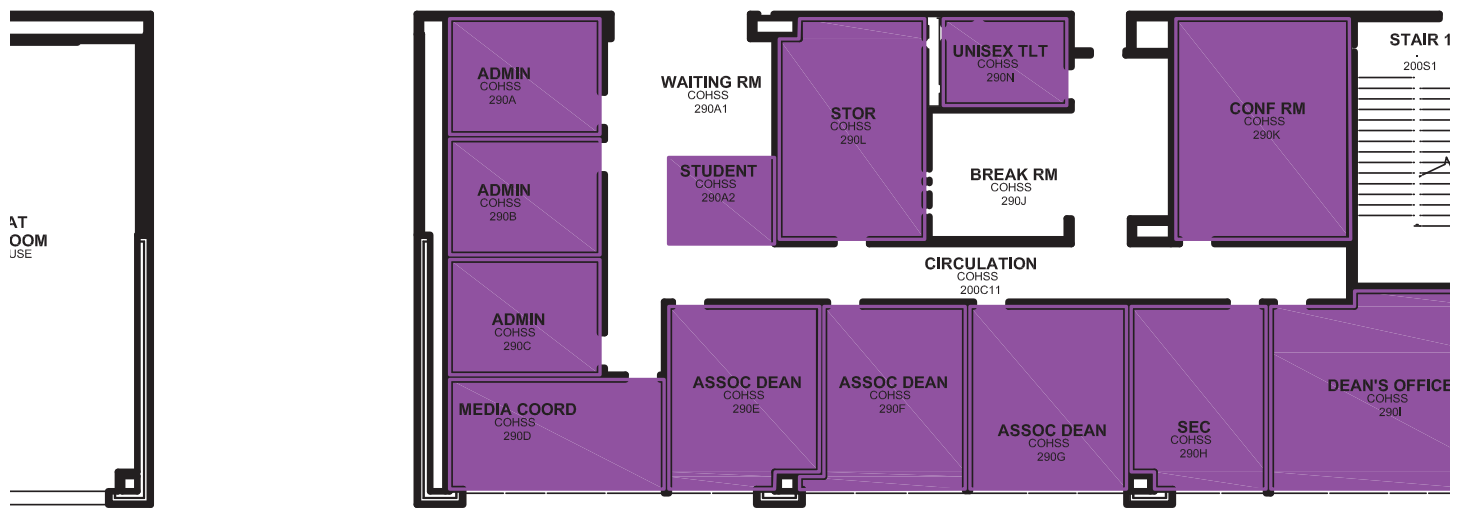






# CHSS Second Floor



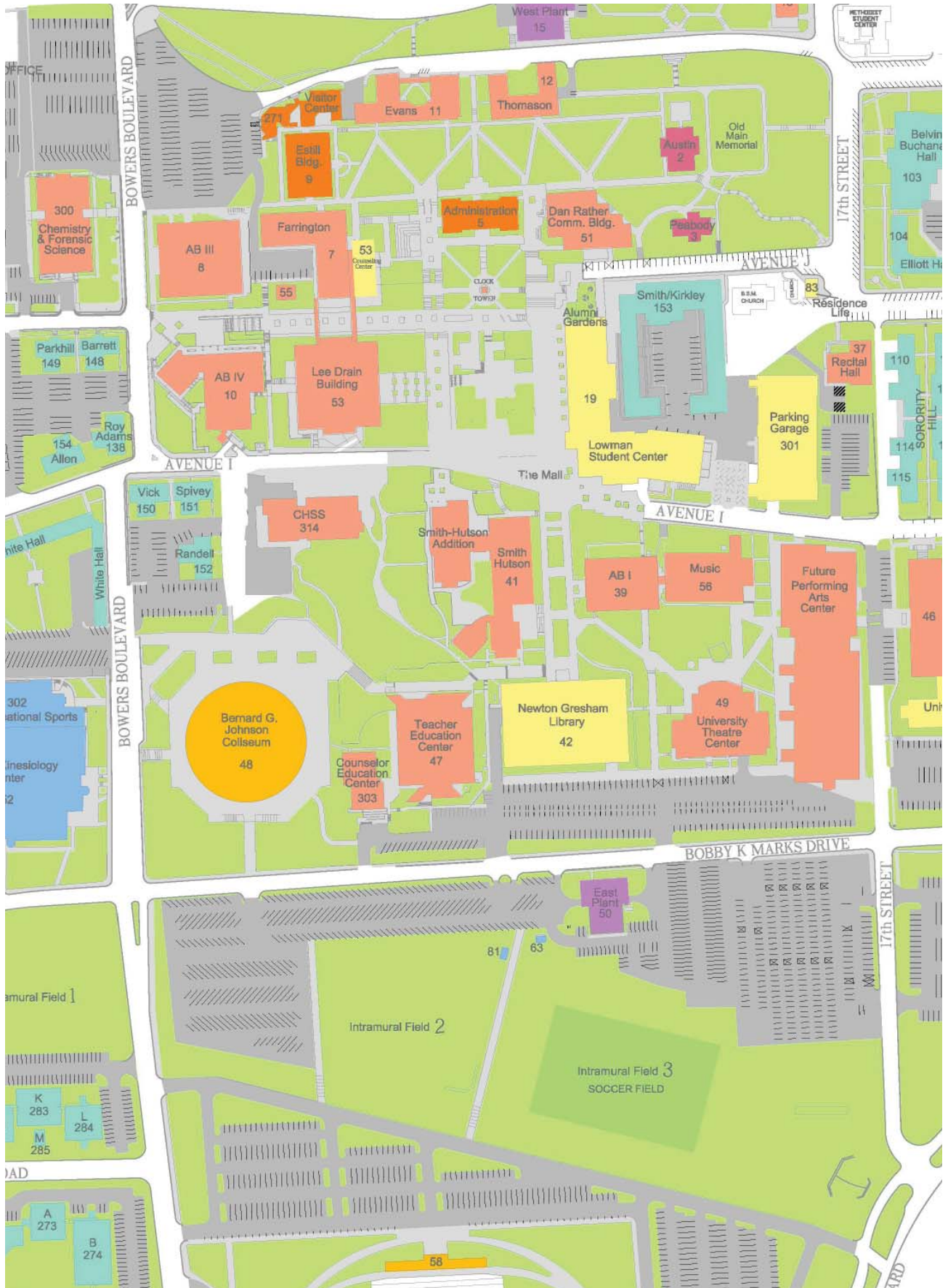


# Campus Map



AP





# Session A

9:00-10:15

## ROOM 206 Psychology and Criminal Justice I

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### ***Examining the Academic Success, Retention, and College Completion of First Generation Students of Color***

**Nievesha Birdine**

Faculty Advisor: Dr. Pamela Gray

### ***Impact of Drug Use on Families: A Scientific and Personal Review***

**Lizette Andrade**

Faculty Advisor: Naomi Timm

### ***Levels of Control: The Function of Transient Depersonalization-Derealization Episodes in College Populations***

**Catherine Stallard**

Faculty Advisor: Dr. Jeffrey Anastasi

### ***The Link Between the Usage of Alcohol or Opioids and Mental Health Among Recently Released Inmates***

**Christopher Holmes and Kayla McCarns**

Faculty Advisor: Ashley Boillot-Fansher

## ROOM 220 History: New Harmony Panel

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### ***Uncovering New Harmony***

**Elissa Aquino, Ashlei Brooks, Jordan Martinek, Luis Ochoa, Michele Robertson**

Faculty Advisor: Dr. Zachary Doleshal

## ROOM 226 Literature: Archetypes

---

### ***Fallen Heroes***

**Preston Balluck**

Faculty Advisor: Dr. Michael Demson

### ***Auden as Hephaistos***

**Clayton Bradshaw**

Faculty Advisor: Dr. Tracy Bilsing

### ***Challenging God, Gender, and Justice: A Feminist Philosophical and Sociological Analysis Towards Frankenstein***

**Cheyenne Moore**

Faculty Advisor: Dr. Kandi Tayebi

### ***The Modern Epic: Deadpool***

**Paige Nelson**

Faculty Advisor: Chris Foster



# Session A

9:00-10:15

**ROOM  
232**

**Education: The New Classroom**

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***Perspectives on Science Teacher Professional Development***

**Travis Hites and Katrina Reeves**

Faculty Advisor: Dr. Scott Miller

***The Changing Male Voice: Classifications, Strategies, and How to be a Better Teacher***

**True Hernandez**

Faculty Advisor: Dr. Lisa Brown

***Our Common World***

**Amanda Henehan and Kindall Jackson**

Faculty Advisor: Dr. Michael Demson

**ROOM  
242A**

**Literature: Narrative Voices**

---

***The Player and the Pawn: An Analysis of Geoffrey Chaucer's Narrators in Book of the Duchess and House of Fame***

**Elisa Holcomb and Angela Shackelford**

Faculty Advisor: Dr. Kimberly Bell

***The Ocean***

**Savanah Burns**

Faculty Advisor: Dr. Helena Halmari

***Leslie Marmon Silko's Use of Landscape and Color in "Yellow Woman"***

**Melanie Brega**

Faculty Advisor: Dr. Tracy Bilsing

***The Death of God, Active Nihilism, and the Dionysian Aspect of the Self***

**Brian Jacobs**

Faculty Advisor: Dr. Stuart West Gurley

**ROOM  
242B**

**Biology and Chemistry**

---

***A Study in Cactus Conservation by Means of Hydroponics***

**Davick Hammack**

Faculty Advisor: Dr. Christopher Randle

***The Replacement of Trichloroethylene and n-Propyl Bromide in Vapor Degreasing for Military Applications***

**Robert Stanton**

Faculty Advisor: Dr. Darren William

***Assessment of Reproductive Health in Marginal Populations of Buffalonut (*Pyrularia pubera*), a Dioecious Parasitic Shrub.***

**Austin Brenek**

Faculty Advisor: Dr. Christopher Randle

***A Model for Time Since Death Generated by the Bacterial Composition on Decomposing Human Bodies***

**Heather Deel**

Faculty Advisor: Dr. Aaron Lynne

# Session A

9:00-10:15

**ROOM**  
**262** Cultural History

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***Unlocking the Mystery of Ritual and Trophy Skulls***

**Natasha Clontz and Ashley Nguyen**

Faculty Advisor: Dr. Joan Bytheway

***When Numbers and Words Collide: The Hidden Mathematics In Geoffrey Chaucer's Book of the Duchess***

**Tyler Josefsen**

Faculty Advisor: Dr. Kimberly Bell

***"Water Music" and the Gender Identity It Establishes in Vanuatu***

**Hannah Talton**

Faculty Advisor: Dr. John Lane

***The Historical Erasure of the LGBTQ Community***

**London Sneden**

Faculty Advisor: Dr. Gene Theodori

# Session B

10:30-11:45

**ROOM  
206**

Literature: Love and Hate

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***Love - An Exploration into Emotion and its Effects***

**Mark Reyes**

Faculty Advisor: Dr. Maria Holmes

***Metaphors and Suicide: A Study of Sylvia Plath's Canon***

**Kristina Lewis**

Faculty Advisor: Dr. Gene Young

***Love and the Conquering of Women***

**Haven Gomez**

Faculty Advisor: Dr. Michael Demson

***Rape Ideology in Ancient Mythology***

**Ashlee Fuller**

Faculty Advisor: Dr. Michael Demson

**ROOM  
210**

Literature: Chaucer Panel

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***Playing with God: Games and the Divine in Geoffrey Chaucer's Book of the Duchess***

**Daniel Agey**

Faculty Advisor: Dr. Kimberly Bell

***A Dance Through Geoffrey Chaucer's Court***

**Kayla Voge**

Faculty Advisor: Dr. Kimberly Bell

***Playing for the Hart in Geoffrey Chaucer's Book of the Duchess***

**Travone Marshall- Pearson**

Faculty Advisor: Dr. Kimberly Bell

***Geoffrey "Big Ego" Chaucer: The Man of Authority and the Great Game of Metaphor***

**Sarah Bivens**

Faculty Advisor: Dr. Kimberly Bell

**ROOM  
226**

Biology and Geology

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***Geochemical Delineation of the Middle Silurian Carbonates of the Hiawatha National Forest, Michigan***

**Allison Quiroga**

Faculty Advisor: Dr. Jonathan Sumrall

***Cementation History within the Silurian Carbonates of the Hiawatha National Forest, Michigan***

**Jordan Vega**

Faculty Advisor: Dr. Jonathan Sumrall

***Using Two-Dimensional Gel Electrophoresis to Isolate a Potential p53-like Protein from *Chlamydomonas reinhardtii****

**Matthew Breuer**

Faculty Advisor: Dr. Anne Gaillard

***Is Endonuclease G Conserved in *Chlamydomonas reinhardtii*?***

**Allyson Keathley**

Faculty Advisor: Dr. Anne Gaillard

# Session B

## 10:30-11:45

### ROOM 232 Business and Community

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***Radio Frequency Identification: its Past, Present, and Future***

**Katelyn Harbaugh and Martez Jones**

Faculty Advisor: Dr. Pamela Zelbst

***Measuring the Economic Impact of the Cynthia Woods Mitchell Pavilion Contemporary Concert Series (2015)***

**Madeleine Mortimore**

Faculty Advisor: Dr. John Newbold

***Crisis Management in the Blue Bell Listeria Outbreak***

**Brackston McKnight**

Faculty Advisor: Dr. Michael Demson

### ROOM 242A Medicine

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***Euthanasia and Its Lingering Impact***

**Yamilex Velez**

Faculty Advisor: Dr. Maria Botero Jaramillo

***The Difference of Cochlear Implants in Children and Adults***

**Faith Cox**

Faculty Advisor: Caitlyn Foster

***The Future of Independent Medical Practices***

**Meaghan Byington**

Faculty Advisor: Dr. Kimberly Bell

***Anthrax in Bioterrorism***

**Maureen Reynolds**

Faculty Advisor: Laura Montgomery

### ROOM 242B Psychology and Criminal Justice

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***Spitting Game: Ethnicity and Opening Gambits***

**Everett Moore**

Faculty Advisor: Dr. Rick Bruhn

***Bystander Education: Prevention at Work***

**Briana Gongora**

Faculty Advisor: Dr. Kathleen Latz

***Orange is the New Black: A Look into the Women's System***

**Jessica Razo**

Faculty Advisors: Kristen Welch

***The Effects of Victim Race and Perpetrator Type on Responses to a Sexual Assault Disclosure***

**Alondra Garza**

Faculty Advisors: Courtney Franklin

# Session B

10:30-11:45

**ROOM  
262**

**History: National and Regional**

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***Espionage in the American Revolution: The Culper Spy Ring***

