



Tuesday, April 15, 2025

Centenary College of Louisiana Campus

Mickle Hall • Kilpatrick Auditorium • Whited Room

8:20 am - 4:45 pm

**33rd Annual
Centenary College Academic Research Conference
Tuesday, April 15, 2025**

Each year Centenary students and faculty present their best works of exploration and invention at our annual Research Conference. A community event for over 30 years, the Research Conference is modeled on long-standing academic traditions of conference-based information sharing and feedback.

The 2025 Research Conference is sponsored by the Bicentennial Committee, the Office of the Provost, Campus Activities Board, and the Student Government Association.

This year's Research Conference was organized by Dr. Scott Chirhart (Biology), Dr. Jessica Alexander (Psychology), Dr. Amanda Donahoe (Political Science), Dr. Chrissy Martin (English), and Dr. Kyra Rietveld (Art). Special thanks to Jeremy Johnson for his graphic design skills, Candace Metoyer for her web skills, and to Connie Whittington for her unwavering support of our students and faculty.

Generous thanks to all our judges of oral presentations and posters. We could not accomplish this conference without the work and support of the entire Centenary community from mentoring student research to printing programs to moderating and judging sessions. Thank you all!

Winners from this year's Research Conference will be presented with awards at the Annual Honors Convocation on May 2 at 5:15 pm in Brown Chapel.

QUICK VIEW

Oral Presentation Sessions

8:20-9:20 SESSION 1

- 1A. Natural Sciences Oral Presentations (Mickle 114)**
- 1B. Art and Writing for the Community Panel (Kilpatrick)**
- 1C. English Panel (Whited Room)**

9:30-10:50 SESSION 2

- 2A. Social Sciences Oral Presentations (Mickle 114)**
- 2B. Student Managed Fund Panel (Kilpatrick)**
- 2C. Arts and Humanities Oral Presentations (Whited Room)**

11-12 Keynote (Whited Room)

12:45-2 SESSION 3

- 3A. Social Sciences Oral Presentations (Mickle 114)**
- 3B. History Panel (Kilpatrick)**
- 3C. Arts and Humanities Oral Presentations (Whited Room)**

2:15-3:15 SESSION 4

- 4A. Political Science Panel (Mickle 114)**
- 4B. History Panel (Kilpatrick)**
- 4C. Humanities Panel (Whited Room)**

3:30-4:45 SESSION 5

- 5A. Political Science Panel (Mickle 114)**
- 5B. Psychology of Design Panel (Kilpatrick)**
- 5C. Creative Writing Award Finalists (Whited Room)**

Poster Presentations along the Mickle 2nd floor hallway – 2:15-3:15, 3:30-4:30 pm

EXPANDED VIEW

8:20-9:20 SESSION 1

1A. Natural Sciences Oral Presentations (Mickle 114)

Moderator: Scott Chirhart

1. Green Process for Recovering Nickel from End-of-Life Batteries – Henry Pudwill
2. The Physics Behind GPS – Jackson David Spataro
3. Brain Under Siege: Aphasia Through Infection and Injury – Mack Grant

1B. Arts and Humanities Panel (Kilpatrick)

Moderator: Rachel Johnson

Topic: Community Engaged Writing: A Partnership with the LGBT+ Archives Project of Louisiana

Presenters: Quentin Beverly, Jasmine Blache, Hailey Chiasson, Craig Collier, Madison Davis, Jacque Deville, Braydon Gaston, Channing Hall, Lydell Hunter, James Jackson, Dani Kimmey, Laura Pizarro, Kyron Powell, Aubrey Salazar, Riana Seidenberg, Kai Young, and other presenters

1C. Humanities Panel (Whited Room)

Moderator: Bellee Jones-Pierce

Topic: Making the Canon Ours: Translation, Adaptation, and Other Approaches to British Literature

1. Conveying Death and Betrayal in the Translation of “The Wife’s Lament – Romane Ghysel
2. The Wanderer: A Translated Excerpt – Kaleb Atkinson
3. Edith Wharton's Book of the Homeless and the British Literature Classroom – Rhys Deupree

9:30-10:50 SESSION 2

2A. Social Sciences Oral Presentations (Mickle 114)

Moderator: Jessica Alexander

1. AAVE, SAE and Tone: How listener's perceive common dialects? – Channing Hall, Sybella Louis and Makayla Young
2. Multitasking between multilingual and monolingual individuals - Jaylin St. Martin, Viviana Rivero, Sam Brocato, and Jacob Stevenson
3. The Influence of Sign Iconicity on ASL-like Sign Acquisition – Cadence Crumpton, Mack Grant, Mackenzie Olinger, Katie Smith, and Mallory Starrett
4. Effects of Bilingualism on the Use of Gestures – Camille Ball, Mary Large, Abigail Rinaudo, and Tessa Eby

2B. Social Sciences Panel (Kilpatrick)

Moderator: Barbara Davis

Topic: 2024 Results of Centenary's Student Managed-Investment Fund

1. Large, Mid and Small Cap Results for 2024 - Connor Fisk, Malick Hasan, & Daniel Lewis
2. Alternative Investments Results for 2024 - Rene Escobar Diaz & Ron Masti
3. International and Fixed Income Results for 2024 - Eoin Hamill & Sophie Schmitz

2C. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Chrissy Martin

1. “Like a Virgin”: How Moon Poetry is Shaped by Western Purity Culture – Aaliyah Vines
2. Quantum Physics and Astrological Poetry: A Scientific Lens for Literary Interpretation – Kaylee Roberts
3. The Feminine Fortunate Fall: Hildegard of Bingen's Marian Liturgical Works – Jo Hoffman
4. Mother, Daughter, Thing, Me: A Short Story Collection – Emma Greer

11-12 Keynote Address (Whited Room)

A Research Mindset: Curiosity and Connection

Dr. Jessica Coker '08

Associate Professor, Department of Psychiatry and Department of Obstetrics and Gynecology,
UAMS College of Medicine
Co-director, Women's Mental Health Program
Medical Director, Women's Inpatient Unit

12:45-2 SESSION 3

3A. Social Sciences Oral Presentations (Mickle 114)

Moderator: Jessica Alexander

1. Effects of Emotional Tonality on Memory Encoding – Jacob Nguyen, Jayden Nguyen, Tuyen Chau, and Thach Chau Jr.
2. The Comparison of Artificial Intelligence Text-to-Speech to Standard Text-to-Speech and Human Reader as a Tool for Auditory Comprehension – Man Cing, Jolie England, Mavy Gigante, and Tarif Islam
3. Learning to Speak “Kid”: Perceptual Learning of the Speech of Young Children – Mackenzie Olinger
4. Please Boost: Exploring the Effects of Social Media Activism on Unconventional Forms of Political Engagement – Channing Hall

3B. Humanities Panel (Kilpatrick)

Moderator: Jama Grove

1. The First Black Person to Apply to Centenary, Denied – Chrys Jackson '24
2. Crossdressing Women in the US Civil War – Ellie Anderson
3. International Law and Acceptable Warfare: How Some Chemical and Biological Weapons Evaded International Condemnation – Casey Clemo
4. Flying High: The Musical and Cultural Influence of Charlie Parker – Carter Lemen

3C. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matt Blasi

1. Shepherds, Sheep, and Sumptuary Laws: Rejecting Early Modern Greed through Nostalgic Pastoral Poetry – Jo Hoffman
2. Shakespeare in Americana: The Band's “Ophelia” as a Southern Retelling of Hamlet – Athena Vasquez
3. The Precipice in Tapestry – Riana Seidenberg
4. Killadelphia is Not an Isolated Incident – Braydon Gaston

