LINDENWOOD SHOWCASE 2026

Thursday, April 23
8:00 a.m. - 5:00 p.m.

The winner of this year's logo contest was Aubrey Wortmann, an undergraduate student from the College of Arts and Humanities – congratulations Aubrey!

Scan QR code to access the full program book!

Refreshments available
in 3rd floor atrium

Welcome to the 2026 Annual Lindenwood Showcase!

This day stands among the most meaningful moments in our academic year. The Lindenwood Showcase is a powerful affirmation of who we are as a scholarly community—faculty, staff, and students united in the pursuit, creation, and sharing of knowledge.

Today, we come together to celebrate the scholarly and creative work of our faculty, staff, and students—and to honor the joy of learning that defines our Lindenwood community. Recognizing authentic learning, rigorous inquiry, and meaningful success is central to our mission as an institution of higher education. By highlighting our work, we model for our students—and for one another—the profound impact of curiosity, discipline, and intellectual courage.

This celebration reflects the very heart of our university. We honor the faculty and staff whose expertise, mentorship, and scholarship shape our academic culture, and we especially celebrate our students as emerging scholars and artists. Through presentations, posters, performances, and various displays of learning, our students demonstrate not only depth of knowledge in their chosen fields, but also the essential power skills that prepare them for leadership and service: critical thinking, creativity, responsible citizenship, and clear, respectful communication.

Most importantly, today we celebrate the best of Lindenwood—an academic community committed to discovery, expression, and the transformative power of learning. Your work matters, and it deserves to be seen, shared, and celebrated. Congratulations on all you have achieved. Thank you for contributing to this remarkable day. Let's enjoy and honor this celebration of learning together.

Sincerely,
Kathi Vosevich, Ph.D.
Provost and Vice President of Academic Affairs

Snapshot of the Day

8:00–8:30 Coffee and Pastries
Harmon Hall

8:30-9:00 Opening Remarks
Dunseth Auditorium, Harmon Hall

9:00–12:00 Faculty Professional Development Sessions and Faculty Presentations
Harmon Hall

12:00–1:00 Lunch
Harmon Hall Lobby

12:15–1:00 "From Lindenwood to Sarajevo: Lessons Learned from a Fulbright U.S. Scholar" with Professor Amy Estlund
Dunseth Auditorium Harmon Hall

1:00-5:00 Networking Lounge with LSG and Community Partners
LARC 325

1:15–2:00 Student Poster Session 1
LARC Lobby and Second Floor Balcony

2:00–2:45 Student Oral Presentations
LARC Classrooms

2:45–3:30 Student Poster Session 2
LARC Lobby and Second Floor Balcony

3:30–4:15 Student Oral Presentations
LARC Classrooms

Program Navigation

Opening Remarks (8:30-9:00 a.m.)

Dunseth Auditorium, Harmon Hall

Join us as Lindenwood University leadership kicks off the second annual Lindenwood Showcase with a warm welcome and a look at the exciting day ahead.

Faculty Professional Development Sessions (9:00-12:00)

Room: 136, Harmon Hall

Time: 9:10-10:00

Behind Every Poster: Faculty Approaches to Inspiring Students

Presenter(s): Colleen Biri, Michiko Nohara-LeClair, Marcus Smith, Kyle Sunderland

Summary: During the afternoon of the Showcase, Lindenwood students will present their research in poster and oral presentations. This work, for many, is also headed to local and national conferences. But how did they get there? In this session, faculty from varied disciplines share the mentoring strategies, creative nudges, and disciplinary knowledge that help students take their research beyond the classroom.

Room: 119, Harmon Hall

Time: 9:10-10:00

Using Classroom Technology to Control Attention, Interaction, and Visibility

Presenter(s): *Tim McNamee and Adam Valencic*

Summary: Learn what technology is available in Lindenwood classrooms, how to use it, and where to get help, followed by practical strategies for applying it to teaching. This session begins with a classroom technology overview from Classroom Support Supervisor, Tim McNamee followed by Adam Valencic, Manager of Learning Design showing ways to use classroom technology to control attention, structure interaction, and make student thinking visible. Participants will also

consider how physical space, room setup, and environmental factors impact learning.