**Miranda Sandlin**

Faculty Advisor: Dr. Katherine Gaskamp

***Neither Citizen nor Slave: The Choctaw Freedmen***

**North Oldham**

Faculty Advisor: Dr. Brian Jordan

***Texas Settlement – Deception in the German Hills***

**Briana Weaver**

Faculty Advisor: Dr. Roseanne Barker

***Religion in America***

**Amy West**

Faculty Advisor: Dr. Phillip Like Sinitiere



**Session C**  
**Posters**  
**1:00-2:30**  
**LSC Ballroom**

Poster titles are listed  
alphabetically by  
presenters'  
last names

***Why are North American Frogs Less Diverse than South American Ones?***

**Sonali Aggarwal**

Faculty Advisor: Dr. Patrick Lewis

***The Economic Ripple of the Blue Bell Shutdown***

**Preston Balluck**

Faculty Advisor: Dr. Michael Demson

***Evolution of Body Plans: Why Have No New Body Phyla Evolved?***

**Ashley Barragan**

Faculty Advisor: Dr. Patrick Lewis

***Descriptive Comparisons Between Inpatient Incompetence to Stand Trial Populations in Forensic Hospitals***

**Laura Beene, Brandon Hollingsworth, Kevin R. Kurian, Billy James, Michael Jumes**

Faculty Advisor: Dr. Adam Schmidt

***Science and Humanities: The Role of Foreign Language Skills in Anatomy***

**Sarah Bivens, Chris Bell, Juan Diego Daza, Patrick Lewis**

Faculty Advisor: Dr. Patrick Lewis

***The Importance and Use of Play in Schools***

**Christina Blackmon, Aimee Sambrano, Ana Sanchez, Laura Flores, Tujuanna Dixon**

Faculty Advisor: Dr. Elizabeth Lasley

***Preventing Sexual Harrasment in the Workplace***

**Austin Boggs, Matthew Hudgens, Ryne Lawson, Bryan Washington**

Faculty Advisor: Dr. Waugh

***BlueBell - Now the Safest Ice Cream You Can Eat?***

**Olivia Boyna**

Faculty Advisor: Dr. Michael Demson

***Chaucer's Response to Horace***

**Clayton Bradshaw**

Faculty Advisor: Dr. Kimberly Bell

***The Effects of Olive Pomace on Weight Gain in Capris aegagrus hircus as a Model for Ruminants***

**Jessica Burke, Keith Fenske**

Faculty Advisor: Dr. Marcy Beverly

***Geoffrey Chaucer Challenging Medieval Traditional Roles for Women in Book of the Duchess***

**Savanah Burns, Emily Hillman, Madison Reid**

Faculty Advisor: Dr. Kimberly Bell

***Fashion Western History***

**Juana Campos**

Faculty Advisor: Dr. Stacy Ulbig

***The Ear Apapratus of Subterranean Worm Lizards (Squamata: Amphisbaenidae: Zygaspis)***

**Geneva Clark**

Faculty Advisor and Co-researcher: Dr. Juan Daza

***Chaucer's Portrayal of the Divine Sisters, Fortuna and Fama***

**Haley Crenwelge, Claudia Valle**

Faculty Advisor: Dr. Kimberly Bell

***The Existence of Harry Mason***

**Jaren Crist**

Faculty Advisor: Dr. Maria Botero

***A Game of Chess with Fortuna in Chaucer's Book of the Duchess***

**Amber Crouch and Diana Martell**

Faculty Advisor: Dr. Kimberly Bell

***The Importance of Play***

**Elizabeth Cunningham, Ieshia Goosby, Rachel Lechmann, Kelly Ong, Cassie Zurovec**

Faculty Advisor: Dr. Elizabeth Lasley

***Practicality vs. Human Life in Food Politics***

**Gregory Daniells**

Faculty Advisor: Dr. Michael Demson

***Genetically Modified Organisms and the General Public***

**Heather Deel**

Faculty Advisor: Dr. Michael Demson

***The Development of the Victorian Asylum***

**Rylea Ducote**

Faculty Advisor: Dr. Audrey Murfin

***A Comparison of Heart Rate Between Established Methods and Smart Phone Application***

**I'Raunce Ellis and Christina Waters**

Faculty Advisor: Dr. Page Glave

***Jaw-musculature in Primates as an Effect of Evolutionary Dynamics Driven by Changing Dietary Habits***

**Christiana Fakhri**

Faculty Advisor: Dr. Patrick Lewis

***Drinking and Physical Activity***

**Rachael Falgout, Addie Goodson, Madison Schiafo, Elise Yenne, Monique Sledd, John Manning, Cindy Mena, Christopher Missimo, Mia Ricardo, Danielle Langemeier**

Faculty Advisor: Dr. Craig Henderson

***Healthcare in Zimbabwe***

**Natalie Finley**

Faculty Advisor: Dr. Patrick Lewis

***Understanding Community Interactions in a Fish Model of Mucosal Microbiomes***

**Corbett French and Annie B Leonard**

Faculty Advisor and Co-researcher: Dr. Todd Primm

***Can Behavior Based Safety Help Create Improved Work Environment?***

**Nicholas Frerichs, Christopher Garcia, Dallis Haney, Matthew Mcadoo**

Faculty Advisor: Dr. Terry Waugh

***Exploring Responses to Sexual Assault Disclosure***

**Alondra Garza, Cortney Franklin**

Faculty Advisor: Cortney Franklin

***Geochemical Analysis of Calcarenite and Carbonate Paleosol Deposits from Eleuthera, The Bahamas***

**Kaitlyn Gauvey and Jean Sumrall**

Faculty Advisor: Dr. Jonathan Sumrall

***The Extinction of Megafauna in North America***

**Britney Gomer**

Faculty Advisor: Dr. Patrick Lewis

***Is the Cambrian Explosion Real?***

**Javier Gomez**

Faculty Advisor: Dr. Patrick Lewis

***The American Diet***

**Emily Gordon**

Faculty Advisor: Dr. Michael Demson

***The Lion's Share: A Spatial Analysis of the Invasive Red Lionfish, *Pterois volitans****

**Michelle Harris**

Faculty Advisor: Mark Leipnik

***ASEEN: Energizing Teachers***

**Destinee Hedrick and William Howard**

Faculty Advisor: Frauk Yilidiz

***Resistant Employees***

**Antonio Hernandez, Steven Hicks, Brittany Morrison**

Faculty Advisor: Frauk Yilidiz

***One, Dos, Trois: Bilingual Proficiency and the Acquisition of a Third Language***

**Diego Ibarra and Helen Wakefield**

Faculty Advisors: Helena Halmari

***Observing Transiting Exoplanets***

**Victor Johnston, Devin Gilmore, Poojan Bhandari**

Faculty Advisor: Dr. Scott Miller

***Denudation Rates of Eleuthera Carbonates***

**Miranda Jordan and Jonathan Sumrall**

Faculty Advisor: Jeanne Sumrall

***Is Success in Leadership Development Events Simply a Numbers Game?***

**Savannah Koehl, Doug Ullrich, Shyam Nair**

Faculty Advisor and Co-researcher: Dr. Dwayne Pavelock

***Can Species Morphology Help Predict Invasions of Ecological Communities?: A Test Using Native and Non-native anuran Species in the Chihuahuan Desert***

**Kelsey Kralman and Christopher Schalk**

Faculty Advisor and Co-researcher: Dr. Carmen G. Montaña

***The Impact of Differentiated Instruction Within the Student-Centered Classroom***

**Rebekah Krob, Kayla MacCurdy, Jennifer Rawley, Kaleigh Wood**

Faculty Advisor: Dr. Elizabeth Lasley

***The Effects of Immigration on Children***

**Raynie Leard**

Faculty Advisor: Dr. Maria Holmes

***Metals, Words, and Authority: The Ekphrastic Game in Geoffrey Chaucer's House of Fame***

**Kristina Lewis**

Faculty Advisor: Dr. Kimberly Bell

***Doing Business in Texas***

**Stephanie Luk Bounsawat**

Faculty Advisor: Renee Gravois

***Evolution of Aurora Kinase Gene Family in Eukaryotes***

**Adam Mansfield, Alexis Farmer, Hyuk Cho**

Faculty Advisor and Co-researcher: Dr. Choudhary

***The Truths about Wild Caught Salmon***

**Agom Menyuah**

Faculty Advisor: Maki Hatanaka

***Variation in Mandibular Anatomy of Zygaspis based on X-ray Computed Tomography***

**Sarai Mesa, Lauren Rudie, Sarah Bivens, and Dr. Juan D. Daza**

Faculty Advisor: Dr. Patrick Lewis

***Mathematical Modeling of the ANWR Ecosystem***

**Abigail Miller and Chris Johlle**

Faculty Advisor: Dr. John Alford and Dr. Edward Swim

***Why Haven't More Invertebrates Evolved Flight?***

**Shyon Motlagh**

Faculty Advisor: Dr. Patrick Lewis

***An Investigation of Magnetic Grain Sizes in Marine Sediments Cored at Site U1387 Off the Margin of Spain and Portugal***

**Matthew Nowicki, Syukri Aviscenna, Cameron Currier**

Faculty Advisor and Co-researcher: Gary Acton

***Coral Bleaching: Causes and Consequences with Emphasis on The Effect of Climate Change***

**Daniel Nwosuocha**

Faculty Advisor: Dr. Diane Neudorf

***A Clean Purple Sweep: Gold Bioremediation Using Rhodobacter sphaeroides***

**Caroline Obkirchner and Hannah Johnson**

Faculty Advisor and Co-researcher: Dr. Choudhary

***Study of Shifting Oral and Fecal Skin Bacterial Communities during Human Cadaver Decomposition in Southeast Texas***

**Laura Paez, Lauren R. Smith, Joseph F. Petrosino, Sibyl R. Bucheli**

Faculty Advisor and Co-researcher: Dr. Aaron Lynne

***Living Arrangements for the Elderly***

**Kaitlin Patterson**

Faculty Advisor: Dr. Victoria Titterington

***What Really Went Wrong with Blue Bell?***

**John Pinard**

Faculty Advisor: Dr. Michael Demson

***Corporate Influence on Health Standards and Public Opinion***

**Brenna Pospisil**

Faculty Advisor: Dr. Michael Demson

***Using Magnetic Susceptibility and Stable Isotopes to Correlate Outcrops of the Engadine Group within the Hiawatcha National Forest of the Upper Peninsula, MI***

**Mallory Ramos, Jordan Vega, Allison Quiroga, Isaac Burton, Erik Larson**

Faculty Advisor and Co-researcher: Dr. Jonathon Sumrall

***Industrialization & Immigration, Chicago, IL (1870-1920)***

**Gabriela Rangel**

Faculty Advisor: Dr. Katherine Gaskamp

***Building a Dream World: Symbols of Instability in Chaucer's Book of the Duchess and The House of Fame***

**Elizabeth Resch, Erin Wiggins**

Faculty Advisor: Dr. Kimberly Bell

***The Effects of Team Instruction on Scores in a Team-Based Learning Course***

**Jaclyn Robinson, L. A. Wolfskill, and Shyam S. Nair**

Faculty Advisor and Co-researcher: Dr. Foy D. Mills, Jr.

***Effect of UV Exposure on recA Mutant of Rhodobacter sphaeroides***  
**Veronica Rodriguez, Wanji, Banda, Berra Koskulu, Hannah Johnson**  
Faculty Advisor and Co-researcher: Dr. Choudhary

***The First Record of Wormian Bones in Lizards***  
**Lauren Rudie, Sarai Mesa, Juan D. Daza**  
Faculty Advisor and Co-researcher: Dr. Patrick Lewis

***Analysis of Monotheistic Religions and Their Afterlives***  
**Angela Schackelford**  
Faculty Advisor: Dr. Jason Payton

***Petrographic Analysis of Bahamian Paleosols***  
**Kristen Sides and Jeanne Sumrall**  
Faculty Advisor: Dr. Jonathon Sumrall

***Transient Depersonalization-Derealization: a Neuroscientific Review***  
**Catherine Stallard**  
Faculty Advisor: Sharon Hunter

***Characterization of the Apocynaceae Family for the Presence of Bioactive Compounds***  
**Alison Stephens, Dr. Justin Williams, Dr. Donovan Haines**  
Faculty Advisor and Co-researcher: Dr. Anne Galliard

***Brenham and Blue Bell***  
**Morgan Stickley**  
Faculty Advisor: Dr. Michael Demson

***Incorporating Classroom Research to Clarify Common Misconceptions in Genetics***  
**Melissa Sutrisno, Gabreal Geleta, Hannah Johnson**  
Faculty Advisor and Co-researcher: Dr. Choudhary

***The Blue Bell Incident, and Why the FDA Needs Money***  
**Connor Tones**  
Faculty Advisor: Dr. Michael Demson

***“Wash My What?”***  
**Asia Williams**  
Faculty Advisor: Dr. Michael Demson

***Vietnam POW/MIA Awareness***  
**Danica Brett Yates**  
Faculty Advisor: Dr. Tracy Bilsing

# Session D

2:45-4:00

**ROOM**  
**206** Literature: Religious Studies

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***Understanding Messianism***

**Emily Essman**

Faculty Advisor: Dr. Jason Payton

***A Study of Language and Cultural Progression in the Bible: Two Lexical Illustrations***

**Rebekah Scholz**

Faculty Advisor: Dr. Helena Halmari

***Native Culture as Reflected in Creation Mythology***

**Sarah Daniels**

Faculty Advisor: Dr. Jason Payton

***The Misconceptions of Satan***

**Natasha Suza**

Faculty Advisor: Dr. Jason Payton

**ROOM**  
**210** Film

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***Sex, Lies And Videotape: A New Era of Cinema***

**Jake Bevill**

Faculty Advisor: Dr. Grant Wiedenfeld

***Walt Disney's Multipanel Camera***

**Tara Cole**

Faculty Advisor: Dr. Grant Wiedenfeld

***The Influence of Structuralist Filmmaker James Benning***

**Rylee Henson**

Faculty Advisor: Dr. Grant Wiedenfeld

***Science Fiction's Future***

**Deysi Marquez**

Faculty Advisor: Christopher Foster

**ROOM**  
**220** Forensic Science: S.T.A.F.S. Panel

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***Analysis of the Taphonomic Changes of Sharp Force Trauma in Aqueous versus Terrestrial Environments***

**Chris Nichols, Judson Rolan, Lillie Scales, Sierra Smith**

Faculty Advisor: Dr. Joan Bytheway



## Session D

2:45-4:00

**ROOM** Animal Science  
**226**

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***The Impact of Confinement Practices on Family-Owned Hog Operations***

**Andrew Johnson**

Faculty Advisor: Dr. Foy Mills

***The Avoidance of Epidemics in Animal Shelters***

**Amber Akin**

Faculty Advisor: Dr. Michael Moore

***Evaluation of a Feed Supplement and its Effects on Feed Intake in Whitetail Deer***

**Mason Hale and Taylor Zobrist**

Faculty Advisor: Dr. Marcy Beverly

**ROOM** Business and Politics  
**242B**

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***Analysis of The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010: Causes and Effects***

**Lauren McCollum**

Faculty Advisor: Dr. Elsie Ameen

***Evolution of the Resumé***

**Savannah Turner**

Faculty Advisor: Dr. Kathryn O'Neill

***#Mudslinging on Twitter: When Twitter Fingers Become Trigger Fingers***

**Alexis Gonzales and Sean Smith**

Faculty Advisor: Dr. Heather Evans

## Oral-Media Abstracts

### Agey, Daniel

#### ***Playing with God: Games and the Divine in Geoffrey Chaucer's Book of the Duchess***

Chaucer's *The Book of the Duchess* was assumable composed in memory of Blanche of Lancaster, the deceased wife of Chaucer's patron, John of Gaunt. However, *The Book of the Duchess* is a dream vision structured as a series of games and not standard memorial elegy. Yet, each game in the text subtly connects to the divine. In this way, *The Book of the Duchess* acts as a consolation by delivering the message to focus on God. By using games to highlight this message, Chaucer's delivery is both innovative and indirect and thus avoids the message being misinterpreted as the directions of an earthly man.