2:15-3:15 SESSION 4

4A. Social Sciences Panel (Mickle 114)

Moderator: Mandi Donahoe

Topic: Issues in Domestic Political Science

1. Gender Gap in Sports - River Boultinghouse
2. Candidate's Rhetoric: How Language Influences Presidential Elections - Kaylee Roberts
3. Political Extremism From Single-Parent Households - Duncan Benton
4. The School to Prison Pipeline – Amani Millon

4B. Humanities Panel (Kilpatrick)

Moderator: Jama Grove

1. "What can YOU do?": Shreveport Women's Political Activism in the 1970s and 1980s - Madilyn McCrary
2. What's In a Name? Death and Material Reality in the 19th Century US – Dani Kimmey
3. Thank You, Tik Tok: Technology as a Tool to Expand Sovereignty Where NAGPRA Fails - Romane Ghysel

4C. Humanities Panel (Whited Room)

Moderator: Bellee Jones-Pierce

Topic: Making Shakespeare in May: Adaptation in the Immersive Term

1. A Tail of Romeo and Juliet - Manisha Menon
2. Messina Springs: An Adaptation of *Much Ado about Nothing* - Alyssa Akers
3. Romeo & Juliet in LEGO - Kendra Christopher

3:30-4:45 SESSION 5

5A. Social Sciences Panel (Mickle 114)

Moderator: Mandi Donahoe

Topic: International Issues with a Gendered Lens

1. The Gendered Impact of War: Exploring the Disproportionate Violence and Vulnerability Against Women - Chana Williams
2. Violence in Conflict and Peace: How Ethiopia's Failure to Include Women in Peace Processes Maintains Gender-Based Violence - Madilyn McCrary
3. Women in Politics: Analyzing the Link Between Female Leadership, Societal Attitudes, and Gender-Based Violence - Emily McClung
4. Our Bodies, Our Reproductive Rights - Julie Barrios

5B. Social Sciences Panel (Kilpatrick)

Moderator: Amy Hammond

Topic: Cookin' Up a Kitchen for a New Century: A Redesign of James Hall Kitchen

Presenters: Aubrey Burkhardt, Madi Cooley, Cadence Crumpton, Nora Flores, Anna Garver, Roan Joiner, Alli Ledoux, Destry Martignetti, Eli Melton, Ma'kayla Perkins, Gray Rhodes, Maxwell Rivera

5C. Arts and Humanities Oral Presentations and Creative Writing (Whited Room)

Moderator: Chrissy Martin

1. Audrey M. Smith Endowed Poetry Award Finalists:
 - Jo Hoffman - "Three Haikus for Cats"
 - Aaliyah Vines - "Our Parents' Fixer Upper"
 - Ally Sullivan - "Home"
2. Zeak Monroe Buckner Writing Award Finalists:
 - Brisa Cardenas - "The Sun"
 - Brooke Sandefur - "If Mama Were Here"
 - Ally Sullivan - "Road Trip"

Poster Presentations (Mickle 2nd floor) – 2:15-3:15 and 3:30-4:30 pm

Moderator: Scott Chirhart

1. Environmental Microbiome Impact on College Student Mental Health - Tuyen Chau & Jacob Nguyen
2. Thiol Oxidation of MerTK - Kaleb Atkinson
3. The History of Sports Marketing of the Dallas Cowboys - Enrique Hernandez
4. From NFL Player to Coach: a Biography of Aaron Glenn - Jordan Cook
5. How the Three-pointer Changed the Game of Basketball - Jakobi Greenleaf
6. Game-Day Rituals: The Influence of Superstitions on Athletes and Sports Performance - G'Colby Spivey
7. Leveraging Human-Induced Pluripotent Stem Cell-Derived Cardiomyocytes for Cardiovascular Disease Modeling - Tarif Islam
8. Evaluating Duckweed's Potential in Absorbing Ammonium Chloride and Dipotassium Phosphate as a Phytoremediation Solution for Polluted Water - Adele Bihler, Sarah Baquedano, Briana Aguirre, & Rachael Ayres
9. Beer Bottles as Helmholtz Resonators - Emma Foster
10. Diffraction by Everyday Objects - Jasmine Jones
11. Constructing a Cloud Chamber to Identify and Record Cosmic Particles - Trinity Thomas
12. Long-term Effects of Methamphetamine on Cardiovascular Function - Alejandro Fuentes

FULL PROGRAM

8:20-9:20 SESSION 1

1A. Natural Sciences Oral Presentations (Mickle 114)

Moderator: Scott Chirhart

1. Green Process for Recovering Nickel from End-of-Life Batteries

Presenter: Henry Pudwill

Research Advisor: Dr. Dewan Russel Rahman

Chemistry, Centenary College of Louisiana

Many high-performance and regular batteries – such as lithium-ion, nickel-metal hydride, and other types of nickel batteries – use nickel-based materials as electrodes. At the end of the lifespan, these batteries are resources for nickel rather than solid waste that needs to be discarded or taken care of. Safer and more environmentally friendly (green) recycling technologies are essential to develop for the practical utilization of end-of-life batteries as nickel resources. Herein, this work introduces a hydrothermal process that exploits the chemistry of amino dicarboxylic acid with nickel materials such as nickel hydroxides or oxyhydroxides. Hydrothermal reaction of iminodiacetic acid with nickel hydroxide or oxyhydroxide electrode powder (collected from nickel batteries) resulted in a dark blue Ni-iminodiacetate (Ni-IDA) complex solution. The complex was characterized by UV-spectroscopy and found to be comparable with the lab-made Ni-iminodiacetate complex. Using a base (NaOH), the Ni-iminodiacetate complex from the electrode material was precipitated as nickel hydroxide. The complex can also be precipitated as nickel phosphate using sodium or potassium phosphate. The work will also present the characterization of the precipitated nickel hydroxide using FTIR and Raman spectroscopy and X-ray powder diffractometry. After recovering nickel as nickel hydroxide or phosphate, the solution contains sodium iminodiacetate, which can readily be collected as salt for reuse by simply drying off the water, rendering the whole method a zero-waste process.

2. The Physics Behind GPS

Presenter: Jackson David Spataro

Research Advisor: Dr. David Kordahl

Physics, Centenary College of Louisiana

The widespread accessibility of GPS technology inspires curiosity about how it works. This talk will explore GPS technology by examining its core components. We will analyze data from currently orbiting satellites to verify how they conform to relevant physics principles, including Kepler's third law and Newton's law of gravitation. Through this investigation, we intend to present a comprehensive explanation of how GPS functions according to established physical principles.

3. Brain Under Siege: Aphasia Through Infection and Injury

Presenter: Mack Grant

Research Advisor: Dr. Ellyn Evans

Biology, Centenary College of Louisiana

Aphasia, a condition affecting speech and language abilities, is commonly associated with physical brain trauma, but its viral origins are less widely recognized. This project explores the differences between aphasia caused by Herpes Simplex Virus Type 1 (HSV1) and aphasia resulting from physical

trauma, focusing on the structural and behavioral impacts of each. HSV1, a virus colonizing approximately 64% of the global population, can infiltrate the brain, leading to meningoencephalitis, encephalomalacia, and ultimately, language deficits such as anomia and aphasia. By comparing neuroimaging data and case studies, this research highlights the distinct neurological pathways and clinical manifestations of each form of aphasia, demonstrating why treatment approaches must differ. Additionally, a public survey gauges the level of awareness regarding HSV1's neurological impact, emphasizing the need for better diagnosis, education, and research into HSV1-induced brain damage. This study aims to inform the public without causing undue alarm, encouraging responsible awareness and preventive measures against HSV1 transmission while advocating for improved diagnostic recognition of its cognitive effects.