### Akin, Amber

#### ***The Avoidance of Epidemics in Animal Shelters***

Contrary to what the public believes, animal shelters are not the source of diseases among animals. Animals that are being brought in are bringing unknown pathogens to the shelter and if not treated correctly, will spread to the entire shelter, making it impossible to get the animals adopted out. In trying to avoid such epidemics, we need to first understand what we are trying to keep from spreading. This paper will look at multiple common diseases/ viruses to further understand how they are spreading. Once there is a better understanding, it will be easier to find ways to stop an epidemic. With the correct preventative methods we will be able to adopt out more animals to happy, loving homes.

### Andrade, Lizette

#### ***Impact of Drug Use on Families: A Scientific and Personal Review***

Drug use is a common issue many encounter on a daily basis. With every drug use, the user and even the families, come into contact with problems. But it seems when parents use drugs, the problems hit the family members twice as hard. For instance, if there are children involved, there are two possible outcomes; they can turn to drugs, like their parents, or they can be taken away and forced to live elsewhere. Not every family will face the same problems, but they all share one thing in common: the negative outcomes. In this presentation, the presenter will discuss the scientific literature surrounding drug use within a family, the consequences on the family, and provide personal insight to the troubles families face when seeking help.

### Aquino, Elissa, Ashlei Brooks, Jordan Martinek, Luis Ochoa, Michelle Robertson

#### ***Uncovering New Harmony***

This panel will present the results of a semester long research project into the history of the New Harmony Settlement, a model-farming village created by George Washington Grant soon after the close of the Civil War. The settlement was meant to embrace the promise of Reconstruction, seeking to build an integrated community a few miles to the east of Huntsville. Quaker educators were brought in, churches were built, and several agricultural gins and mills began whirring. Yet it seems that only freed blacks took Grant up on his offer to settle in the colony. Grant died in 1899, but little is known as to what happened in the colony. We do know that after World War One most of the land was broken up and sold off to the National Forest Service in 1936. The panel will reveal its findings for the first time to the public at the U.R.S.

### Balluck, Preston

#### ***Fallen Heroes***

This paper examines the distinct archetype of fallen heroes in literature, graphic novels, and film, in order to extrapolate a firmer definition of the 'fallen hero'. Upon further examination, many of literatures greatest antagonists should actually be considered fallen heroes based upon the establishment of new criteria discussed in this paper. This examination brings to light the pasts of Lucifer, Ganelon, Saurumon, and Darth Vader, which are often forgotten in light of a their future actions, which should be used to evolve our understanding of what is three main literary archetypes, not two.

### Bevill, Jake

#### ***Sex, Lies And Videotape: A New Era of Cinema***

At the end of the 1980's, the film industry was undergoing a backlash: in opposition to the overzealous budgets and eccentric storytelling of American 1980's films, the success of *Sex, Lies and Videotape*, a low budget debut from director Steven Soderbergh in 1989, marked the beginning of a new era of Cinema and saw the birth of a generation of filmmakers who opposed the Hollywood system, deciding to produce and distribute their films independently. In my presentation, I will analyze the trends in filmmaking set by Hollywood in the 1980's and how Independent Cinema defied those conventions, using *Sex, Lies and Videotape* as the primary example. I will

also be noting the influence of the french new wave movement of the 1960's and Dogme 95 on the stylistic and narrative trends of American Independent Cinema, referencing films such as *Slacker* by Richard Linklater and *Elephant* by Gus Van Sant.

### **Birdine, Nieesha**

#### **Examining the Academic Success, Retention, and College Completion of First Generation Students of Color**

First-generation students, especially those of color, are more likely to fall short of completing their college degree. The research done in this literature review will examine the different determining factors that will aid in the retention of first-generation students of color.

### **Bivens, Sarah**

#### **Geoffrey "Big Ego" Chaucer: The Man of Authority and the Great Game of Metaphor**

Geoffrey Chaucer's early dream vision *House of Fame* ends mid-sentence with "But he seemed for to be / A man of gret auctory....," leaving the audience to wonder who indeed this man might be. Through the transfer of knowledge, cultural, and political authority from one empire to another (known as *translatio studii et imperii*), Chaucer constructs a wild game of metaphor in *House of Fame* from start to finish. This presentation will show just how Chaucer uses *translatio* to inarguably establish himself as the man of ultimate authority in regards to culture, language, and translation.

### **Bradshaw, Clayton**

#### **Auden as Hephaistos**

This presentation explores the motivations and message of W.H. Auden's "The Shield of Achilles." Auden grew up surrounded by his father's obsession with Greek mythology, so it only makes sense that he would turn to mythology to present truths in literature. Disappointed by his early attempts at activist poetry, he used Homer's shield passage from *The Iliad* to address concerns over post-World War II society in his own ekphrastic attempt. W.H. Auden considered himself as a modern day Hephaistos, utilizing his craft to bring realistic imagery in a criticism of war-driven society.

### **Brega, Melanie**

#### **Leslie Marmon Silko's Use of Landscape and Color in "Yellow Woman"**

This research explores Leslie Marmon Silko's use of color within the landscape in her short story "Yellow Woman." Silko primarily draws upon the Laguna Pueblo culture, storytelling, and lore in order to enrich her main character's journey into a mythical space where she gains both understanding and appreciation for her Native American heritage. Silko embeds Laguna Pueblo culture in her story deliberately, especially through color, to reveal the rich quality of the heritage and to challenge pre-conceived notions of Native American lifestyle.

### **Brenek, Austin, Christopher Randle**

#### **Assessment of Reproductive Death in Marginal Populations of Buffalonut (*Pyrularia pubera*), a Dioecious Parasitic Shrub.**

The Buffalonut (*Pyrularia pubera*) of the family *Cervantesiaceae* is a hemi-parasitic shrub that inhabits the understory of forests of the Appalachian Mountains from northern Alabama through southwestern Pennsylvania, where it is listed as rare. Pennsylvania populations have come under special threat due to deer-browsing. *P. pubera* is dioecious and is also capable of asexual reproduction by rhizomatous growth. In this study we assess the reproductive health of SW Pennsylvania populations of *P. pubera* experiencing a spectrum of herbivory. A census was taken at each of four sites at anthesis of female flowers to estimate 1) the number of male and female plants belonging to the population, 2) the number of male and female flowers present, and 3) pollen to ovule ratio. Populations vary considerably in potential for sexual reproduction, likely due to extremely small census size.

### **Breuer, Matthew, Terah Hardcastle, Anne Gaillard**

#### **Using Two-Dimensional Gel Electrophoresis to Isolate a Potential p53-like Protein from *Chlamydomonas reinhardtii***

Programmed cell death (PCD) is a form of cell death which results from a series of intracellular molecular events. One of the most well-studied molecules in this pathway is p53, a transcription factor which performs multiple functions in the PCD process in vertebrates. The goal of this project is to determine if a p53-like protein is present in the unicellular chlorophyte *Chlamydomonas reinhardtii*, since it is also capable of undergoing PCD. Previous wet-lab approaches demonstrate that a *C. reinhardtii* protein weighing approximately 53 kD is recognized by three anti-p53 monoclonal antibodies. The goal of this project is to isolate this potential p53-like protein from a whole cell extract of *C. reinhardtii* in order to have it sequenced. Here, we seek to spatially separate this polypeptide from other proteins in the sample using two-dimensional gel electrophoresis (2DGE). Experiments are currently underway and

show significant promise for the isolation of this polypeptide.

## **Burns, Savannah**

### ***The Ocean***

In this essay, I will compare and contrast the portrayals of the ocean within two Old English elegiac poems, “The Wanderer” and “The Seafarer.” Specifically, I will investigate the distribution and use of three lexical elements—heart, spirit, and mind—in order to show how, through the use of these words, the poet-narrators are projecting their emotions onto the ocean. The ocean, in both poems, becomes a double-entendre, representing each narrator’s physical and spiritual state.

## **Byington, Meaghan**

### ***The Future of Independent Medical Practices***

The future of independent, privately owned medical practices is entirely uncertain. Many doctors believe these medical practices will go extinct, much like the dinosaurs. The Patient Protection and Affordable Care Act (PPACA), along with the Individual Mandate, have negatively affected independent businesses tremendously. With these in action, some doctors are choosing to retire early, while others join larger companies, such as hospitals, to avoid the effects of the mandate. As a result, not enough primary care physicians are available to take care of people covered by the PPACA, resulting in a higher number of patients and lower quality of care nationwide. In this presentation I will use one independent physician-owned pediatric practice to illustrate the struggles independent medical practices now face. Based on this case study and research, I believe private practices can recover if change is made in the healthcare system. However, I fear the changes necessary will not be made, and independent medical practices will go extinct.

## **Clontz, Natasha, Ashley Nguyen**

### ***Unlocking the Mystery of Ritual and Trophy Skulls***

Trophy and ritual skulls have drawn attention around the world based on the mystery of these practices. History has shown that these skulls have played roles in religious practices, cultural rituals, wars, and violent crimes. The research gathered for trophy skulls focused on skulls used in war, the Nasca tribe of Peru, Native American culture, and other prehistoric times. For ritual skulls, the research focused on five unique cases: plastered skulls, tsantsa, kapala, santeria/ palo mayombe ritual cauldrons, and the mutilated skulls of South Syria. The intent of this research is to provide an in depth look of these practices from an anthropologist’s perspective and see if a relationship can be established between the two types of skull practices. It will also entail the history behind these skulls, how common these practices are/were.

## **Cole, Tara**

### ***Walt Disney’s Multipanel Camera***

Walt Disney created a huge empire but it all started with *Snow White* and none of this would be possible without his Multipanel Camera that helped bring life to this timeless classic. I will be showing how this device was created, how it works, and why it had such an impact on film.

## **Cox, Faith**

### ***The Difference of Cochlear Implants in Children and Adults***

Would a Cochlear Implant have more success in a young child or an adult? Based on multiple studies and interviews with professional audiologists, Cochlear Implant surgeries are more successful in children at very young ages. Children adjust to the cochlear implant much easier because their brain is still developing. Everything a young child is learning is new to them; therefore, learning to hear and recognize sounds, as well as learning to talk is not very difficult. Studies have shown that children adjust to this surgery faster than adults. Adults, however struggle to adjust. Adults also have a longer healing process than children. This research paper goes in depth with all of the advantages young children have with cochlear implants that make them more successful than adults.

## **Daniels, Sarah**

### ***Native Culture as Reflected in Creation Mythology***

In western culture where the Christian belief system is so dominant, the mention of the word “religion” does not generate consideration of beliefs that do not focus on the God-man Jesus. In order to bring focus back to the spiritual beliefs that existed long before Christianity ever made an appearance in what is now the United States, this presentation attempts to shed light on the way that a spiritual system is formed by the culture it flourishes in and the clear differences between the culture of the western world and the cultures of Native Americans as reflected by the focuses of their belief systems. The types of questions that a set of mythologies strives to answer reflect a need within the culture to understand something about itself. This research explores the questions that

these cultures attempt to answer through the creation stories of the societies' primary spiritual institution.

### **Deel, Heather**

#### ***A Model for Time Since Death Generated by the Bacterial Composition on Decomposing Human Bodies***

The microbiome of a decomposing human body is diverse and continuously changing throughout decomposition. By sampling the core microbiome of decomposing bodies continuously over a period of time, patterns of bacterial compositions can be established. These patterns can be combined to create models that represent the presence of certain bacteria during each stage of decomposition. Over two years, various donated human bodies were all placed outside and consistently sampled. The generated model of bacterial composition could possibly be used to establish time since death in homicides that occur in similar environments.

### **Essman, Emily**

#### ***Understanding Messianism***

The term 'Messiah' and its eastern, Judaic meaning and function has been diluted through the embrace of messianism in the Western world, largely due to the prominence of Christianity. This paper attempts to return to the ancient Judaic roots of the controversial and powerful concept of a Judaic redeemer in order to better understand messianism's political and social functions in Jewish society, particularly the intriguing aspect of Jewish messianism that requires human participation in bringing about the Messiah's reign.

### **Fuller, Ashlee**

#### ***Rape Ideology in Ancient Mythology***

I will be exploring how rape is viewed in ancient Greek, Hindu, and Viking societies through their respective mythological texts. In each society rape was denounced and was never considered morally acceptable, just as it is today. However, there are major inconsistencies between how modern and ancient societies pass judgement and treat the victims. Despite the distance in chronological and physical location between the Greek, Hindu, and Viking societies, there are obvious similarities in their texts. In addition to sharing the same ideology about the treatment of perpetrators and victims, the evolution and progression of this idea is consistent between the cultures.

### **Garza, Alondra, Courtney Franklin**

#### ***The Effects of Victim Race and Perpetrator Type on Responses to a Sexual Assault Disclosure***

The aftermath of sexual assault requires further insight concerning the responses expressed by those to whom victims disclose, specifically when assault or victim attributes might impact the type of responses provided to victims upon disclosure. The current study uses a sample of surveys administered to undergraduate students at a mid-sized public university geographically located in the south to assess subject responses to a rape disclosure vignette. Four vignettes are presented to subjects with type of rape (stranger vs. acquaintance) and victim race manipulated. Future implications for research and policy will be discussed.

### **Gomez, Haven**

#### ***Love and the Conquering of Women***

The female characters of mythology function as a tool to describe a cultures' mentality of male domination. Greek, Hindu, and Norse mythology, specifically, have offered various female images under distinctive circumstances which highlight the intricacies of their androcentric cultures in which women are below men. When men believe themselves to be in love with women, they use this "feeling" to lift themselves above their love interest and fall into a sense of entitlement. The degradation of women in this way leads to several representations of misogyny: a woman's only honor being her chastity, the non existence of the concept of rape, and most importantly, a lack of identity. These myths portray the minds of men and the cultivation of their mindset and how the fall of women was inevitable.

### **Gongora, Briana**

#### ***Bystander Education: Prevention at Work***

This thesis critically reviews the literature on the efficacy of bystander intervention programs (BIPs) in reducing the incidence of campus sexual assault. While preliminary evidence supports the value of BIPs in challenging cultural rape myths, a more rigorous evaluation study of the programs is needed. My thesis begins by identifying gaps in the existing research on bystander education and concludes with a framework for establishing a local BIP based on the available data. These programs are potent tools in sexual assault prevention on college campuses and should be implemented at universities across the nation.

### **Gonzalez, Alexis, Sean Smith, Heather K. Evans, Kayla Strouse**

#### ***#Mudslinging on Twitter: When Twitter Fingers Become Trigger Fingers***

Following the work of Evans, Cordova, and Sipole (2014), we examine the way that candidates for Congressional



seats in 2014 used Twitter during the last two months of their campaign. Using a content analysis of every tweet sent by all candidates for both the U.S. House and Senate, we show that particular individual-level and campaign specific characteristics are related to whether and how often candidates go negative on Twitter. In particular, we show that there are differences based on competitiveness, incumbency, gender, and partisanship. The timing of the negative tweets is also explored.

**Hale, Mason, Taylor Zobrist, Marcy M. Beverly Ph.D., Stanley F. Kelley, Ph.D., Mark Anderson, Ph.D., Jessica Leatherwood, Ph.D., Kyle Stutts, Ph.D.**

#### ***Evaluation of a Feed Supplement and its Effects on Feed Intake in Whitetail Deer***

This study focused on increasing feed intake during warm months of the year with a ration containing an additive believed to reduce body temperature. Forty deer were grouped by sex and age. A control and test feed was provided to the deer *ad libitum*. Eating patterns of deer fed the control vs test ration were monitored using game-cameras. The test group had a longer average overall time at the feeder ( $P < 0.01$ ) due to a tendency ( $P = 0.10$ ) for more time at the feeder in the morning. An increased feeding time was seen in the test group during the evenings, time at the feeder was the lowest ( $P < 0.01$ ) for both treatments during this peak temperature interval when compared to cooler intervals. The test ration did increase overall time at the feeder, it did not affect the feeding time during the hottest part of the day as predicted.

**Hammack, David, Austin Brenek, Alan Byboth, Kenneth Nobleza**

#### ***A study in Cactus Conservation by Means of Hydroponics***

There are over 800 endangered species of cactus. Current conservation methods are difficult due to lack of volunteers, funding, and awareness. Traditional soil/container methods require more labor and space than is practical. Most plants, including cacti, thrive in hydroponic systems for several reasons: each plant receives maximum nutrients, there is little competition for space, the apparatus requires less space compared to traditional propagation, and the apparatus can be sterilized easier. I have built a simple, inexpensive system for hydroponic-propagation of cacti within the greenhouse at the SHSU Center for Biological Field Studies with the assistance of Alan Byboth, Austin Brenek, and Dr. Chris Randle. The study organism is *Echinocereus reichenbachii*, a widely cultivated species. Data will be recorded for two seasons. I hope that this experiment will bring the utility of hydroponic cultivation to the attention of conservationists working in *Cactaceae* and other plants.

**Harbaugh, Katelyn, Martez Jones**

#### ***Radio Frequency Identification: Its Past, Present, and Future***

This paper will inform the audience about Radio Frequency Identification (RFID) by discussing its history, how it is used today, and how it can be used in the future. Sources of information will include academic journals and a book on RFID written by an SHSU faculty member. RFID is a rapidly developing technology that is currently used in a variety of industries, such as: retail inventory, hospitals, credit card companies, and libraries. Through ongoing research and development RFID has the potential to have a greater impact in even more industries. This paper will give a more detailed account of these current and future uses.

**Henson, Rylee**

#### ***The Influence of Structuralist Filmmaker James Benning***

I will be discussing James Benning, an American experimental filmmaker. The presentation will situate his work within the Structuralist movement, and describe his influence on my own filmmaking and video art. Structuralist filmmakers organize their content around abstract patterns and formulae to represent one idea, rather than following traditional narrative. The presentation will include clips on both Benning's work and my own.

**Hernandez, True**

#### ***The Changing Male Voice: Classifications, Strategies, and How to be a Better Teacher***

The presentation is based upon a literature review and research from several theorists and educators from around the country and their research on the changing male voice, its classification, and how one's teaching would be influenced and changed based upon the needs of the students. The approach to teaching differs upon the types and voice classifications of singers in the classroom. Adolescent males go through their voice change at all different ages, starting typically from ages 10 to 15. The techniques one would use in a music classroom would differ and have to be edited upon the different stages and classifications the students' voices were in. These approaches, changes, and strategies are used from information gathered from Dr. Terry J. Barham's collection of interviews entitled *Strategies for Teaching Junior High and Middle School Male Singers*, as well as other theses, books, and education resources, such as DVDs and interviews.



**Hites, Travis, Katrina Reeves, Andrea Foster, Renee James, Ph.D**

***Perspectives on Science Teacher Professional Development***

The Astronomy Summer School of East Texas (ASSET) is a two-year teacher professional development program created to help improve secondary school science teachers' knowledge of and attitudes towards Astronomy. Teachers are taught Astronomy concepts and principles through engaging pedagogical techniques. Participants were interviewed before, during, and after the workshop to ascertain their perspectives and understanding of Astronomy. We gauged the effectiveness of the workshop by administering a pre/post content survey. Similar surveys were also administered to the teachers' students in an effort to determine the extent to which teacher's gains were transferred to their students.

**Holcomb, Elisa, Angela Shackelford**

***The Player and the Pawn: An Analysis of Chaucer's Early Narrators***

In his early poems, *Book of the Duchess* and *House of Fame*, Chaucer experiments with narrators who recount their fictional dream experiences. Medieval dream narratives typically adhere to certain conventions, including having a problem or issue brought up by the narrator while he is awake, and then finding a solution to the problem in the dream itself that he recounts to his audience. The narrators in these two dream visions each engages in the creative act of turning a dream into a verse, but they undergo vastly different experiences: the narrator in *Book of the Duchess* is an insomniac, who searches for sleep and finds himself in a fictional world constructed by others, namely Ovid and Virgil; in contrast, the narrator in *House of Fame* simply wants to tell a truly exceptional story, and thus he adopts old stories and transforms them into new works.

**Holmes, Christopher, Kayla McCarns**

***The Link Between the Usage of Alcohol or Opioids and Mental Health Among Recently Released Inmates***

Research suggests that people with a history of alcoholism and people who abuse depressant-type drugs have a more difficult time readjusting to society after release from long-term incarceration. Reintegration is tougher for those with a lack of emotional support, education, or other core elements. Using data acquired from the Serious and Violent Offender Reentry Initiative (SVORI), we will discuss the effects of alcoholism and depressant-type drug abuse on the individual offender's mental health. Results will be discussed during the presentation.

**Jacobs, Brian**

***The Death of God, Active Nihilism, and the Dionysian Aspect of the Self***

The death of God is a common and recurring concept put forward by German philosopher, Friedrich Nietzsche, through his multiple philosophical works. The notion of the death of God is wielded by Nietzsche as a tool with the goal of influencing the minds of his readers in order to promote the acceptance of certain philosophical principles, specifically the doctrine of active nihilism and the embracement of the Dionysian aspect of the self. Such principles are also heralded and promoted in a variety of other Nietzschean themes, specifically in "the eternal recurrence of the same", "the will to power", and "the overcoming of idols". The overall theme of the concept of the death of God is not constrained to the writings of Nietzsche as such a theme can be gleaned and deciphered in a variety of ways within select writings from Dostoevsky, Kierkegaard, Shakespeare, and Heidegger.

**Jackson, Kindall, Amanda Henehan**

***Our Common World***

Responding to the writing of Paulo Freire and other radical pedagogists who sought to reform the centripetal "banking model of education," which privileges memorization over critical engagement and adherence to classroom etiquette over dialogical discourse, Dr. Demson collaborated with us to create a textbook that makes an attempt to resolve the growing alienation of students from the materials they study. Concerned that the highly unstable nature of the classroom, stratified in such a way that the teacher is thought to "lose control" if students express a dissenting opinion, deters rather than fosters a sense of academic investment, we developed the groundwork for a book that necessitates a conversation between the students and their community. In undertaking this project, we hoped to refine the unique voice of each student through the writing process and through a series of unusual assignments, governed by the centrifugal disciplines of ecopedagogy and radical pedagogy.

**Johnson, Andrew**

***The Impact of Confinement Practices on Family-Owned Hog Operations***

Members of the American public have ethical concerns about confinement agricultural operations, especially regarding swine production. These unfounded concerns stemming from myths about 'factory farming' are causing consumer fads that place more emphasis on impractical, old-fashioned food production processes that are incompatible with today's need for a food supply that is safe and plentiful enough to feed a burgeoning global population despite decreases in human capital and the availability of agricultural inputs. Animal agriculturists must

take responsibility for initiating a dialogue with the various consumer interest groups and other parties concerned with the rights/welfare of the animals involved to insure their way of life is not irrevocably altered and that the food supply so many Americans take for granted is not endangered.

### **Josefsen, Tyler**

#### ***When Numbers and Words Collide: The Hidden Mathematics In Geoffrey Chaucer's Book of the Duchess***

Mathematics works with three dimensions, while literature lies within a two-dimensional text. What happens, though, when a literary composition is read in three dimensions? This presentation will illustrate how mathematics holds the key to understanding one of Chaucer's most complicated works, *Book of the Duchess*. If we read *Book of the Duchess* as a three-dimensional text, we are able to unearth a new meaning that remains hidden: what I argue in this presentation is that Geoffrey Chaucer has not composed a simple poem with *Book of the Duchess*, but rather he has constructed a multi-dimensional game with his readers; it is our job to figure out how to win it.

### **Keathley, Allyson, Dr. Anne Gaillard**

#### ***Is Endonuclease G Conserved in Chlamydomonas reinhardtii?***

*Chlamydomonas* is a single-celled eukaryotic alga that's used for experiments. Here, we use *Chlamydomonas* to study programmed cell death (PCD), or the controlled death of a cell. One key event of PCD is DNA laddering, where endonucleases specifically cleave DNA. Endonuclease G (EndoG) induces DNA laddering in humans. We hypothesize that *C. reinhardtii*'s endonuclease is similar to EndoG. We performed gel electrophoresis on DNA from PCD-induced cells to visualize DNA laddering. Resveratrol was used prior to stress to test whether it inhibits DNA laddering. We also performed a Western blot using a human antibody for EndoG. Results show that PCD-induced cells exhibit DNA laddering that isn't inhibited by resveratrol. Additionally, the human antibody binds well to the endonuclease in *C. reinhardtii*, meaning it's similar to EndoG. Later, we plan to perform a Western Blot on mitochondria to test whether the endonuclease migrates to the nucleus during PCD, as in humans.

### **Lewis, Kristina**

#### ***Metaphors and Suicide: A Study of Sylvia Plath's Canon***

Sylvia Plath's poetry is often branded dark and full of angst; however, her brilliant use of clever metaphors – while conventional among poets of her time – allows her work to illuminate her mental path to the rationalization of her suicide. In "Daddy," Plath perfectly executes a metaphor that, in the scope of her poems, serves as the culmination of her preceding work and the foundation for the later poems – her father as Nazi Hitler and herself as a doomed Jew. Her poetry preceding 1962 would build her metaphor with key lines in various poems, and "Lady Lazarus" would employ it as the rationalization for her decision that would ultimately lead to "Edge," her suicide note. As her poems outlined her life, so would they define her death. For Plath, poetry was not simply a means of expression and her suicide was not an impulse – they were her life, making her death the final masterpiece to her canon.

### **Marquez, Deysi**

#### ***Science Fiction's Future***

Science fiction film, once exclusive to a fairly niche audience, has taken the last several decades by storm. With the rise of "nerdy" culture, the science fiction genre is everywhere. Franchises like *Star Wars*, and *Star Trek*, who were once originally viewed as "geeky" are now household names. Science fiction allows viewers to escape everyday life and then are able to come back to with new creative and alternative insights. I want to be able to better understand how other countries view this genre and where it will lead us next.

### **Marshall-Pearson, Travone**

#### ***Playing for the Hart in Geoffrey Chaucer's Book of the Duchess.***

Geoffrey Chaucer's early dream vision *Book of the Duchess* is about a narrator who recounts a wonderful dream he had. The poem is structured as a frame narrative, wherein stories are nestled in other stories; intriguingly, the stories Chaucer treats are about games, including reading, chess, and the art of courtly love. The poem also includes a hunt for a stag called a hart. In this presentation, I will first explain how hunting was considered to be a game in the Middle Ages; I will then analyze how it functions within the larger context of the poem by arguing that the hunting game uncovers the emotions of character.

### **McCollum, Lauren**

#### ***Analysis of The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010: Causes and Effects***

This thesis discusses the Dodd-Frank Act of 2010 which was passed in response to the 2008 financial crisis in the United States. The research includes the causes and effects of this Act and reaction from industries affected. Previous financial crises, including the Great Depression of 1929 and the Savings and Loan Crisis of 1989, are analyzed. An apparent trend is identified from this analysis. Many reasons were given for passage of the Dodd-Frank Act, but the primary reason was to prevent another financial crisis from occurring. The Act has been criticized

for being ambiguous and difficult to understand. The success or lack of success of the Act is discussed.

### **McKnight, Brackston**

#### ***Crisis Management in the Blue Bell Listeria Outbreak***

A review will be given on the crisis management techniques used by the Blue Bell Ice Cream Company in the wake of the listeria outbreak in 2015. A comparison will be drawn between the accepted best crisis management techniques and those followed by Blue Bell after it was discovered the majority of their products were contaminated with listeria. An analysis will also be given on particular actions the company took, and whether they will be positive or negative for the company's well being in the long run.

### **Moore, Cheyenne**

#### ***Challenging God, Gender, and Justice: A Feminist Philosophical and Sociological Analysis Towards Frankenstein***

Mary Shelley's *Frankenstein* has been used to exemplify "Nature vs. Nurture," but little work has been done to examine the philosophic and religious criticism in relation to the authority of God. The relationship between Victor and the creature is a complex one, but one aspect resembles the predisposed relationship between God and humanity. Shelley uses Miltonic tropes to characterize the relationship between the creature and Victor, which are used to challenge the authority of God, in order to question the responsibility that God has in respect to humankind. Victor's character mirrors the excessive Romantic masculine sublime, which negatively impacts his surrounding loved ones, society, and creation. Both Victor's character and the failed state of the social systems within Victor's society, lead to the philosophical question of "Free Will" in relation to the creature, therefore extending the religious criticism of God in relation to the predisposed relationship between God and humanity.

### **Moore, Everett**

#### ***Spitting Game: Ethnicity and Opening Gambits***

Research into relationship science is extremely rewarding when it helps individuals to create happy, healthy relationships. This study serves as an exploratory work investigating the relationship between young women's ethnicities and the effectiveness of the opening gambit script on their willingness to initiate a romantic relationship. Participants will be gathered through a university volunteer system and will be randomly assigned to one of three types of opening gambit conditions; innocuous, direct, or cute-flippant. The expected results, potential implications, and remaining stages of research completion will be discussed.

### **Mortimore, Madeleine**

#### ***Measuring the Economic Impact of the Cynthia Woods Mitchell Pavilion Contemporary Concert Series (2015)***

In 2015, the Cynthia Woods Mitchell Pavilion (CWMP) hosted 61 contemporary arts concerts, with a total attendance of nearly 500,000 concert-goers. In this study key patron consumption data is combined with local economic data to derive a measure of the economic impact of the Cynthia Woods Mitchell Pavilion Contemporary Concert Series for 2015. The findings are based on over 3,700 interviews conducted among CWMP patrons at 12 representative concerts from the 2015 season. The analysis uses the IMPLAN modeling system and economic data for Montgomery County, Texas (as of 2013). The study identifies 3 distinct effects on the local economy: direct, indirect, and induced. The overall level of economic activity attracted to Montgomery county from outside the county is determined to exceed \$50 million.

### **Nelson, Paige**

#### ***The Modern Epic: Deadpool***

"The endurance of the epic tradition is an extraordinary literary phenomenon...Nor does epic as a genre show any signs of decay, for it is constantly being updated and revived for a modern audience..." (Bates, *The Cambridge Companion to the Epic*) With the ever present influence of traditional epics, the themes and ideals have bled into current literature, thus creating modern epics. These epics take the ideal of modern society, what has been idolized and contort it into a criticism of the culture. The Marvel comics of *Deadpool* display the American society's lust for violence and gore as well as the god-like status science holds and has many qualities, such as both the pinnacle and nadir of societal values, hubris, and a "godly" influence that make it a modern epic.

### **Nichols, Chris, Judson Rolan, Lillie Scales, Sierra Smith**

#### ***Analysis of the Taphonomic Changes of Sharp Force Trauma in Aqueous versus Terrestrial Environments***

Human remains with inflicted trauma will differ in taphonomic changes depending on the environment in which the body is exposed. This study was conducted at the STAFS facility at Sam Houston State University to compare the effects of inflicted sharp force trauma to two cadavers one being exposed to an aqueous environment and one to a terrestrial environment. Sharp force trauma was inflicted at five identical locations on both cadavers. Cadavers were placed in the designated environment, one in aqueous and one on land, and photographed three times a week. Ambient, water, and land temperatures were taken as well. Preliminary results indicate the land-placed

cadaver decomposed faster than the water-placed cadaver. Further decomposition analysis will be presented during the symposium.