1B. Arts and Humanities Panel (Kilpatrick)

Moderator: Rachel Johnson

Topic: Community Engaged Writing: A Partnership with the LGBT+ Archives Project of Louisiana

Presenters: Quentin Beverly, Jasmine Blache, Hailey Chiasson, Craig Collier, Madison Davis, Jacque Deville, Braydon Gaston, Channing Hall, Lydell Hunter, James Jackson, Dani Kimmey, Laura Pizarro, Kyron Powell, Aubrey Salazar, Riana Seidenberg, Kai Young, and other presenters

*Research Advisor: Dr. Rachel Johnson
English, Centenary College of Louisiana*

Groups of students currently enrolled in ENGL/GEN 202 - Writing and Community will share their works-in-progress for the course. Each group is creating a public-facing project related to our course partnership with the LGBT+ Archives Project of Louisiana. Projects will document the lives and contributions of the LGBTQ+ community of Northwest Louisiana and will be donated to the archive at the conclusion of the course. Projects engage with public history may include oral histories, timelines, mini exhibitions, educational tools, guides for archival collection, and more! Learn how these students conceptualized their topics, interfaced with the community, and developed strategies for working together.

1C. Humanities Panel (Whited Room)

Moderator: Bellee Jones-Pierce

Topic: Making the Canon Ours: Translation, Adaptation, and Other Approaches to British Literature

*Research Advisor: Dr. Bellee Jones-Pierce
English, Centenary College of Louisiana*

According to Centenary's Academic Catalogue, ENGL 322 "introduces students to some major British writers and to profitable approaches to their works while providing opportunities for students to refine their critical practices." That seems straightforward enough...but is it really? What exactly does this course description mean by "introduce"? What about "major"? How many is "some"? Which authors—which texts, in what languages—count as "British"? Who says?

In this set of presentations, students who have taken ENGL 322 will share some of the "profitable approaches" that they have employed in the study of British Literature. Through translation,

adaptation, review, and other modes, these students show that careful critical work is also creative in nature--and that "British Literature" is what we make it.

1. Conveying Death and Betrayal in the Translation of “The Wife’s Lament

Presenter: Romane Ghysel

2. The Wanderer: A Translated Excerpt

Presenter: Kaleb Atkinson

3. Edith Wharton's Book of the Homeless and the British Literature Classroom

Presenter: Rhys Deupree

9:30-10:50 SESSION 2

2A. Social Sciences Oral Presentations (Mickle 114)

Moderator: Jessica Alexander

1. Multitasking between multilingual and monolingual individuals

Presenter: Viviana Rivero, Sam Brocato, Jaylin St. Martin, & Jacob Stevenson

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

This research design explores the ability to multitask between multilingual and monolingual individuals using dual paradigm tasking, word pair association, and problem solvings tests. We will use multiple approaches to conduct these test from word pair memorization to mathematical proficiency. This is a 2 week analysis where participants will be evaluated in different time intervals . Each participant will be asked lifestyle questions during the process to evaluate what factors may effect their performance.

2. AAVE, SAE and Tone: How listener's perceive common dialects?

Presenter: Channing Hall, Sybella Louis and Makayla Young

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

African American Vernacular English (AAVE), once referred to as “Ebonics” is a popular, and complex, dialect spoken by many Black people in America. It can be used as a method to recognize others and celebrate a unique and diverse culture. This project examines how effective people from differing backgrounds are at recognizing the tonal differences between AAVE and Standard American English (SAE). Participants in the study listened to 20 recordings of short sentences, 10 written in AAVE, 10 written in SAE. The recordings were adjusted into noise vocoded speech. Participants were asked to identify which sentences utilized AAVE or SAE. This research suggests that the differences between African American Vernacular English and Standard American English are not just in the choice of words or grammar, but instead exists at even the tonal level.

3. The Influence of Sign Iconicity on ASL-like Sign Acquisition

Presenter: Cadence Crumpton, Mack Grant, Mackenzie Olinger, Katie Smith, Mallory Starrett

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

This study examines whether people learn and retain signs more effectively when the sign visually resembles its meaning (iconic signs) compared to signs that have no physical resemblance to their meaning (non-iconic signs). Participants are involved in a within-subjects design, with a training and testing component. Each participant will watch the videos of every sign three times for training and then enter into the testing phase. In the testing phase, participants view the signs again and type the corresponding word. Accuracy is measured as the percentage of correct responses. This study aims to explore how sign iconicity influences memory and learning, contributing to research on visual learning and language acquisition. Findings may have implications for teaching methods, sign language education, and cognitive processing of symbolic gestures.

4. Effects of Bilingualism on the Use of Gestures

Presenter: Camille Ball, Mary Large, Abigail Rinaudo, and Tessa Eby

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

A person's gestures when telling a story can impact how the listener interprets the story that they are listening to. This experiment investigates how the number of gestures produced by bilingual individuals, in French and English, vary based on the language that is spoken. The individuals are asked to tell one childhood story in their native language and their second language, then the number of gestures that the person makes is measured when they are speaking in each language. The results help us understand how gestures influence bilinguals story telling based on their native and second language.

2B. Social Sciences Panel (Kilpatrick)

Moderator: Barbara Davis

Topic: 2024 Results of Centenary's Student Managed-Investment Fund

Research Advisor: Dr. Barbara Davis

The purpose of the Student Managed Investment Fund is to facilitate the academic objective of teaching theory and practice of managing long-term investment portfolios with annual spending objectives through a real-world environment. The SMIF began operations on April 23, 2004 with an initial contribution of \$100,000. Since inception, there have been \$166,081, tax deductible, contributions, \$129,164 investment policy directed distributions to Centenary College, and \$25,000 of funds have been invested with EAP's NLAF 2 and 3. As of December 31, 2024, the ending market value was \$242,191 and the dollar gain since inception has been \$230,275. Since the beginning of operations, the annual compound rate of return has been 6.89% and SMIF blended benchmark return has been 7.50%. Student presenters will focus on the 2024 returns for the asset classes of the portfolio. Comparisons of the actual returns to the designated benchmarks will be made and explained.

1. Large, Mid and Small Cap Results for 2024

Presenter: Connor Fisk, Malick Hasan, and Daniel Lewis

2. Alternative Investments Results for 2024

Presenter: Rene Escobar Diaz and Ron Masti

3. International and Fixed Income Results for 2024

Presenter: Eoin Hamill and Sophie Schmitz

2C. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Chrissy Martin

1. "Like a Virgin": How Moon Poetry is Shaped by Western Purity Culture

Presenter: Aaliyah Vines

Research Advisor: Dr. Chrissy Martin

English, Centenary College of Louisiana

This study takes a look at how the moon appears in poetry throughout history, paying special attention to how these appearances align with western purity culture. By looking at the early myths that influenced astro-poetics, the personification of the moon, and the historical events taking place at the times of these poems, this study identifies a slow shift taking place across time. Earlier poetry personifies the moon as a virgin or a mother, feminine archetypes that are deemed "pure," yet later poetry, specifically after the American moon landing, changes rhetoric to describe the moon as something old or tainted, signaling a sudden disinterest upon discovery. This study attempts to trace this change throughout time and pinpoint the effects of this shift on the public.