#### **Oldham, North**

##### ***Neither Citizen nor Slave: The Choctaw Freedmen***

The Choctaw Indians of present-day Mississippi found themselves surrounded by European settlers colonizing their burgeoning United States. In an effort to assimilate to new technologies and customs, they adopted the practice of slavery in an effort to not only adopt racial superiority to African slaves, but to blend in with those white contemporaries they struggled so hard to gain equality with for themselves. This study will examine the practice of slavery from Mississippi that was transplanted to Indian Territory west of the Mississippi River with the removal of the Choctaws from their native homeland, the experiences of slaves owned by the Choctaws, but quantified around the citizenship of Black Freedmen in the Choctaw Nation at the end of the Civil War through the Treaty with the Choctaw and Chickasaw, 1866 into the Reconstruction Era.

#### **Quiroga, Allison, Erik B. Larson, Ph.D, Jonathon Sumrall, Ph.D**

##### ***Geochemical Delineation of the Middle Silurian Carbonates of the Hiawatha National Forest, Michigan***

This study examined the Silurian carbonates of the upper Michigan Basin. The groups of interest in this study were the Manistique Group and Engadine Group. This study delineated the two groups using geochemical, mineralogic, and petrographic data. The Manistique and Engadine samples plot in two overlapping but distinct fields on 13C vs 18O plots. Subdivisions of the Engadine cannot be distinguished. Similar distinctions exist when comparing iron content and 13C for the two groups. This suggests that the Manistique and Engadine Groups were altered by either geochemically distinct fluids or a fluid with evolving geochemical characteristics during the replacement process.

#### **Razo, Jessica**

##### ***Orange is the New Black: A Look into the Women's System***

Prison systems across America house thousands of inmates who must be punished, rehabilitated and supervised. *Orange is the New Black*, a memoir, by Piper Kerman portrays the personal life of a former inmate of the prison system and the experiences that she had to deal with first hand. Through the acquisition of various journals, articles, and other research, the life of women in prison systems across America was assessed. Within these research documents, similar correlations were found between the prison described in *Orange is the New Black* and the prisons across America that were described. This paper will focus on the flaws that inhibit the criminal justice system and the inmates of the prisons across America. It will compare the life that Piper Kerman lived during her personal sentence to the actual evidence that is found in the criminal justice system.

#### **Reyes, Mark**

##### ***Love - An Exploration into Emotion and It's Effects***

How powerful is love? Indeed, love is often quoted as the most powerful emotion. It can drive people to action and thoughts that they would normally not consider. However, one thing even more powerful than love is the absence of it. Based on the book *Enrique's Journey* by Sonia Nazario, the short poem "Love" (by Mark Reyes) explores love and its absence; how it affects us, what it can make us do, and what it can give us in return.

#### **Reynolds, Maureen**

##### ***Anthrax in Bioterrorism***

*Bacillus anthracis* is a naturally occurring sporiform gram positive, bacillus shaped bacterium that can live for decades in soil. Both natural and human-caused anthrax poisoning has been seen throughout history; its appearance has been linked across a broad range, from cows eating grass from contaminated soil to the spores being weaponized and used in acts of terror. While the last well known anthrax attack was in 2001, the threat is still real and relevant to today's society. This paper discusses the different types of anthrax, methods of treatment, progress on new vaccines, and the continued threat to national security.

#### **Sandlin, Miranda**

##### ***Espionage in the American Revolution: The Culper Spy Ring***

Beginning in 1778, a small group of men bravely came together to form the Culper Spy Ring, which turned out to be one of the Patriots' most successful attempts at espionage during the American Revolution. The Culper Spy Ring gave vast amounts of useful information to General Washington, without which the entire outcome of the war could have been different. Their dangerous work not only provided important pieces of information such as the British locations and morale, but also allowed false information to slip through the enemy lines and mislead the British into acting how Washington wanted.



## Scholz, Rebekah

### ***A Study of Language and Cultural Progression in the Bible: Two Lexical Illustrations***

Because of the Bible's long life, its language has undergone great change. This is a significant example of how language itself develops over time. In this study, I have compared the use of words in two English translations of the Bible published over 350 years apart: the King James Version (1611) and the New Language Translation (1996). Focusing on two words, "brethren" and "angel," has allowed me to identify changes in two areas: political correctness regarding gender and the Christian connotation of angels. As cultures evolve, biblical revisions, along with revisions of all literature, will reflect those changes.

## Snedden, London

### ***The Historical Erasure of the LGBTQ Community***

After a visit to a Holocaust Museum, the author questions the lack of representation that homosexuals receive in regards to the Holocaust. The presenter sets out to investigate and answer three questions. 1. Is sexuality, being a culturally controversial subject, the main reason for the non-recognition of this group (originally in reference of the Holocaust)? 2. Were they too small a portion of the population to be represented (also originally in reference to the Holocaust)? 3. In what other ways has the LGBTQ population possibly experienced historical erasure? To answer this, the author explores the historical presence of, attitudes towards, and treatment of homosexuality/homosexuals, from ancient civilizations up to the modern day Gay Right's Movement, wrapping up by reflecting on the three proposed questions, concluding that the LGBTQ community has faced erasure in every aspect due to discrimination, and in what ways the academic inclusion of LGBTQ history is important.

## Stallard, Catherine

### ***Levels of Control: The Function of Transient Depersonalization-Derealization Episodes in College Populations***

Depersonalization-derealization disorder has gained attention as a psychological phenomenon in recent years within the realm of dissociative disorders. Transient depersonalization-derealization episodes have been a less focused on phenomenon within the disorder whose symptoms are prevalent in the general population. This paper briefly discusses the neurobiological function of chronic depersonalization-derealization disorder and provides a description for function of transient depersonalization-derealization episodes through a model of cognitive control. This model describes levels of cognitive control and illustrates the function of transient depersonalization-derealization episodes that flow through a fully-conscious base level, through an onset unconscious level, a partial conscious level, and ending in a fully-conscious level again. Additionally, this article will illustrate an experiment testing transient depersonalization-derealization in the college population.

## Stanton, Robert, Jacob Perry, Darren Williams, Ph.D

### ***The Replacement of Trichloroethylene and n-Propyl Bromide in Vapor Degreasing for Military Applications***

The goal of this Department of Defense funded research is to find replacement solvent blends for trichloroethylene (TCE) and n-propyl bromide (nPB) in vapor degreasing (VDG) operations. The requirements for replacement azeotropes are that the blends are not hazardous air pollutants (HAP), volatile organic compound (VOC) solvents, ozone depleting solvents (ODS), and all solvents must have a low global warming potential (GWP). A new vial test method was generated to test numerous solvents and solvent blends at once. The new method was used to test TCE, nPB, and the azeotropes in their ability to dissolve or displace marine grade grease. Further testing was completed with a Branson 125 vapor degreaser. The blends were not as efficient as TCE and nPB to remove marine grade grease in testing but were successful at removing some of the grease.

## Szuja, Natasha

### ***The Misconceptions of Satan***

I drew my research from the Oxford Study Bible, Jewish texts, books, and articles which have relevant pertinence to my topic. With my research I hope to derail the basic assumptive concepts which western culture has built around the Christian interpretation of Satan. Currently American politics are progressing in a manner that preferences Christian morals and beliefs. The general agreement on the theological nature of Satan is a fundamental Christian axiom. By revealing misconceptions on such a basic topic due the singularity of the culture that most Americans are immersed in, I hope to draw awareness to the fact that if Christians in America can be so misled about a basic theological concept within their own religion, they can begin to question what the media tells them about other religions around the world which have also been similarly portrayed in only one light or aspect.

## Talton, Hannah

### ***"Water Music" and the Gender Identity It Establishes in Vanuatu***

My mission is to research female gender roles and ethnomusicological issues relating to "Water Music" on the south Pacific island of Vanuatu. On Gaua Island women pass down the tradition of creating "Water Music," which

is composed of musical splashing sounds as well as accompanying vocal melodies. This traditional performance practice by women in Vanuatu is a unique part of their cultural identity. I plan to do a multimedia presentation including sound and video examples to showcase the Vanuatu musical environment. The Vanuatu musical identity is one brimming with historical expression.

**Turner, Savannah, Kathryn O'Neill**

### ***Evolution of the Resumé***

Based on research conducted in 1984 and 1997, work experience, education and professional objectives are most sought after by hiring professionals. In this current research, we explore whether or not the presentation of this information is equally as important as the information itself. Professionals can choose between traditional and graphic resumé. Graphic resúmes contain the same information as traditional resúmes; however, these resúmes portray the information with images, color, and more diverse layout choices. Careers and companies founded in tradition tend to only seek applicants with traditional resúmes; whereas, companies and careers seeking creativity and innovation encourage the use of graphic resúmes. Social resúmes also affect the hiring process. In certain hiring situations, employers will research a possible hire's social media accounts, including LinkedIn, Facebook, Twitter, and Pinterest, to gain further understanding of the applicant's ability to fit within the culture of the company.

**Vega, Jordan, J.B. Sumrall, E.B. Larson**

### ***Cementation History within the Silurian Carbonates of the Hiawatha National Forest, Michigan***

Refinement of the Silurian stratigraphy to outcrop scale field observations has been extremely challenging within the Hiawatha Forest (HNF) of the Upper Peninsula of Michigan. Samples were analyzed petrographically and geochemically. These data were used to delineate the Cordell Formation of the Manistique Group, and the Rockview, Rapson Creek, and Bush Bay Formations of the Engadine Group. The dolomite cements filling pores space were utilized in this research in differentiating these units. Dolomite cements were analyzed optically using cathodoluminescence microscopy (CL). Three types of cements have been observed, specific to the two groups (the Engadine and Manistique). These cements show repetitive zoning of differing colors and intensities. Bulk elemental data indicates that the Engadine differs in the amount of activators (e.g. Mn<sup>2+</sup>) and quenchers (e.g. Fe<sup>2+</sup>) from the Manistique

**Velez, Yamilex**

### ***Euthanasia and Its Lingering Impact***

Euthanasia is the decision of a terminally ill person to end their life due to agonizing pain or suffering. There are two kinds of euthanasia: passive where the doctor withdraws necessary life treatment for the individual and active euthanasia where an act is conducted to cause death. This paper focuses on the moral implications of passive involuntary euthanasia –a form of euthanasia where the end of life decision is made by the next of kin instead of the individual. These are referred to as special cases because the concept of self-determination, deciding what is best for one's self, cannot be exercised by the individual but has to be exercised by the next of kin on their behalf. I will argue that to facilitate this difficult decision for families on behalf of their loved ones, both active and passive euthanasia should be available.

**Voge, Kayla**

### ***A Dance Through Chaucer's Court***

Games are goal-oriented systems governed by rules and played by willing participants. Literary games function in the same way, with the audience acting as willing participants in a game of interpretation with the poet. Geoffrey Chaucer is a master at such literary games, and he often signals the gameful nature of his poems by changing significant details of classical works he draws from. He also manipulates certain game strategies in unconventional ways. In this paper, I will firmly argue that Chaucer blackmails or baits his audience through his narrators, thereby transforming unwilling participants into willing participants of his reading games. The goal of Chaucer's games is to figure out their meaning. When we see Chaucer's poems as literary games, we gain a new understanding of his art as well as uncovering a more comedic sense of his poems, something often lost on a 21st-century audience.

**Weaver, Briana**

### ***Texas Settlement – Deception in the German Hills***

Between 1844 and 1847, over seven thousand Germans, with dreams of a new life, crossed the Atlantic to Texas, forever altering the demographic of the Lone Star State. The Society sent two officials, Prince Carl of Solms-Braunfels and later John O. Meusebach, expecting them to oversee and maintain the colonization effort. Today, these men, especially Meusebach, are revered in New Braunfels and Fredericksburg for their participation in establishing these towns and for their management abilities. However, recent developments in my research



suggest a reevaluation of Meusebach's effort and present a man whose incompetence, neglect and arrogance assisted in the organization's bankruptcy and eventual collapse along with the countless amount of poor lost souls who perished.

**West, Amy**

***Religion in America***

For this presentation, religion in America will be the main subject matter. The presenter will later go into a detailed discussion using an in depth analysis of the way religion and politics have an impact on American Society. Further discussion will focus on religion and the American Presidency and Presidential rhetoric, as well as how the right and left perceive religion on the political spectrum. In addition, the presenter will talk about how attending a university can impact a student's religious participation during college. Although many sources were used for this research, the presentation will rely heavily on primary sources such as Presidential interviews and speeches, as well as statistical data that illustrates how Americans feel about religion in today's society.

## Poster Abstracts

**Aggarwal, Sonali**

### ***Why are North American Frogs Less Diverse than South American Ones?***

Greater diversity is seen in the tropics for a wide range of taxa. This pattern is called the latitudinal diversity gradient. Specifically, a divergence is seen in North and South American frog populations. Many theories have attempted to explain this phenomena. Such hypotheses include: the tropical and niche conservation hypotheses, the out-of-the-tropics model, and diversification rate hypothesis. The mechanism explaining this occurrence may be because of glaciation and other geological events as well. Despite these competing theories, such differences are obvious and can be difficult to understand the mechanism.

**Balluck, Preston**

### ***The Economic Ripple Effect of the Blue Bell Shutdown***

This research examines the economic ripple effect that occurred after the Blue Bell shutdown in 2015. This ripple effect had a greater effect than just a loss of ice cream, one which was felt in multiple industries. Starting with the main Blue Bell plant in Brenham and using it as the epicenter, three industries were chosen as the primary focus: the dairy industry, the oil and gas industry, and the grocery industry. Using an economic analysis will show that the shutdown of 2015 had varying financial results.

**Barragan, Ashley**

### ***Evolution of Body Plans: Why Have No New Body Phyla Evolved?***

The wonder of evolution is its diversity of form, and to this day all descriptions of diversity are classified using the term phylum. Each phylum is usually mapped to its own body plan which leads to the argument, why have no new body plans (phyla) evolved in the past 500 years. The phylum and body plans have had little to no changes, while the class- and family-level body plans have had significant changes since the Cambrian explosion. Fitness landscape provides a way of discerning the interactions between evolving potential and the evolutionary success which will be explored to give reason as to why no new adjustments have been made to the phyla body plans.

**Beene, Laura, Brandon Hollingsworth, Keven R. Kurian, Billy James, Michael James**

### ***Descriptive Comparisons Between Inpatient Incompetence to Stand Trial Populations in Forensic Hospitals***

Forensic hospitals nationwide typically do not report their state and regional population statistics, making it difficult to offer comparison of norms (Way, Dvoskin, & Steadman, 1991). Kerrville State Hospital (KSH) is the only state hospital that is exclusively forensic in its mission. As such, it has a unique population of patients that are deemed incompetent to stand trial (IST), with some patients requiring longer term care in cases where competency is unlikely to be restored. This study presents demographic data of IST patients committed to KSH before January 1st, 2015 and makes comparisons to available data from other inpatient forensic populations in the United States. Variables of interest include demographics such as age, gender, ethnicity, and primary psychiatric diagnoses. Implications for mental health practitioners and criminal justice personnel are discussed. Additionally, this study contributes to a much needed archive of descriptive information regarding forensic populations in the United States.

**Bivens, Sarah, Chris Bell, Juan D. Daza, Ph.D**

### ***Science and Humanities: The Role of Foreign Language Skills in Anatomy***

German scientific journals, many dating to the 1920's, are critical to understanding the muscular anatomy of the reptile family *Amphisbaena*, called worm-lizards. Several research projects in the Biology department regarding the anatomy of these unusual reptiles require the information in these articles to proceed. In particular, I need this information for my project, which entails the first digital dissection of jaw muscles for the *Amphisbaenids*. Little is known about the form and function of the *Amphisbaenid* jaw; specimens are rare, small in size, and restricted to areas in the Neotropics. As such, traditional destructive dissection is not suitable; instead, we are using high resolution CT scans. Each muscle is individually segmented and rendered to show its placement within the jaw using the program Amira. I will describe the placement and function of the muscles within the *Amphisbaenid* jaw in order to better understand how the group burrows and feeds.

**Blackmon, Christina, Aimee Sambrano, Ana Sanchez, Laura Flores, Tujuanna Dixon**

### ***The Importance and Use of Play in Schools***

This study was to discover whether play is being used in building relationships, the curriculum, building a caring community, learning and development, and assessment in real classrooms. Play is a key element in the growth and development of early childhood cognition. The present study explored the importance and use of play in early childhood classrooms. We compared our research with the results of twenty surveys- ten by teachers and ten by

high school students not pursuing a major in education.

**Boggs, Austin, Matthew Hudgens, Ryne Lawson, Bryan Washington**

***Preventing Sexual Harassment in the Workplace***

Our presentation will cover the basic ways to prevent sexual harassment in the workplace as well as ways on how victims can be sure that whatever the situation is that it is indeed sexual harassment. Meetings, different techniques, and consistently informing workers about this specific information will prevent a lot of cases in the workplace. Our main goal is to explain and inform on what standard procedures are effective in the prevention of harassment within the workplace.

**Boyna, Olivia**

***Blue Bell - Now the Safest Ice Cream You Can Eat?***

I intend to focus on the listeria incident with Blue Bell, the idea that it is now the safest ice cream one could eat, due to the fact that they are now the pioneers of new regulations and safety guidelines within the industry. I intend to do research into the specifics of their new practices and display them in a detailed and succinct manner.

**Bradshaw, Clayton**

***Chaucer's Response to Horace***

This presentation addresses the relationship between Chaucer's *House of Fame* and Horace's *Ars Poetica*. Many scholars see *House of Fame* as a statement of purpose and method consistent with an *ars poetica*. This project seeks to identify the direct correlations that exist between this work and *Ars Poetica*. Chaucer not only intended for *House of Fame* to declare his presence among the greats in literature, but for it to serve as his response to Horace's *Ars Poetica*.

**Burke, Jessica, Keith Fenske, Phil Urso, Marcy M. Beverly, Ph.D., Stanley F. Kelley, Ph.D., Mark Anderson, Ph.D., Jessica Leatherwood, Ph.D., Kyle Stutts, Ph.D.**

***The Effects of Olive Pomace on Weight Gain in Capris aegagrus hircus as a Model for Ruminants***

Twenty-eight Spanish influence goats were fed varying amounts of olive pomace with a protein pellet. The four test groups (n=7) consisted of a 3:1, 1:1, and 1:3 olive pomace to feed ratio (O:F) and a control containing no pomace. Over a 49-day trial, the 1:1 and 1:3 groups were the most efficient in their average daily gain (ADG), 0.1258 and 0.1020 lbs/day, respectively. The control group maintained their condition and weight throughout the trial. The 3:1 group was the least efficient, by continually losing an average of 0.0476 lbs/day starting at day 14. These results portray the 1:1 and 1:3 pomace groups are an effective additive to maintain average daily gain when compared to the control group (p>0.36), but does not have the protein content to be the main ingredient or self-sustaining ration. Olive pomace is an efficient additive at lower levels mixed with a protein supplement.

**Burns, Savannah, Emily Hillman, Madison Reid**

***Geoffrey Chaucer Challenging Medieval Traditional Roles for Women in Book of the Duchess***

Geoffrey Chaucer's *Book of the Duchess* (ca. 1368-74) is an early dream vision that was supposedly composed to commemorate the death of Blanche, Duchess of Lancaster and first wife of Chaucer's patron, John of Gaunt (third son of King Edward III). The poem as elegy, however, is problematic: for instance, it treats serious themes of love, death, and loss in a humorous way. It also portrays women in a way that was unusual for the time. Chaucer challenges the traditional gender roles for women by portraying them at an equal level as men. Alcyone, White, and Fortuna are portrayed as influential components in the story. Chaucer recognizes that women were treated as scape goats and insignificant, yet, in turn he represents them as powerful, equals, and leaders.

**Campos, Juana**

***Fashion in Western History***

Throughout the history of Texas, there have been several series of events that contributed and added the influence of fashion fads and trends in the twenties and thirties. During these conservative eras, fashion garments for men, women, and children were a representation of the quality of lifestyle and the economy. In a timeline of events where historical influences and monumental events occurred, fashion followed and became the emphasize of what the century was about. Western fashion in Texas has been one of the most evolving as it has continuously been influenced through the series of historical events that involved movements, government actions, and standards of proper attire based on their class. Implementing new job opportunities, new sports, and women being able to vote has helped create a growing urbanization within Texans that revolutionized both fashion trends and fads for women, men, and children.

## Clark, Geneva

### **The Ear Apparatus of Subterranean Worm Lizards (Squamata: Amphisbaenidae: Zygaspis)**

*Amphisbaenians* are lizards specialized in a subterranean lifestyle. Underground dwellers specialize in low frequency hearing, requiring development of a specialized ear apparatus. We studied this apparatus in 15 species using HRCT data. We sampled all species within the genus *Zygaspis*, which is our focal taxon. HRCT allows us to look into hearing apparatus organization in detail. We used Avizo to measure volumes from endocasts, and measurements from the skull, extracolumella, and stapes. We found a proportionally small extracolumella in *Rhineura*, while this structure is absent in *Bipes*. Within the genus *Zygaspis*, skull length fluctuates from 5.96 mm to 10.4 mm. We found an isometric relationship between the skull length and inner ear volume, showing a well-fit exponential curve when graphed together. The stapes also presents an isometric relationship with the skull length while the size of the extracolumella becomes proportionally smaller and more robust as the specimens increase in size.

## Crenwelge, Haley, Claudia Valle

### **Chaucer's Portrayal of the Divine Sisters, Fortuna and Fama**

In the Middle Ages, one of the most symbolic figures was the goddess Fortuna, who was usually depicted in poetry and art as spinning a wheel on which men were bound. Extremely capricious, she was believed to determine a person's good and bad fortunes. Geoffrey Chaucer refers to and includes images of this goddess in many of his works, including his early poem *Book of the Duchess*. Interestingly, in another work, *House of Fame*, he chooses not to portray Fortuna, as would have been expected, but her sister *Fama* (or Fame). In this presentation, we will compare Chaucer's use of both sisters to argue that ultimately Chaucer directs us to the goddess Fortuna, who provides a better opportunity for characters to triumph in literary texts.

## Crist, Jaren

### **The Existence of Harry Mason**

René Descartes famously said, "*Cogito Ergo Sum*" which we all know as "I think, therefore I am." George Berkeley said, "*Esse est Percipi*" or "to be is to be perceived." While Berkeley viewed real things as ideas in minds, Descartes claimed the only thing we could know was our own existence by way of the very fact that we are thinking. In this paper I take these two ideas and apply them to prove the existence of a character in a video game. Not in the sense of saying that he merely exists, but that he exists just as much as we or anything else does.

## Crouch, Amber, Diana Martell

### **A Game of Chess with Fortuna in Chaucer's Book of the Duchess**

Chaucer's dream narrative *Book of the Duchess* is a supposed elegy commemorating Blanche, Duchess of Lancaster. While its themes are love, death, and loss, it also treats a number of games, such as reading, hunting, and courtly love. It also includes a game of chess that a man (whose beloved has died) plays with the goddess Fortuna. Fortuna was known for a different game, the Wheel of Fortune, wherein people accepted her gifts (worldly goods, honors, even romantic love), knowing that they may lose them if Fortuna desired it. In this presentation, we explore the reasons why the man plays chess with Fortuna to argue that rather than Fortuna being the center of the story (as she was usually shown with her wheel), God is. As a result, we learn that the loss of worldly love should not be mourned, as investing in Fortune only triggers her game.

## Cunningham, Elizabeth, Iesha Goosby, Rachel Lechmann, Kelly Ong, Cassie Zurovec

### **The Importance of Play**

Play is one of the most crucial aspects of a child's development, yet we are seeing a decrease in the amount of play in classrooms today. Through numerous interviews with Kindergarten – 3rd grade teachers and college students, this study delves into the important role that play has on a child's developmental processes. Both groups were asked strategically chosen questions that follow along with the five guidelines for effective teaching, set by the National Association for the Education of Young Children: Caring Community, Development & Learning, Curriculum, Assessment, and Reciprocal Relationships. Through careful analysis of the teacher and student responses, as well as corresponding research from various studies we hope to rekindle an awareness of the significant impact that play has on a child's learning.

## Daniells, Gregory

### **Practicality vs. Human Life in Food Politics**

The debate between practicality and human life is prominent in food politics. This poster will focus on the philosophical principles that are being applied to the debate and argue that human life is more important than the definition of practicality in American food politics. The philosophical theory that will be used for the side of

practicality will be utilitarianism, which states that the morally right action is the action that produces the most good. One philosophical principle for the side of human life will be Kant's second categorical imperative, which states never to treat humans as a means to an end but as an end in themselves. The second philosophical principle included on the side of human life is my own philosophical principle of human potential, which states that every human has the potential to impact the world in a major way.

### **Deel, Heather**

#### ***Genetically Modified Organisms and the General Public***

Most members of the general public have their own opinion on genetically modified organisms, or GMOs. The majority of those who support them are aware of exactly what GMOs are and understand their benefits as well as their risks. It's possible that many who are afraid of GMOs do not understand what they are nor how prevalent they actually are in our everyday lives. A study of why the general public does not support GMOs can hopefully enlighten scientists about what information to present to them as a reassurance that they are indeed safe to eat.

### **Ducote, Rylea**

#### ***The Development of the Victorian Asylum***

Madness. Lunacy. Institution. These are words that were commonplace in the Victorian era. Asylums were such a prevalent part of Victorian society that they can be found in an abundance of literature from that time period. This project will discuss how there was a shift in society's view on madness which prompted positive developments in asylums that improved the treatment of patients. It will also address the existence of mental asylums in the classic Victorian novels *Jane Eyre* and *Dracula*.

### **Ellis, I'Raunce, Christina Waters**

#### ***A Comparison of Heart Rate Between Established Methods and Smart Phone Applications***

There are several established methods to measuring heart rate, among these are ECGs and chest straps. Smartphone technology has now made it possible for heart rate to be measured by using downloaded applications. This research study is being conducted to compare the accuracy of two popular smart phone applications that measure heart rate to the established heart rate measuring methods (ECGs and chest straps). Research participants will complete moderately intense aerobic exercises at no more than 76% of estimated maximum heart rate while connected to a 4-lead ECG; wearing a chest strap; or wearing a fitness bracelet. The exercise session will consist of a 5 minute warm up followed by 15 minutes of moderate exercise using an elliptical. Every 30 seconds the heart rate will be measured using the two smart phone applications. Data from all sources will be analyzed for accuracy and statistical significance.

### **Fakhri, Christiana**

#### ***Jaw-musculature in Primates as an Effect of Evolutionary Dynamics Driven by Changing Dietary Habits***

This study is a comparative analysis of mastication apparatuses in stem primate specimens. With the rise of anthropoid primates, diet diversified among taxa—some specializing on foliage, others on fruit. I hypothesize that size and orientation of muscle fascicles relates to the dietary preferences observed in primate specimens. My alternative hypothesis is that variation is present and correlates with dietary preference. I plan to quantify the variation in muscle fiber length and orientation of the masseter muscle between representative primate specimens—*Callithrix pygmaea*, *Lemur catta*, *Saimiri boliviensis*, *Saguinus oedipus*, and *Pan troglodytes*. Specimens collected from the Houston Zoo were processed at Sam Houston State University and CT imaged at the University of Texas. The scans were segmented using Aviso 6.2 and rendered into models. This study could substantiate evolutionary lineages and indicate adaptive radiation patterns by providing a greater understanding of how dietary habits influenced the evolution of primate anatomy.

### **Falgout, Rachael, Addie Goodson, Madison Schiafo, Elise Yenne, Monique Sledd, John Manning, Cindy Mena, Christopher Missimo, Mia Ricardo, Danielle Langemeier**

#### ***Drinking and Physical Activity***

We will be reporting on the significant effects of alcohol use and physical activity in a college age population. Our presentation will be a brief overview of the studies conducted by Dr. Henderson and the Doctoral Students in the Clinical Psychology department. Each of these studies covers a different aspect of the relationship between drinking, exercise, and the impact each has on the average participant's life. Specifically, these studies examine the behavioral compensations, decisional balance (studying motivation and obligation) and indicators of any particular relationship between physical exercise and drinking. We gathered the data through motion monitoring devices (behavioral economic study), personal surveys (decisional balance study, behavioral economic), and daily monitoring of alcohol intake. The findings so far show a conclusive link between the amount of alcohol consumed and the amount of time spent doing physical activity, but the relationship is determined by the participant-



depending on motivations and obligations.

### **Finley, Natalie**

#### ***Healthcare in Zimbabwe***

Any improvement in the healthcare of the Zimbabwean people can only occur with a deeper understanding of its diverse culture. Current and future healthcare resources cannot be effectively utilized until it is adapted to the worldview of African culture, rather than Western culture. The many cultures and lifeways enveloped by Zimbabwe must all be considered as they are further diversified as education, urbanization, and political unrest are factored in. I interviewed and spoke with local people in schools, factories, mines, community centers, hospitals, orphanages, and rural clinics in Bulawayo, Limpopo, Victoria Falls, and Matopos. I then synthesized this information using Leininger's Sunrise Model of Culturally Competent Care. These conversations revealed commonalities in the core cultural values, superstition and taboos deeply embedded in daily life, and starkly contrasting political views among races.

### **French, Corbett, Annie B. Leonard**

#### ***Understanding Community Interactions in a Fish Model of Mucosal Microbiomes***

Microbiomes are complex communities that have major effects on the host organism's health. Typically, when external bacteria are introduced, they fail to colonize or are outcompeted. This suggests specific control of community members, which likely comes from both host factors and the microbial members themselves. To better understand member interactions, we use a fish (*Gambusia affinis*) skin mucosal layer as a model. *Acinetobacter* is a native organism often found as one of the dominant genera in the skin microbiome. To determine microbiota persistence of *Acinetobacter*, fish are exposed to high concentrations in the water. The microbiome is extracted and bacteria quantified using selective, differential media. We predict that the native organism will persist at a higher rate than what is normally found in the microbiome. This model system should allow future explorations of microbiome community selection, and understanding the interactions with other genera present.

### **Ferichs, Nicholas, Christopher Garcia, Dallas Haney, Matthew Mcadoo**

#### ***Can Behavior Based Safety Help Create Improved Work Environment***

BBS is Behavior Based Safety. We researched the effect of this practice and how it can make the workplace safer, and also looked into our own personal work histories. We chose this particular practice because the only way to accomplish perfect safety culture is if the workers themselves believe in the importance of safety. We found that if BBS is practiced completely the workplace would be an overall safer place, bringing injuries down to a micro-level.