2. Quantum Physics and Astrological Poetry: A Scientific Lens for Literary Interpretation

Presenter: Kaylee Roberts

Research Advisor: Dr. Chrissy Martin

English, Centenary College of Louisiana

Science and poetry are often seen as very different fields. However, when explored together, logic and data combine with emotions and complexity, creating a unique connection. Through the study of quantum physics and poetry, themes of uncertainty, complexity, and the limits of human perception can enrich the understanding of poetry, especially in relation to the astro world. Concepts in quantum physics, such as superposition, entanglement, and the observer effect, offer a lens through which poetry can be viewed. Just as quantum physics challenges our understanding of space, time, and reality, poetry disrupts traditional forms, structures, and meanings. By examining quantum physics as a lens through which we interpret poetry, readers can discover new meanings that bridge the worlds of science and art, highlighting the entanglement between all elements in the universe.

3. The Feminine Fortunate Fall: Hildegard of Bingen's Marian Liturgical Works

Presenter: Jo Hoffman

Research Advisor: Professor Meg Sanders

English, Centenary College of Louisiana

In Hildegard of Bingen's liturgical works, she participates in standard Christian tradition with parts of her songs, begging for prayers from the mother on the sinners' behalf or comparing her to nature, but she also often sets up Mary in contrast to Eve to illustrate just how important Mary's role is in Christian theology. Hildegard even goes so far as to parallel the early-Church concept of the Fortunate Fall onto Mary and Eve. Where typically Jesus and Adam are set parallel to one another, Hildegard shifts the narrative to look upon the female counterparts. Throughout her liturgical works, she condemns Eve's sins as crimes that cursed women, and she illustrates the Virgin Mary as a redeemer of these sins. Her perspective allows a glimpse into the medieval conception of the feminine within scripture and Christian theology.

4. Mother, Daughter, Thing, Me: A Short Story Collection

Presenter: Emma Greer

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

"Mother, Daughter, Thing, Me: A Short Story Collection" includes two stories that work within the wider genre of horror to comment on feminist themes. "Teeth Marks" takes place in 1980s small town suburbia and tells the story of a young woman having her first sapphic experience with a vampire. This story follows in the recent tradition of queer horror, but also harkens back to the extensive history of monstrous queers, as in Le Fanu's *Carmilla*. "Inconceivable" follows a teenage girl experiencing a form of immaculate conception. It comments on the horror of pregnancy, isolation of teen pregnancy, and religious imagery in horror. Though the two works differ considerably, they share the uniting themes of women existing outside of the cultural norm and subversion of identifiable tropes in the horror tradition.

11-12 Keynote Address (Whited Room)

A Research Mindset: Curiosity and Connection

Dr. Jessica Coker '08

Associate Professor, Department of Psychiatry and Department of Obstetrics and Gynecology, UAMS College of Medicine

Co-director, Women's Mental Health Program

Medical Director, Women's Inpatient Unit

12:45-2 SESSION 3

3A. Social Sciences Oral Presentations (Mickle 114)

Moderator: Jessica Alexander

1. Effects of Emotional Tonality on Memory Encoding

Presenter: Jacob Nguyen, Jayden Nguyen, Tuyen Chau, & Thach Chau Jr.

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

The purpose of this study is to determine if emotional tone has an effect on memory encoding. A series of experimental trials were performed in which participants were randomly divided into one of three emotional presentations: neutral, happy, or angry. For each emotional presentation, participants listen to a recording of the same sentences separated with a few second pauses. Following, the participants are presented with a number distraction task. Then, participants are given the sentences in written form, being only presented the first half of each. They are asked to fill in the remaining half of each sentence from memory. Results would indicate a positive impact on memory integration given high accuracy in sentence filling.

2. The Comparison of Artificial Intelligence Text-to-Speech to Standard Text-to-Speech and Human Reader as a Tool for Auditory Comprehension

Presenter: Man Cing, Jolie England, Mavy Gigante, Tarif Islam

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

Students with reading disabilities or a preference for auditory learning can benefit from audiobooks. When only text copies of learning materials are offered, Text-to-Speech (TTS) programs may serve as an audiobook replacement. With the rise of artificial intelligence (AI), new TTS programs have been created to incorporate AI to better mimic a human voice. This project aims to compare this new AI TTS to standard TTS and a human reader. Participants were asked to listen to 3 passages of similar length and complexity read aloud to them by the 2 TTS and human reader. The participants then answered multiple-choice questions to assess their understanding of the passages. The findings of this project may be used to determine if it is beneficial for digital learning materials, like online textbooks, to include AI TTS as a tool.

3. Learning to Speak “Kid”: Perceptual Learning of the Speech of Young Children

Presenter: Mackenzie Olinger

Research Advisor: Dr. Jessica Alexander

Psychology, Centenary College of Louisiana

The speech of young children is often difficult to understand, similar to foreign-accented speech and the speech of people with dysarthria. Previous exposure to children has been shown to increase the intelligibility of child speech. However, it is an open question if child speech is able to be learned in the lab and if learning generalizes to novel children. In this study, participants trained on words spoken by 2 or 3 year olds, and then were tested with novel words and a set of the same speakers and a group of different speakers. There were also untrained control participants. For each age group, one group of listeners trained on a group of multiple children, and one group trained on a single child

speaker. These results will help us to better understand if adults are able to learn child speech and to what degree that they can learn it.

4. Please Boost: Exploring the Effects of Social Media Activism on Unconventional Forms of Political Engagement

Presenter: Channing Hall

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

This paper explores the relationship between social media activism and unconventional forms of political engagement among American youths. The central question of the research seeks to answer exactly how social media movements are able to incentivize unconventional political participation. Prior research has already indicated a strong positive correlation between social media and conventional participation like voting, but there is a gap in research when it comes to studying similar relationships between social media and unconventional participation. By conducting a comparative case study, this research found that there are three hallmark qualifications that are needed for a social media movement to successfully incentivize unconventional participation. The hallmark qualifications are unifying rhetoric, innovative platform use, and easily operationalized calls to action. The three cases that were studied are March for Our Lives (2018), Black Lives Matter (2020), and Free Palestine (present). Each hallmark qualification was explored through examples of events and actions that were shared across the three cases. Ultimately, the evidence indicates that there will likely be an increasing reliance on social media in order for social movements to have success among younger demographics.

3B. Humanities Panel (Kilpatrick)

Moderator: Jama Grove

1. The First Black Person to Apply to Centenary, Denied

Presenter: Chrys Jackson '24

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

Dr. Ivory Nelson, a Shreveport native and graduate of Booker T Washington HS, applied to Centenary in 1955. He was denied because he was a black man. He went on to become President of multiple universities.

2. Crossdressing Women in the US Civil War

Presenter: Ellie Anderson

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

There are many tales of women dressing as men to serve in the military in some capacity. Dr. James Barry, born Margaret Anne Bulkley, joined the British Army as a man to serve as a military surgeon. Milunka Savić, a Serbian heroine from the First World War, enlisted to cover for her sick brother and ended up becoming the most decorated female combatant in history. One particular event that had many crossdressing soldiers was the Civil War. Sarah Emma Edmonds, under the alias “Franklin

Thompson,” fought for the Union until she risked being discovered after she was injured. Elizabeth Compton not only disguised herself as a man, but lied about her age to join the Union and went on to serve to the end of the war. There are many other stories of these women warriors, each of whom bravely defied societal expectations and served their country.