### **Garza, Alondra, Cortney Franklin**

#### ***Exploring Responses to Sexual Assault Disclosure***

The aftermath of sexual assault requires further insight concerning the responses expressed by those to whom victims disclose, specifically when assault or victim attributes might impact the type of responses provided to victims upon disclosure. The current study uses a sample of surveys administered to undergraduate students at a mid-sized public university geographically located in the south to assess subject responses to a rape disclosure vignette. Four vignettes are presented to subjects with type of rape (stranger vs. acquaintance) and victim race manipulated. Future implications for research and policy will be discussed.

### **Gauvey, Kaitlyn, Jean Sumrall**

#### ***Geochemical Analysis of Calcarenite and Carbonate Paleosol Deposits from Eleuthera, The Bahamas***

This study examines the geochemical signature and Insoluble materials of paleosols, ancient soils, on Eleuthera, The Bahamas. Paleosols play an important role in the differentiation between episodes of carbonate deposition and exposure on carbonate platforms, such as The Bahamas. However, paleosols can be misinterpreted and lead to errors in the interpretation of the geologic record. Two distinct paleosols were identified on Eleuthera: terra-rossa paleosols and calcarenite protosols. Utilizing ICP-AES on samples from multiple stratigraphic units developed a geochemical signature for Holocene and Pleistocene carbonates. XRD analysis of two paleosol samples were analyzed for bulk and clay mineralogy. Insoluble material was concentrated by chemical treatments and centrifuged to separate by size fraction. These geochemical and mineralogic data are the first performed on the carbonates of Eleuthera.

### **Gomer, Britney**

#### ***The Extinction of Megafauna in North America***

During the Late Quaternary period, North America saw an extinction event that greatly affected many of the large terrestrial vertebrates, also known as the Megafauna. One proposed idea for this extinction event is climate/



environmental change. The last glacial period, or Ice Age, that occurred towards the end of the Pleistocene era, greatly changed the vegetation and habitat of many species at the time. Those not adapted to lower plant diversity could not survive these harsh conditions. The other hypothesis proposed is the “overkill hypothesis.” This claims that the increase of human hunting resulted in extinction of animals who breed slowly and could not maintain population numbers. While other hypotheses have been posed, these two ideas are heavily debated among researchers and it is possible that a combination of both is what caused the extinction of many species of large animals.

**Gomez, Javier**

### ***Is the Cambrian Explosion Real?***

The Cambrian explosion is categorized as an event (about 541 mya and 530 mya) that caused the emergence of major groups of today’s extant phyla (Marshall 2006). In this period, many successful phyla were already starting to emerge and differentiate, and one of the traits that marked this period was the appearance of hard body parts; these hard anatomies were crucial because they were “better” at leaving fossils (Marshall 2006). Many factors and scenarios were already presented and discussed about the Cambrian explosion and whether the scenario was met for different organisms to start differentiating and changing due to the wide variety of possible and available niches (Zhang et al., 2014). Possibly different phyla were already present to some extent, but the fossils are not yet discovered, giving the Cambrian explosion its novelty. This paper focuses on the gathered data to assert whether the Cambrian explosion is real.

**Gordon, Emily**

### ***The American Diet***

Rates of obesity are rising exponentially in America. Various elements as to why have been analyzed. From attacking carbohydrates to fats, many different fad diets have been created with the purpose of losing weight. It’s important to look at every aspect of the diet and to pay close attention to more than simple nutrition facts given on a package. Many foods that are labeled as healthy actually contain many hidden unhealthy ingredients. It’s crucial to learn how to properly read packages and know exactly what is being consumed. From added sugar to preservatives, people need to be more aware of what they are ingesting and if it is beneficial.

**Harris, Michelle**

### ***The Lion’s Share: A Spatial Analysis of the Invasive Red Lionfish, *Pterois volitans****

This poster depicts a spatial analysis of the exponential presence of the invasive red lionfish in the gulf and Atlantic. The primary focus is to relate physical and natural factors to the success and reproduction of the species that was introduced in 1992, and to determine which geographical factors serve as catalysts for their ecological success. With the use of ArcGIS, reported sightings will be monitored over a span of 25 years to draw spatial patterns in their continued growth in relation to their surrounding environment and native habitat range, including factors such as reported depth, size, reef proximity, and environmental influence. This project has a prospective completion date of November, 2016.

**Hedrick, Destinee, William Howard**

### ***ASEEN: Energizing Teachers***

The Agriculture Sustainable Energy Education Network (ASEEN) is a three year project at Sam Houston State University. ASEEN is sponsored by the United States Department of Agriculture to promote the use of renewable energy resources targeting K-12 students. Between the grades of kindergarten and twelfth grade. The goal of the project was to offer workshops to 25 teachers from Independent School Districts each year. Teachers were offered workshops by the SHSU faculty and Industrial Advisory Board members. Teachers were involved in training using experimental kits. Over the span of three years, seventy-five teachers participated workshops. Consequently, project team asked for a year of extension to visit teachers to conduct post-project surveys by visiting teachers and their students. During visits, students were offered energy related workshops. ASEEN had reached over 750 students to promote the growing industry of renewable energies. ASEEN helps to energize students and teachers’ interest in renewable energies.

**Hernandez, Antonio, Steven Hicks, Brittany Morrison**

### ***Resistant Employees***

The main focus of this presentation is to show how to handle employees that are resistant to the change in the company or workplace. We will show what steps that can help from the manager/ supervisor point of view. For instance; the relationship between employer and employee have a drastic effect on how the employees will accept or resist the change. Also we will discuss the perception of the employee and what goes through their mind when a change is presented and why they resist to modify their way of working.

**Ibarra, Diego, Helen Wakefield**

***One, Dos, Trois: Bilingual Proficiency and the Acquisition of a Third Language***

Factors such as age, motivation, personality, and aptitude have been shown to influence success in foreign language learning. There are, however, few studies focusing on whether native-like fluency in two or more languages helps in the learning of an additional language. Using questionnaire data from four hundred students in language classes at Sam Houston State University and the University of Texas at Austin we explore whether bilinguals have an advantage over monolinguals in the task of language learning. Here, we present the background research, discussing factors that have been established to be a part of an ideal language learning experience.

**Johnston, Victor, Devin Gilmore, Poojan Bhandari**

***Observing Transiting Exoplanets***

This study on Exoplanets will show some of the basics for those wishing to gain an understanding in observational astronomy as well as data processing using professional software. Transiting exoplanets are planets that eclipse their host star and are visible from Earth. This study records images of these eclipses and measures the effect they have on the light coming from their host star. We will show some of the techniques used to correct for errors that are inherent in observational astronomy such as light pollution and the effects of the atmosphere. Finally, results of the observations will be shown and their meaning discussed

**Jordan, Miranda, Jonathan Sumrall, Ph.D**

***Denudation Rates of Eleuthera Carbonates***

Samples from three eolian dunes were gathered and compared to determine primary denudation rates and paleoclimate on the island of Eleuthera. The samples were analyzed for pore space, grain sizes, grain shapes, carbon dates, and denudation rates were calculated using field measurements and laboratory experiments. It was determined through carbon dating that the age of the oldest dune was 7,004 years old and the youngest portion of the youngest dune was 4,581 years old. Both dunes fall within the Holocene, yet there is a gap of over 2,400 years. Using field measurements and carbon dating, the calculated denudation rate is 76 centimeters every thousand years on the South Point Dune. Based on these data, the dominant wind direction was westerly. The denudation that has occurred on both dunes will open further research into how paleoclimate altered the carbonate topography within The Bahamas.

**Koehl, Savannah, Doug Ullrich, Ph.D, Shyam Nair, Ph.D, Dwayne Pavelock, Ph.D**

***Is Success in Leadership Development Events Simply a Numbers Game?***

Texas FFA chapter membership in Texas varies from 30 members to more than 800 members, yet these chapters compete against all others regardless of their membership numbers. The Texas FFA State Leadership Development Events include 13 events in areas such as parliamentary procedure, and FFA knowledge. Researchers examined whether chapters with larger memberships or more teachers experienced more success at the state competition. Chapters with two teachers had the largest percentage of qualifiers, finalists, and top 5 placings, but chapters with three teachers had the most state winners. Regarding membership levels, chapters with 101-200 members comprised the largest percentage of qualifiers and finalists, but chapters with 201-300 members achieved the most top 5 placings; however, the 101-200 member chapters fielded more than half of the state winning teams. Only one winning team came from each of these: 51-100 members, 301-400 members, more than 400 members.

**Kralman, Kelsey, Christopher Schalk**

***Can Species Morphology Help Predict Invasions of Ecological Communities?: A Test Using Native and Non-native Anuran Species in the Chihuahuan Desert***

Morphological approaches have been used extensively to understand patterns of organization of ecological communities. Morphology reflects an organism's niche, allowing inferences to be made on its ecology. A species' morphology has been used to predict the space occupied by biological invaders in a community. Here we examined the morphological diversity of six native and two non-native frog species (*Hyla cinerea* [Family Hylidae] and *Lithobates catesbeianus* [Family Ranidae]) inhabiting a Chihuahuan Desert wetland in Big Bend National Park, Texas. A Principal component analysis (PCA) separated native vs non-native species along a morphological gradient associated with habitat affinities and diet. Our findings suggest that the success of these two non-native frog species may be attributed to their ability to exploit niche space that was previously unoccupied by the native frog community.

**Krob, Rebekah, Kayla MacCurdy, Jennifer Rawley, Kaleigh Wood**

***The Impact of Differentiated Instruction Within the Student-Centered Classroom***

A qualitative research study was conducted to determine if the use of differentiated instruction within the classroom correlates with the five NAEYC guidelines. Ten undergraduate students and ten pre-K, K, 1st, 2nd,

and 3rd grade teachers were interviewed to determine if and how they used differentiated instruction within their own classrooms. Our research indicates that the use of differentiated instruction directly affected the learning and environment within a classroom. Those who used it, or experienced it, tended to report a better learning environment and educational outcome.

### **Leard, Raynie**

#### ***The Effects of Immigration on Children***

Every day, children from Mexico and Central America, in hopes of reuniting with their mothers who have journeyed abroad for work, travel alone atop speeding trains, smacking into branches, and encounter gangs who brutally beat them and patrol men who send them all the way back to their home countries. This research, inspired by *Enrique's Journey*, explored both the benefits and risks of child immigration and questioned if the consequences are worth the end result of finding their mother. Despite the risks of illegal youth immigration, I concluded the psychological benefits of the journey are worth the challenges.

### **Lewis, Kristina**

#### ***Metals, Words, and Authority: The Ekphrastic Game in Geoffrey Chaucer's House of Fame***

In *House of Fame*, Geoffrey Chaucer employs the literary device of ekphrasis, defined by James Heffernan as "a verbal representation of a visual representation." Chaucer's use of this device is two-fold: to accurately represent Fame's house, while simultaneously to challenge the Roman poet Virgil (his major source) to a game of poetic skill. Chaucer initiates this ekphrastic game through his description of the metals used to create Fame's house with Virgil's description of his hero Aeneas' (metal) shield. This game, I argue, is played through the metals each poet describes, which ultimately leads the audience to Ovid's "Four Ages of Man," all described as metals. As a result, I conclude, Chaucer effectively melds Virgil's and Ovid's great works into his own, thereby creating his own authority.

### **Luk Bounsawat, Stephanie**

#### ***Doing Business in Texas***

In support of the increasing interest of surviving the Blue Bell famine, this poster will reflect the decisions in marketing and product allocation to different market subdivisions in a strategic manner. This visual presentation will present interval data points on the effects of business regulations to the prosperity of a local entrepreneur opening and running a small to medium-sized company. It will include the process of keeping track on the changes in regulations and corresponding effect in the life cycle of Blue Bell Creameries. However, this report will not predict the incoming charges and regulations after the Blue Bell listeria crisis.

### **Mansfield, Adam, Alexis Farmer, Hyuk Cho**

#### ***Evolution of Aurora Kinase Gene Family in Eukaryotes***

*Aurora kinase* belongs to a protein kinase family that plays a major role in cell division and has implications in tumorigenesis. It is associated with centrosome maturation and separation, spindle assembly and the mitotic spindle formation. The current study was designed to analyze the sequence divergence and selective constraint of the protein among model eukaryotic organisms. Results revealed a high conservation of the protein across various lineages as shown by a heat map and a phylogenetic tree analysis. Also, there was shown to be high conservation in the protein core, while there was less functional constraint in both the carboxy and amino termini. The understanding of the functional constraint of the protein among model species will help identify targets for coordinated cell cycle regulation and novel cancer therapies.

### **Menyauh, Agom**

#### ***The Truths about Wild Caught Salmon***

I will be speaking on my research about the commodity wild caught salmon. And the sociological problems and solutions on the commodity.

### **Mesa, Sarai, Lauren Rudie, Sarah Bivens, Juan D. Daza**

#### ***Variation in Mandibular Anatomy of Zygaspis based on X-ray Computed Tomography***

*Amphisbaenians* are a poorly known clade of legless reptiles that possess distinctive head shapes which correlate to their function as digging organs. However, the role of the jaw in burrowing is unclear. To better understand how the jaw may play a role in locomotion, we undertook a study of variation in the mandibular joint of the South African genus *Zygaspis*. Specimens of *Z. vandami*, *Z. violacea*, *Z. kafuensis*, and *Z. quadrifrons* were borrowed and scanned using high-resolution X-ray computed tomography at the CT lab at the University of Texas in Austin. Scans of each element were studied using the computer program Amira 5.6.0. Individual bones of the jaws were isolated, three dimensionally rendered, and compared for morphological variation in relative size of the elements. Results will

ultimately be helpful for a better definition of how the jaw varies interspecifically in this group and its role in moving through sediment.

**Miller, Abigail, Chris Johlle**

#### **Mathematical Modeling of the ANWR Ecosystem**

*Grus americana* (Whooping Crane) is an endangered species of birds which overwinter in Texas at the Aransas National Wildlife Refuge (ANWR). Modeling the ecosystem that the birds inhabit is important to establish a sense of sustainability of the resources available to the flock as well as the crane population itself. Specifically, a population model for blue crabs and a model of the hydrological conditions along the coast were created to help predict the environment for the returning migratory flock.

**Motlagh, Shyon**

#### **Why Haven't More Invertebrates Evolved Flight?**

Birds, bats, and some modified animals that are able to glide in the air seem to rule the airways. However, most people seem to forget the major contributor of flight in the animal kingdom, invertebrates. This poster looks at the arthropod fossil record and the evolutionary changes from early insects to insects today that have the ability of flight, as well as a comparison of present flightless invertebrates. Also, different ecologies of insects provide a good source for the insects' evolutionary energetics, mechanics, and allocation of resources that are used for flight. When looking at these ecological costs, arthropods have developed a system of tradeoffs in order to increase maximum output and production of flight. Moreover, body length, size and symmetry show to be an important factor when looking at flight potential. In conclusion, this poster will show many possibilities to why many invertebrates haven't evolved the capability for flight.