However, a question that many of their contemporaries and scholars have asked about these women is: why? What made these women decide to leave their homes and womanhood behind to secretly take part in a world overwhelmingly dominated by men and full of danger? Was it the desire to live without the constraints of being deemed the “fairer sex?” Did they desire more out of life than what was available to them? Did they simply want to have an adventure? There is no definitive answer. But I would propose an interesting theory: these women wanted to experience a different gender identity, at least for a while. This project aims to highlight gender norms and identity in the Civil War era through the stories of these women, as well as how they help modern scholars rethink gender identity throughout history

3. International Law and Acceptable Warfare: How Some Chemical and Biological Weapons Evaded International Condemnation – Casey Clemo

Presenter: Casey Clemo

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

The widespread use of chemical weapons during World War I prompted international regulations barring the use of these weapons in warfare, a proscription that many warring nations were surprised to see upheld on the battlefields of World War II. However, subsequent US military actions during the Cold War saw the widespread use of chemicals including Napalm and Agent Orange. Despite the terrible consequences of these weapons, the United States largely escaped critique on the international stage while the Viet Cong were widely assailed for creating low-budget weapons such as pit traps polluted with excrement. This study will examine how and why the international prohibition on chemical warfare encompassed mustard gas while permitting Agent Orange and Napalm and explore what led public opinion to tolerate these chemical weapons while holding up the use of biological weapons as inhumane.

4. Flying High: The Musical and Cultural Influence of Charlie Parker

Presenter: Carter Lemen

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

When observing the evolution of jazz, a complex musical genre based around a flurry of quick chord changes and virtuosic instrumental playing, the era of bebop particularly catapulted the genre into its contemporary state. Contemporary jazz musicians, such as Guthrie Govan, English guitar virtuoso, and frontman of the jazz trio The Aristocrats, clearly have a bebop-esque style of playing. When we think about the origins of jazz, people often think of Miles Davis, often considered the greatest jazz musician of all time. But even the greatest of musicians had a teacher. In his autobiography, Davis refers to “Dizzy [being his] idol [back] then.” “Dizzy,” as referred to by Davis, is none other than Dizzy “Dizz” Gillespie, bebop extraordinaire and trumpeter. Gillespie is up there in the ranks of most acclaimed jazz musicians, next to his alleged protege Miles Davis. Davis does, for whatever reason, leave out a critical figure in the beginning pages of his “tell-all” autobiography: Charlie “Bird” Parker.

Charlie Parker wasn't only the spearhead of the bebop movement, he was both Davis' and Gillespie's teacher. However, Charlie Parker is often left out of historical reference, not out of spite, but out of ignorance. Parker was only 34 years old when he died, passing away in his room at the Hotel Stanhope on Fifth Avenue in New York City, from a combination of the effects of his long battle with addiction and lack of care for his body. Despite his short life, Parker's influence on jazz as a whole remains significant as he pioneered bebop, an influence that lived on through his pupils, whether they chose to recognize him or not.

3C. Arts and Humanities Oral Presentations (Whited Room)

Moderator: Matt Blasi

1. Shepherds, Sheep, and Sumptuary Laws: Rejecting Early Modern Greed through Nostalgic Pastoral Poetry

Presenter: Jo Hoffman

Research Advisor: Dr. Bellee Jones-Pierce

English, Centenary College of Louisiana

In medieval England, sheep's impact on the economy through its wool sale resulted in widespread greed of the elite at the detriment to the country's peasant class. In pastoral poetry, however, shepherds and their sheep do not face these crises. Instead, their lives are idyllic, peaceful, and free from the worries of a burgeoning capitalistic structure. Surely, in a culture where sheep held so much power and influence, a literature that uses them as a primary symbol would be, in some way, affected by the greater cultural significance. This presentation explores how the idyllic nature of pastoral poetry does not contradict the reality of the sheep industry, rather acts as a reaction to the industry. Poets pushed against the increasingly toxic industry by writing in a mode that exemplifies the joys that emerged from a rural life.

2. Shakespeare in Americana: The Band's "Ophelia" as a Southern Retelling of Hamlet

Presenter: Athena Vasquez

Research Advisor: Dr. Bellee Jones-Pierce

English, Centenary College of Louisiana

The Band's "Ophelia," from their 1975 album *Northern Lights – Southern Cross*, reimagines Shakespeare's *Hamlet* through an Americana lens, set in the American South. The song's lyrics and musical style reflect themes from the original play while shifting the setting and social context. Lead lyricist Robbie Robertson draws on historical and cultural influences, including the Civil Rights Movement. The song portrays Ophelia as a Black woman in an interracial relationship with Hamlet, who narrates the song, reflecting the era's racial tensions. Musically, the use of Dixieland jazz elements, especially through Garth Hudson's instrumental work, roots the song in the South. "Ophelia" is a poignant adaptation that blends Shakespearean tragedy with 20th-century American issues, offering a commentary on race, love, and loss.

3. The Precipice in Tapestry

Presenter: Riana Seidenberg

Research Advisor: Professor Alissa Klaus

Meadows Museum of Art, Centenary College of Louisiana

This project is a piece of my exhibit, *The Precipice*, which will be at the Meadows Museum from April 1st to May 2nd. It explores the contradictions of young adulthood, ages 18-29. To many experiencing it, this age feels like the in-between of the safety net of childhood and the finality of adulthood. It is a time of increasing responsibility, independence, and uncertainty. The artworks I am specifically focusing this presentation on are the two crochet tapestries I made from scratch for the exhibit, which was not only time intensive, but also artistically challenging. I designed, patterned, and crocheted the entire project from scratch. It took four months and 35,250 single stitches to make each tapestry. I will walk the audience through what a tapestry is and the process I used to make a meaningful artwork out of unusual materials.

4. Killadelphia is Not an Isolated Incident

Presenter: Braydon Gaston

Research Advisor: Dr. Matthew Blasi

English, Centenary College of Louisiana

This project is about how the story of corrupt mayors and systemic exploitation of black people in Killadelphia does not exist in isolation, but instead is connected to all of America. It specifically focuses on the history of slavery and policing and how mayors, even those that exist in marginalized positions can reinforce those exploitative power structures. It also involves close-reading to showcase how Killadelphia does contain some radical ambition in the form of Tevin, as well as some close-readings about how Mayor Gaskins is analogous to some contemporary mayors in America today.

2:15-3:15 SESSION 4

4A. Social Sciences Panel (Mickle 114)

Moderator: Mandi Donahoe

Topic: Issues in Domestic Political Science

1. Gender Gap in Sports

Presenter: River Boultinghouse

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

I will be presenting my senior seminar proposal which analyzes the gender gap in America's sports. The gender gap between male and female athletes has become increasingly noticeable as women continue to vocalize the injustice they face. Women have overcome many trials when it comes to their inclusion, but there is progress yet to be made when it comes to funding, opportunities, and medical care women receive. Women's role in sports have developed in many great ways over time and women have been able to adapt to environments around them to succeed in their goals. For example, during world war women were the main focal points when it came to sports as men were deployed. However, when men returned, they brought back the gender norms and tried pushing women back into their homes. Society especially men still struggle with allowing women to break gender norms and become equal with men. These gender norms are integrated into people at a very young age and only grow with time. These norms often push women out of sports and back to filling the role of housewife. When women allow themselves to be pushed back into gender norms it only hurts the end

goal of equality even more. Through leaving the sport funding dwindles and voices begin to squander. Women's disadvantages continually become more apparent begging the question what will it take to change?

2. Candidate's Rhetoric: How Language Influences Presidential Elections

Presenter: Kaylee Roberts

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

Political rhetoric plays an important role in shaping public opinion and influencing voter behavior. While it is not the only factor in election outcomes, effective communication significantly impacts a candidate's success. Due to the rise of social media as a heavily influential form of political communication, traditional political rhetoric has been forced to depart from its typical studied style. Donald Trump's rhetorical style, known for its simplicity, emotionality, and directness, varies from the typical political communication strategies. This review presents a proposal for research that examines how Trump's unique rhetorical approach and how it has been studied, can offer a new lens of which we can compare to those of other presidential candidates. By analyzing the use of rhetorical variables such as language complexity, emotional appeal, and direct engagement with voters through social media, this study aims to determine which rhetorical strategies have proven most effective for candidates seeking to win elections. In doing so, there will be a stronger ability for scholars to determine which rhetoric style can be most useful for one candidate when against another.

3. Political Extremism from Single-Parent Households

Presenter: Duncan Benton

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

Single parents arguably have the greatest impact on their child's political affiliation and views than any single other source possibly can. This paper is an examination of the effects of single parenthood on political extremism, specifically with a focus on the psychology of parenthood and political affiliations in children. Children draw their political party affiliations from their parents, whether consciously or unconsciously. There are many different reasons for single parenthood and how each affects children in a multitude of different ways. Things such as incarceration, divorce, a death of a parent, or the fallouts from alcoholism/drug abuse all present different versions of the single parent story that all have wildly different ramifications for the children involved. However, data suggests that while children draw their political affiliation from their parents, the issues that they find to be important come from outside sources such as school, church, and friends. The research is also expected to show that while single parents have an effect on party affiliation, they do not explicitly push children towards, nor are they the sole reason for, the purportedly increased political extremism of the modern age.

4. The School to Prison Pipeline

Presenter: Amani Millon

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

This is a proposal for my senior seminar project. The school-to-prison pipeline describes a system where students in the American education system are funneled into the American criminal justice system. This is a well documented and researched phenomenon, and many solutions have been proposed both locally and federally. This system overwhelmingly targets black and brown students and the effects are worse in rural areas and regions like the Deep South. This is due to a number of reasons such as poverty, implicit bias, No Child Left Behind, police presence on campuses, and zero-tolerance policies that were central to the way school districts handled discipline and student conduct. School resource officers, or SRO's, are law enforcement officers assigned to specific K-12 campuses, this increases interactions between students and the criminal justice system. Many school districts have implemented policies to combat this problem, but there is not much research into if these solutions have worked. Louisiana is a state that is dead last in education in the country and globally has one of the highest incarceration rates per capita. What solutions have Louisiana put in place and what effects have they had. The subject of this project may expand to include school districts in states with higher rated education systems that also focus on diversity, equity, and inclusion. The Caddo Parish School District has implemented certain policies like rotating officer schedules and the topic was even discussed by the local KSLA news channel. These policies have likely done little though as more data comes out during the development of this project. These attempted solutions will likely lead to not addressing the entire issue, which will lead to more overcrowded juvenile detention centers and an increase in youth incarcerations.

4B. Humanities Panel (Kilpatrick)

Moderator: Jama Grove

1. "What can YOU do?": Shreveport Women's Political Activism in the 1970s and 1980s

Presenter: Madilyn McCrary

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

In the struggle to pass the Equal Rights Amendment, the national narrative emphasizes a conflict between two types of women's political activity. In this narrative, feminist activists marched, rallied, and lobbied for full equality, while conservative women (led by Phyllis Schlafly) prevented the passage of the ERA through clever exploitation of traditional gender roles and symbols of gender identity. However, a close analysis of feminist activism in Shreveport, Louisiana reveals women using those same symbols of femininity to lobby for equality. For instance, activists in Shreveport sold ERA bracelets and necklaces as fundraisers for their political activism. Although, they ultimately lost the national battle, their efforts proved critical in other areas of activism, and their methods demonstrate that progressive and conservative women both recognized the power of traditionally gendered symbols in the political fight for gender equality.

2. What's In a Name? Death and Material Reality in the 19th Century US

Presenter: Dani Kimmey

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

Widows' pensions and veteran death benefits around the time of the Civil War provide a potential reflection of that time period's understanding or perception of death. "Understanding" in this context refers less to the mechanics of dying or the religious connotations often involved. Instead, I want to

unpack the role of death as a concept or as a material state. How do people relate to death? In the case of the American Civil War, how did their understanding of death interact with such a high casualty situation? How does the war influence the categorization of deaths? Women, more specifically widows, were able to influence government policy during a time when they did not have political power or political autonomy. Did they use the societal perception of death to their advantage, or did they oppose that perception? How did their status as a widow or as a woman married to a dead man influence their role?

By comparing the government's treatment of soldiers who died during the war to the time period's perception of death this study will examine whether taking care of death and the dead through formal state benefits is an extension of feminine responsibility for death and mourning or a patriarchal government giving the bare minimum in response to large-scale casualties.

3. Thank You, Tik Tok: Technology as a Tool to Expand Sovereignty Where NAGPRA Fails

Presenter: Romane Ghysel

Research Advisor: Dr. Jama Grove

History, Centenary College of Louisiana

Technology has been a great tool in accelerating repatriation while the federally funded institutions which are supposed to comply with NAGPRA do not do their job or do not do it in the right way. It can open eyes to some people owning Native American's items and ancestors. These technological tools can also serve as a way to empower Native Americans and urge them to fight and ask for repatriation. By examining case studies in which traditional activists turned to social media to draw attention to institutional resistance to repatriation of Native American artifacts, this study will examine the ways in which activists and tribal members have leveraged public pressure garnered through new technologies to compel institutions to negotiate the return of stolen artifacts and recruited supporters for greater national sovereignty.

4C. Humanities Panel (Whited Room)

Moderator: Bellee Jones-Pierce

Topic: Making Shakespeare in May: Adaptation in the Immersive Term

Research Advisor: Dr. Bellee Jones-Pierce

For the past two years, Shakespeare and Film has convened in Centenary's May Term, an immersive three-week semester that gives students the opportunity to focus deeply on one area of study. The final projects of this course ask students to adapt one of Shakespeare's texts, in whole or part, and to pitch a full-length film adaptation of their own. Students are often unsure about adapting Shakespeare at first. Some revere him, others find his work impenetrable, and both positions must be adjusted for their works to be successful. By the time these projects are finished, students have taken Shakespeare and off the shelf; they have collaborated with him and made his texts—works that seemed untouchable—their own. In this panel, scholars will discuss Shakespearean source texts, their own filmic adaptations, and the creative and critical processes involved in their work.

1. A Tail of Romeo and Juliet

Presenter: Manisha Menon

2. Messina Springs: An Adaptation of *Much Ado about Nothing*

Presenter: Alyssa Akers

3. Romeo & Juliet in LEGO

Presenter: Kendra Christopher

3:30-4:45 SESSION 5

5A. Social Sciences Panel (Mickle 114)

Moderator: Mandi Donahoe

Topic: International Issues with a Gendered Lens

1. The Gendered Impact of War: Exploring the Disproportionate Violence and Vulnerability Against Women

Presenter: Chana Williams

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

This paper will examine the sexual and physical abuse women suffer due to war including the devastating impact, at the hands of their country and opposing forces. Armed conflict has served as a means for perpetrators, often soldiers, to pillage and abuse their power when they are powerless. The abuse extends after war as the systemic inequities between men and women are amplified. Violence against women is used to terrorize and demoralize communities. Throughout history, women have been subjected to sexual violence, abduction, and forced labor, and the consequences of these crimes extend far beyond the battlefield. In the end, women are left with permanent mental and physical damage with little support or health care options. Case studies from Nigeria, South Sudan, South Korea, and Ukraine will be used to discuss the different aspects of violence against women. As well as case studies on female soldiers, comfort women, and other cases of women in armed conflict. The simple answer to this question is women and young girls are subjected to violence as a means to alleviate frustration for men.