**Nowicki, Matthew, Cameron Currier, Syukri Aviscenna**

#### **An Investigation of Magnetic Grain Sizes in Marine Sediments Cored at Site U1387 Off the Margin of Spain and Portugal**

Integrated Ocean Drilling Program Expedition 339 cored sites along the Iberian Margin to investigate the paleoclimatic influence of discharge of the warm and salty Mediterranean Outflow Water (MOW) into the Atlantic Ocean. As the MOW current flows out of the Straights of Gibraltar and along the Iberian Peninsula, it deposits sediments, which have accumulated over the past 5 million years into thick sedimentary sections. The strength of the MOW current through time can be reconstructed using proxy data such as changes in sediment grain size. We use the magnetic susceptibility of the samples from drill cores collected at Site U1387 to estimate how magnetic grain size changes through time. In particular, we determine the concentration of magnetic grains that are superparamagnetic, which are super small grains with diameters less than about 30 nanometers. Variations in the concentrations of these particles may provide insights into past environmental changes.

**Nwosuocha, Daniel**

#### **Coral Bleaching: Causes and Consequences with Emphasis on The Effect of Climate Change**

The aim of this research was to investigate the causes of coral bleaching and degradation, and the role of climate change in it. Also considered, is the long term consequences that may arise from coral bleaching, these consequences may be biological or economic in some situations. In this study, it was found that some causes of coral bleaching include fluctuations in sea surface temperature [SST], ocean acidification, increase in atmospheric CO<sub>2</sub>, and human actions like pollution of the ocean. However, the main driver of coral bleaching is climate change which, increase in CO<sub>2</sub> and global warming can be said to be part of. The average global temperature and CO<sub>2</sub> increase is used to analyze the bleaching event in progress now. It is found that at the rate of climate change which causes these mass bleaching events, about 60% of the world's corals would be lost in 30 years.

**Obkirchner, Caroline, Hannah Johnson**

#### **A Clean Purple Sweep: Gold Bioremediation Using *Rhodobacter sphaeroides***

Heavy metal contamination is a worldwide problem that can be handled with the use of bioremediation using microorganisms, including *Rhodobacter sphaeroides*. *R. sphaeroides* has a wide range of metabolic capabilities, and has shown a tolerance to gold contaminated conditions. A series of growth kinetics and colony forming units (CFU) were analyzed to determine if the survival is due to mutant-selection or to cellular adaptation mechanism. Localization of the gold will determine if the metal is metabolized within the cellular membrane or the cytoplasm. This characterization allows the utilization of the bacterium to clean up gold contaminated environments, including gold mines.



**Paez, Laura, Lauren R. Smith, Joseph F. Petrosino, Sibyl R. Bucheli**

***Study of Shifting Oral and Fecal Skin Bacterial Communities During Human Cadaver Decomposition in Southeast Texas***

Decomposition is a dynamic process whereby features of a cadaver change in a relatively predictable pattern over time. Cadavers decompose, through major stages leading from wet decomposition (fresh, bloat) to dry decomposition (decay, mummification, and/or skeletonization). Little is known about bacterial succession during decomposition. To investigate community structure of the skin, human cadavers were placed outdoors to decompose under natural conditions at the Southeast Texas Applied Forensic Science (STAFS) facility at the Center for Biological Field Studies (CBSF), Sam Houston State University, Huntsville, Texas. The skin of 14 cadavers was sampled by swabbing the fecal and oral sites through the stages of decomposition. Sample processing was sequenced following protocols benchmarked as part of the Human Microbiome Project. Samples were grouped according to site, cadaver of origin, and accumulated degree hours. Initial results suggest different trends of microbial communities before and after the purge stages of decomposition.

**Patterson, Kaitlin**

***Living Arrangements for the Elderly***

Descriptive study.

**Pinard, John**

***What Really Went Wrong with Blue Bell?***

Eating Blue Bell ice cream has been a past-time for most Texans and more recently for all Americans. This delightful summer treat comes in many shapes, sizes and flavors making it keen to all taste buds; unfortunately, that taste became sour. Blue Bell's recall and shut down of all their manufacturing plants is debatably the most widespread food borne disease outbreak of the decade. How did this small town creamery go from a pleasant house-hold name to the dupe of the food industry? This article addresses the public health and medicine aspect of the now-famed Blue Bell Creameries Listeria outbreak.

**Pospisil, Brenna**

***Corporate Influence on Health Standards and Public Opinion***

Major food and beverage corporations play a significant role in public opinion and health standards through the use of monetary influence on the individuals who create and publish research and scientific data. This presentation takes a look at one global company, Coca-Cola, and its attempts to sway scientific research regarding the link between sugar and disease. This also includes a preview of Coca-Cola's monetary contributions to a variety of health and medical organizations and how it directly impacts consumer perception of products.

**Ramos, Mallory, Jordan Vega, Allison Quiroga, Isaac Burton, Erik Lawson**

***Using Magnetic Susceptibility and Stable Isotopes to Correlate Outcrops of the Engadine Group within the Hiawatha National Forest of the Upper Peninsula, MI***

A total of 48 samples were collected from various locations throughout the in the Hiawatha National Forest in an effort to correlate stratigraphic framework of the Engadine Group of the middle Silurian. Samples were analyzed for magnetic susceptibility and stable isotopes to determine if a correlation between sites exists using these parameters. Overall, there is a lack of research in this area, especially dealing with the formation of karst features on these dolostones. Changes in magnetic susceptibility can correlate with changes in sedimentary provenance and geochemical changes. Stable carbon and oxygen isotopes were also used in conjunction with magnetic susceptibility to correlate and differentiate stratigraphy. This information can be used to correlate stratigraphy of similarly aged rocks in the Hiawatha National Forest. Finally, the trends derived will be used to determine the stratigraphic identity of unknown outcroppings and boulder fields within the Hiawatha Nation Forest.

**Rangel, Gabriela**

***Industrialization and Immigration, Chicago, IL (1870-1920)***

In the time period between 1870 and 1920, there was a surge of people speaking of the abundance of labor in the U.S. due to industrialization. Industrialization in America came from several different factors some of which include the manufacturing of textiles, the invention of the light bulb, and the expansion of rail roads. Immigrants found much labor, specifically in Chicago, Illinois. Immigrants' hard work ethics and ability to endure harsh labor conditions that led to regulations in the U.S. workforce led to the increase of wealth in Chicago and as a whole, in the United States of America.

**Resch, Elizabeth, Erin Wiggins**

***Building a Dream World: Symbols of Instability in Chaucer's Book of the Duchess and The House of Fame***

Geoffrey Chaucer's *Book of the Duchess* and *House of Fame* are dream visions that describe buildings constructed with insubstantial materials. *Book of the Duchess* includes a bright dream chamber studded with windows, while *House of Fame* has a temple made of stained glass and a palace on a mountain of ice on which is etched the names of famous authors. Curiously, these structures all depict the classical tale of the fall of Troy. In this presentation, we will argue that Chaucer tells the story of Troy by employing the *translatio studii et imperii* topos, a literary device that connects one culture with its own so as to gain more authority as a major power. We argue that the instability of these structures to tell this famous story allows the audience to recognize Chaucer's process behind *translatio*.

**Robinson, Jaclyn, L. A. Wolfskill, Shyam S. Nair**

***The Effects of Team Instruction on Scores in a Team-Based Learning Course***

One of the characteristics of Team Based Learning (TBL) is the Readiness Assurance Process, which consists of readiness assessment tests (RAT), both individual (iRAT) and team (tRAT). Several studies have shown that scores on the tRAT are consistently higher than iRAT scores. There is, however, limited information regarding the effect of post-RAT instruction on concepts that students failed to comprehend, and the impact on hourly exams taken both individually and as a team. Data from Principles of Agricultural Economics, a lower-division undergraduate course taught using TBL, was collected and analyzed using t-tests. Results showed that average individual and team scores on hourly exams post-RAT and post-instruction were significantly higher than those earned on iRATs and tRATs, respectively ( $p < 0.0001$ ). Additionally, standard deviation between individual and team scores narrowed. Apparently, TBL improved student learning based on improved exam scores.

**Rodriguez, Veronica, Wanji, Banda, Berra Koskulu, Hannah Johnson**

***Effect of UV Exposure on recA Mutant of Rhodobacter sphaeroides***

RecA regulates the SOS response, a UV induced DNA damage-repair system in bacteria. *Rhodobacter sphaeroides* is a model organism for studying the SOS response, since it is found in diverse environment including a niche with high UV radiation. This current study examines the effect of UV exposure to both wild type and recA mutant strains. Results exhibit the severe effect of an increasing dosage of UV radiation on the cell survival and the extent of DNA damage. However, both strains do not show any difference in colony morphology when grown under different growth conditions.

**Rudie, Lauren, Sarai Mesa, Juan D. Daza**

***The First Record of Wormian Bones in Lizards***

Wormian bones, sometimes referred to as supernumerary bones, are accessory bones found between the elements that create the cranial sutures. Their formation has been suggested as being driven by both genetic and environmental factors. Wormian bones have been discovered in various mammals, notably in humans and chimpanzees. In this study we evaluated the presence of wormian bones in the lizard genus *Zygaspis*. The cranial anatomy of six species within the genus *Zygaspis* (*Z. kafuensis*, *Z. vandami*, *Z. violacea*, *Z. quadrifrons*, *Z. niger*, and *Z. ferox*) were examined for the presence of wormian bones. We used high resolution 3-D models of the skull generated with the computer software Amira 6.0 to isolate and view the bones. We found three wormian bones in the interdigitated frontoparietal suture of *Z. kafuensis*. This is the first known record of wormian bones in lizards.

**Schackelford, Angela**

***Analysis of Monotheistic Religions and Their Afterlives***

My area of focus is centered around the idea of the afterlife within monotheistic religions. In order to narrow down this idea, I will be looking at the Qu'ran, the Hebrew Bible, and the Bible to discover what believers of each text have to look forward to after death. Although Jews, Christians, and Muslims show their devotion to faith in similar ways (i.e. prayer, fasts, and regularly scheduled worship), the afterlives which believers have to look forward to are markedly different. Through my presentation, I will display a visual representation of the afterlives promised in each sacred text.

**Sides, Kristen, Jeanne Sumrall**

***Petrographic Analysis of Bahamian Paleosols***

This study examines paleosol deposits on Eleuthera, The Bahamas. Paleosols, ancient soils, are a common topographic feature found on carbonate platforms, however, the amount of research conducted on paleosols in The Bahamas has been marginal. These paleosols at first sight appear to be poorly cemented and highly porous in the field, however, petrographic analyses reveal lower porosity values. Point counts indicate that most, if not all, samples had low porosity (never exceeding 9%). These paleosols are fairly well cemented (sometimes with as



much as 33% cement). Two types of paleosols have been identified on Eleuthera. Type 1 are paleosols with higher to equal amounts of insoluble material, such as iron oxides, and allochems. Type 2 are paleosols with significantly more allochems than there are iron oxide. These two types of paleosols represent a similar diagenetic process in a slightly different stratigraphic location.

### **Stallard, Catherine**

#### ***Transient Depersonalization-Derealization: a Neuroscientific Review***

Transient depersonalization-derealization episodes are a fascinating topic as a clinical phenomenon. Past studies have discussed the neurobiology of chronic depersonalization-derealization disorder but have yet to focus on more common transient episodes of the disorder. This poster includes a review of the neurobiological function of transient depersonalization-derealization episodes and provides a model of cognitive control. This model describes levels of cognitive control and illustrates the function of transient depersonalization-derealization episodes that flow through a fully-conscious base level, through an unconscious level, a partial conscious level, and ending in a fully-conscious level again. This model aims to suggest potential therapeutic applications as a result of the current study.

### **Stephens, Allison, Dr. Justin Williams, Dr. Donovan Haines**

#### ***Characterization of the Apocynaceae Family for the Presence of Bioactive Compounds***

Various plants in the *Apocynaceae* family are known to contain compounds that are effective chemotherapeutic agents. Many plants in this family are yet to be investigated for their potential bioactive compounds. In this project, crude extracts were prepared from various plants in the *Apocynaceae* family, and those extracts were tested for their alkaloid content. The *Vinca major* extracts were confirmed for the presence of alkaloids. In addition, a potato disc assay was developed to test for bioactivity of the compounds, as well as their potential for use in chemotherapy. Various experimental conditions were modified in order to facilitate the induction of tumors by *Agrobacterium tumefaciens*, a key step in the potato disc assay. Here, we report on the success of those modifications.

### **Stickley, Morgan**

#### ***Brenham and Blue Bell***

The influence that Blue Bell has on Brenham has shaped the way the people in the town reacted (positively) to the outbreak. I was also hoping to interview a few residents of Brenham and possibly employees of Blue Bell. I have lived in Brenham my whole life, and I think it is amazing how the reactions of people who live in Brenham differ so greatly from those who don't and have an objective view on the subject.

### **Sutrisno, Melissa, Gabreal Geleta, Hannah Johnson**

#### ***Incorporating Classroom Research to Clarify Common Misconceptions in Genetics***

Several genetic traits are polymorphic and display alternate or multiple phenotypes. A common misconception in the genetics class is all wild type phenotypes are dominant. The term "wild type" refers to the most frequent phenotype observed in a natural population. We have examined thirteen traits from 63 students, which were further divided by sex and ethnic groups. The null hypotheses were analyzed using chi-square tests. Results revealed that the wild types are represented by either dominant or recessive phenotype. While five of these traits are frequently common, and therefore both dominant and recessive phenotypes represent as wildtype.

### **Tones, Connor**

#### ***The Blue Bell Incident, and Why the FDA Needs Money***

The recent tragedy behind the Blue Bell incident, and how this is a much more serious issue for the entirety of the food industry, not just Texas. The basis of the food issue stems from the fact that we have been so lax in how we handle the enforcement of food safety practices. The poster will spell out the entirety of the issues with the FDA's issues with being understaffed, and the enforcement of food policies in general, while referencing parallels with the incident at Blue Bell. The purpose of this poster is to ensure the audience that there is a way to stop all of these horrible outbreaks from taking over, and it starts with stricter enforcement of food safety practices.

### **Williams, Asia**

#### ***"Wash My What?"***

"Wash My What?" We always see the signs imploring employees to wash their hands each time before leaving the restroom, but do we as civilians take the initiative to do the same? We demand cleanliness from the establishments we dine at, but do we maintain those levels of sanitation in our own homes? It is expected for those in the food preparation industry to handle their work with the utmost of care from personal hygiene to the actual preparing of the food before cooking, during and after. Do you?

**Yates, Danica Brett**

***Vietnam POW/MIA Awareness***

During the Vietnam War, many campaigns arose to bring prisoners of war and missing in action military personnel to the attention of the American people. These campaigns were started by college students and military family members as a way to inspire action to bring the men home, and to remember the men who would never see their beloved country or family again. The POW/MIA Bracelet Campaign and the POW/MIA flag were both avenues used to increase awareness that men were left in Southeast Asia after the end of the Vietnam War in 1973. In a time when many people wanted to forget about a war that was not heavily supported by the United States' population, these campaigns kept the men who were left behind by their country in the news and in eyesight. Media sources, like movies, were used to keep the POW/MIA awareness movement alive well into the 1980s.



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

John Alford

Kay Angrove

Kimberly Bell

Tracy Bilsing

Chelcy Brumlow

Dawn Burns

Zechariah Carroll

Ching-In Chen

Paul Child

Madhusudan Choudhary

Tami Cook

Carolyn Dachinger

Zachary Doleshal

Danielle Fails

Page Glave

Helena Halmari

Maria Holmes

Kelsey Jenkins

Hannah Johnson

William Kerr

Keli King

Elizabeth Lasley

Justin Levy

Patrick Lewis

Carroll Nardone

John Newbold

Tim Pannkuk

Jason Payton

Zachary Pierce

Todd Primm

Osama Qureshi

Mary Ruble

Cyrus Sadeghian Sadeghian

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