2. Violence in Conflict and Peace: How Ethiopia's Failure to Include Women in Peace Processes Maintains Gender-Based Violence

Presenter: Madilyn McCrary

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

This paper aims to determine the effects of the failure to include women in the formal peacemaking process on gender-based violence (GBV) in Ethiopia. During negotiations in 2023 after the Tigray War in Ethiopia, women were not a part of the negotiations. A key part of the conflict was the use of GBV against women. Outside of conflict, Ethiopia also exhibits high rates of GBV. This study hypothesized that the high rates of GBV in Ethiopia during peace as the result of high rates of GBV during conflict, paired with the lack of inclusion of women during formal peace-making processes. This study examines literature on GBV, peace processes, and the inclusion of women to demonstrate the failure to include and protect women. A case study of Rwanda's process after their genocide in 1994 is used

to demonstrate a potential path to an inclusive peace that works to create change around gender ideology and violence against women for Ethiopia.

3. Women in Politics: Analyzing the Link Between Female Leadership, Societal Attitudes, and Gender-Based Violence

Presenter: Emily McClung

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

This study will explore the relationship between women's political participation and societal attitudes toward women's rights and gender-based violence (GBV). Specifically, it will examine how the involvement of women in politics influences public perceptions and policies related to gender equality and violence. The research will take a comparative approach, looking at countries with both the lowest and highest rates of GBV and analyzing the percentage of women in political roles in each case. By comparing these nations, the study will assess whether having more women in leadership positions leads to more positive societal attitudes toward women's rights and a reduction in GBV. The research will also include a focused comparison with the United States, examining how its political gender dynamics measure up against the global picture. Ultimately, this study aims to determine whether greater female representation in politics contributes to more progressive social policies and better outcomes for gender equality. By shedding light on the intersection between political participation and social change, the research will offer valuable insights for policymakers and activists working to improve women's rights and reduce gender-based violence worldwide.

4. Our Bodies, Our Reproductive Rights

Presenter: Julie Barrios

Research Advisor: Dr. Amanda Donahoe

Political Science, Centenary College of Louisiana

Reproductive rights have not always been a controversial issue. Abortion was a regular practice in women's lives and later when the practice became difficult to obtain, women relied on emmenagogue herbs and medication to induce abortions. This practice was allowed until 1910 when abortion was banned nationwide and only accessible to the wealthy. In 1974, the Swedish Abortion Act was passed, which legalized women the right to an abortion when requested up to 18 weeks of pregnancy. Following this act, abortion procedures have become a safer, more acceptable method of deciding one's reproductive rights. While there is no set answer as to why countries restrict women's access to reproductive rights, there are certain factors that are evident in their decision-making, such as legal, political, gender roles, and socio-cultural factors.

5B. Social Sciences Panel (Kilpatrick)

Moderator: Amy Hammond

Topic: Cookin' Up a Kitchen for a New Century: A Redesign of James Hall Kitchen

Presenters: Aubrey Burkhardt, Madi Cooley, Cadence Crumpton, Nora Flores, Anna Garver, Roan Joiner, Alli Ledoux, Destry Martignetti, Eli Melton, Ma'kayla Perkins, Gray Rhodes, & Maxwell Rivera

Research Advisor: Dr. Amy Hammond
Psychology, Centenary College of Louisiana

5C. Arts and Humanities Oral Presentations and Creative Writing (Whited Room)

Moderator: Chrissy Martin

1. Audrey M. Smith Endowed Poetry Award Finalists:

- Jo Hoffman - "Three Haikus for Cats"
- Aaliyah Vines - "Our Parents' Fixer Upper"
- Ally Sullivan - "Home"

2. Zeak Monroe Buckner Writing Award Finalists:

- Brisa Cardenas - "The Sun"
- Brooke Sandefur - "If Mama Were Here"
- Ally Sullivan - "Road Trip"

Poster Presentations (Mickle 2nd floor) – 2:15-3:15 and 3:30-4:30 pm

Moderator: Scott Chirhart

1. Environmental Microbiome Impact on College Student Mental Health

Presenter: Tuyen Chau & Jacob Nguyen

Research Advisor: Dr. George R. Tiller

Biology, Centenary College of Louisiana

It is well established that the human gut microbiota influences physical health. Within the last twenty years there have been only ~1,800 peer-reviewed articles published in the NCBI PubMed database looking at the relationship between human mental health and microbiota. Furthermore, there are few published papers that investigate the presence of airborne microbiota in student-facing environments or “common spaces” i.e., classrooms, dormitory rooms, and cafeteria, amongst other sites. Of these published papers, there are none that specifically investigate the effects on college students' mental health. Therefore, we are collecting and creating a library of airborne microbial samples from student-facing environments with the goal of evaluating potential links between these samples and the college students' mental health. Future directions include sequencing the microbial samples, developing the mental health survey, and assessing the results of said survey in relation to the microbes' identity as determined by sequencing.

2. Thiol Oxidation of MerTK

Presenter: Kaleb Atkinson

Research Advisor: Dr. Chris Pattillo, Department of Molecular and Cellular Biology at LSU Health Shreveport

Atherosclerosis is a condition in which lipids build up in the arteries and block blood flow to the heart. The development of these blockages is characterized by increased reactive oxygen species (ROS), which increases oxidative stress. The body naturally combats this stress via the use of antioxidants, of which glutathione is the most prevalent. This antioxidant has two forms: a reduced form (GSH) produced in most cell types, and an oxidized form (GSSG) that forms in response to oxidative stress. GSSG can modify proteins, which can activate or inhibit the protein's function. In oxidative stress conditions, the amount of GSSG and the amount of modified proteins (p-SSG) increases. We hypothesize that MerTK, a cellular recognition protein in macrophages, is potentially susceptible to, and inhibited by, this modification. This inhibition could decrease efferocytosis rates, leading to

plaque instability and myocardial infarction. This project aims to confirm post translational modification of MerTK.

3. The History of Sports Marketing of the Dallas Cowboys

Presenter: Enrique Hernandez

Research Advisor: Dr. Daniel Krywaruczenko

Sports Management, Centenary College of Louisiana

Sports management has evolved from basic team organization to a multi-billion-dollar industry involving marketing, sponsorships, and strategic operations. Early sports management focused on ticket sales and local sponsorships, but the rise of television, corporate partnerships, and branding transformed the field. The Dallas Cowboys serve as a prime case study in modern sports management. Established in 1960, they became one of the most valuable sports franchises by leveraging strategic branding, sponsorships, and media deals. Their owner, Jerry Jones, revolutionized team marketing through exclusive partnerships, stadium revenue innovations, and aggressive merchandising. The Cowboys' brand extends beyond football, making them a global sports icon. This project explores how the evolution of sports management principles contributed to their success, analyzing marketing strategies, financial growth, and fan engagement techniques. Understanding the Cowboys' business model provides insight into how modern sports franchises maximize profitability while maintaining strong fan loyalty.

4. From NFL Player to Coach: A Biography of Aaron Glenn

Presenter: Jordan Cook

Research Advisor: Dr. Daniel Krywaruczenko

Sports Management, Centenary College of Louisiana

Aaron Glenn, a former NFL cornerback, has transitioned into a prominent coaching career. His decade-long playing career showcased his leadership, resilience, and deep knowledge of the game. After his playing days, he joined Cleveland Browns' scouting department before becoming a coach for several teams. Now, he's the new head coach for the New York Jets. I'm presenting on Glenn's journey from an elite player to a respected coach. I'll discuss the challenges and successes he faced during his transition, as well as how his playing career and scouting experience helped him become one of the top young coaches in the NFL this year.

5. How the Three-pointer Changed the Game of Basketball

Presenter: Jakobi Greenleaf

Research Advisor: Dr. Daniel Krywaruczenko

Sports Management, Centenary College of Louisiana

In my project I'm talking about how the nba games has changed because of the 3 pointer shot alone it has become one of the most taken shots in all of basketball team regular pass up the lay up just to take a 30 foot shot or and catch nd shoot shot. Team have change and adjust their line just to be able to make 3 point shot and also defend the 3 point shot. Team are now going smaller then they used to be like really smaller and I want to show how the numbers show why this is a great move in winning more game.

6. Game-Day Rituals: The Influence of Superstitions on Athletes and Sports Performance

Presenter: G'Colby Spivey

Research Advisor: Dr. Daniel Krywaruczenko

Sports Management, Centenary College of Louisiana

This project explores the role of superstitions in sports and how they affect athletes' performance, mindset, and decision-making. Many athletes, from amateurs to professionals, follow specific rituals or believe in lucky charms to enhance their chances of success. These beliefs often stem from psychological factors such as confidence, anxiety reduction, and the illusion of control.

7. Leveraging Human-Induced Pluripotent Stem Cell-Derived Cardiomyocytes for Cardiovascular Disease Modeling

Presenter: Tarif Islam

Research Advisor: Dr. Hilansi Rawat and Dr. Tarek Magdy

Department of Pathology and Transitional Pathobiology, LSU Health Shreveport

Human-induced pluripotent stem cells (hiPSCs) provide a novel platform for studying cardiovascular diseases and drug discovery. hiPSCs can be generated autologously, avoiding ethical concerns while recapitulating the donor's genetic profile. This makes hiPSC-derived cardiomyocytes (iPSC-CMs) ideal for personalized medicine. Sepsis-induced cardiomyopathy (SICM) is a fatal acute ventricular dysfunction unrelated to myocardial ischemia and is associated with a significant increase in the mortality rate of up to 70-90%. Although factors such as male sex, age, hemoglobin level, and diabetes are risk factors for SICM, the mechanisms remain poorly understood, as current in vivo models do not fully capture human cardiomyocyte response to sepsis. In this study, we differentiated hiPSCs into cardiomyocytes and treated them with 10% human sepsis serum for 24 hours. Immunofluorescence analysis revealed disorganized myofilament structures and cell death; mirroring SIC features. These results underscore the potential of hiPSC-CMs as an in vitro model for sepsis-induced cardiovascular dysfunction.

8. Evaluating Duckweed's Potential in Absorbing Ammonium Chloride and Dipotassium Phosphate as a Phytoremediation Solution for Polluted Water

Presenter: Adele Bihler, Sarah Baquedano, Briana Aguirre, and Rachael Ayres

Research Advisor: Dr. Rebecca Murphy

Biology, Centenary College of Louisiana

Algal blooms in the Shreveport-Bossier area threaten water quality by depleting oxygen and increasing toxins. Phytoremediation, using plants to remove contaminants, offers a potential solution. This study examines duckweed's (*Lemna* spp.) ability to absorb ammonium chloride (NH_4Cl) and dipotassium phosphate (K_2PO_4), key contributors to algal growth. In a controlled laboratory experiment, duckweed was introduced to water samples containing these chemicals and fertilizer. Water quality was monitored over the span of a week utilizing spectrophotometry, pH measurements, and qualitative root growth analysis. Preliminary results indicate significant nitrogen and phosphorus absorption by duckweed, reducing contaminant levels over time. These findings suggest duckweed's potential as a cost-effective, eco-friendly approach to mitigating algal blooms. However, further research is needed to evaluate large-scale applications in natural ecosystems. If successfully implemented, duckweed-based phytoremediation could improve water quality and protect aquatic ecosystems.

9. Beer Bottles as Helmholtz Resonators

Presenter: Emma Foster

Research Advisor: Dr. David Kordahl

Physics, Centenary College of Louisiana

A Helmholtz resonator consists of a large, enclosed cavity with a small neck and opening, and displays a type of air resonance when air is forced in and out of it. By changing the size of the opening and the cavity, the resonance frequency of the resonator is changed. By applying the Helmholtz model to a beer bottle, the air plug at the opening of the bottle can be treated as a damped harmonic oscillator. This experiment demonstrates how a beer bottle can be used as a Helmholtz resonator, and how parameters for a damped oscillator can be extracted.

10. Diffraction by Everyday Objects

Presenter: Jasmine Jones

Research Advisor: Dr. David Kordahl

Physics, Centenary College of Louisiana

Diffraction is a fundamental wave phenomenon that occurs when waves encounter obstacles or openings comparable in size to their wavelength. In this experiment, lasers were used as the light source to analyze the diffraction patterns produced by a phone screen, CD, and DVD. The pixels per distance of a phone screen were measured when using the screen as the diffracting element. Similarly, the track and pit spacing of a CD and DVD were measured using the discs as the diffracting elements. Smaller track spacing leads to an increase of the spiral track length which increases the data capacity of the disc. Comparing the track spacings of the discs leads to a comparison of the data capacity of each disc. The estimates were then compared to manufacturer specifications to assess the accuracy of the calculations.

11. Constructing a Cloud Chamber to Identify and Record Cosmic Particles

Presenter: Trinity Thomas

Research Advisor: Dr. David Kordahl

Physics, Centenary College of Louisiana

Particle physics is the study of the fundamental particles of matter and radiation. These elementary particles are everywhere, but they are far too fast and small to observe with the naked eye. One of the many innovations of particle physics, the cloud chamber, allows for the observation and identification of these particles through the patterns they create in isopropanol gas. This experiment aims to successfully construct a cloud chamber to identify and record naturally occurring cosmic rays and particles emitted by radioactive materials.

12. Long-term Effects of Methamphetamine on Cardiovascular Function

Presenter: Alejandro Fuentes

Research Advisor: Dr. Gopi Kolluru

LSU Health Science Center, Department of Pathology

Methamphetamine (METH) is a highly addictive stimulant used globally with long-lasting, harmful effects on the cardiovascular system. It affects over 27 million people worldwide. METH-related hospitalizations due to heart failure has increased significantly in the United States. Importantly, age groups 26-40 years have higher incidence rates of cardiovascular dysfunction (CVD). Additionally, the

consequences of recovering from METH are largely unknown in the cardiovascular system. Our previous data reports that METH induces cardiovascular dysfunction via inhibition of Cystathionine-gamma-lyase (CSE)/ Hydrogen sulfide (H₂S) signaling causing a pro-aging phenotype in younger mice. In this study, we evaluated the long-term effects of METH on cardiovascular function.

1 8 2 5 Centenary 2 0 2 5



*A community tradition for over 30 years, the Research Conference
is modeled on long-standing academic traditions
of conference-based information sharing and feedback.*



centenary.edu/researchconference