Room: 137 Harmon Hall

Time: 9:10-10:00

Sharpen, Don't Replace: Teaching with AI Across the Disciplines

Presenter(s): *Justine Pas, Mary Silverglate, Melissa Baker, Kadence Berry, and Mattie Ohlsen*

Summary: In this session, two Lindenwood faculty, Justine Pas and Mary Silverglate, share how they ' ve integrated AI to sharpen rather than replace student skills. Dr. Pas developed a Student AI Consultant model in an Honors Composition course and a constraint-based prompting framework that teaches students to use AI as a diagnostic tool rather than a ghostwriter. Professor Silverglate redesigned a mathematics course around real client data projects, where students experiment with AI-generated code while navigating professional ethics around data privacy and responsible use. Their students, Melissa Baker, Kadence Berry, and Mattie Ohlsen, join the conversation to share what it feels like to develop critical thinking and disciplinary expertise alongside AI.

Room: 233 Harmon Hall

Time: 9:10-10:00

Faculty Presentations by Trent Olsen and Gaurango Banerjee

Presenter(s): *Trent Olsen and Gaurango Banerjee*

Summary: "Paradoxical Masculinity: Eugène Delacroix ' s Louis August Schwiter and the Post-Imperial Dandy" by Trenton Olsen ; "A Cost-Benefit Analysis And Ethical Considerations In Applications Of Blockchain Technology In Financial Markets" by Gaurango Banerjee

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Room: 217 Harmon Hall

Time: 9:10-10:00

Faculty Presentations by Chajuana Trawick Ferguson and Elisabeth Erickson

Presenter(s): *Chajuana Trawick Ferguson and Elisabeth Erickson*

Summary: "The History of Annie Turnbo Pope Malone and Poro College in St. Louis, Missouri from 1902-1930" by Chajuana Trawick Ferguson ; "I Can't Do This Alone": Allison Feaster And The Reproduction Of The White American Dream by Elisabeth Erickson

Room: 243 Harmon Hall
Time: 9:10-10:00
Faculty Presentations by Ben Cooper & Morgan Butler
Presenter(s): *Ben Cooper and Morgan Butler*
Summary: "When Marble Becomes Lead: Hawthorne's Faun and Gli Anni di Piombo, 1860-1977" by Ben Cooper
"Politics Or Platform: How Social Identity And News Consumption Shaped Perceptions Of U.S. University Pro-Palestine Encampment Protests" by Morgan Butler

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Room: 229 Harmon Hall
Time: 9:10-10:00
Faculty Presentations by Betsy Melick and Ben Brink
Presenter(s): *Betsy Melick, Sue Edele, Elizabeth Fleitz and Ben Brink*
Summary: "Human-AI Teaming In The Development Of A High-Level Systems Model" by Ben Brink; "Developing AI Literacy in Composition Courses" by Betsy Melick, Sue Edele & Elizabeth Fleitz

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Room: 121 Harmon Hall
Time: 10:10-11:00
Course ReDesign Strategies to Benefit Novice, Intermediate, and Advanced Learners
Presenter(s): Stephanie Jost and Heather Sandy
Summary: Explore practical course redesign strategies that support novice, intermediate, and advanced learners using examples from the ARTH 11000 redesign. Stephanie Jost and Heather Sandy highlight various strategies such as microlearning and scaffolded assessments to create flexible, engaging, and accessible learning experiences for all learners.

Room: 131, Harmon Hall
Time: 10:10-11:00
Guiding with Intention: The Lindenwood Learning Academy Advising and Mentoring Fellowship in Action
Presenter(s): *Learning Academy Advising and Mentoring Fellows*
Summary: Meet this year's LLA Advising & Mentoring Fellows and hear firsthand how they're rethinking student support. From new resources to innovative approaches, these projects represent Lindenwood's commitment to relationship-rich education at every stage of the student journey.

Room: 136 Harmon Hall
Time: 10:10-11:00
SoTL Institute Panel
Presenter(s): *Scholarship of Teaching and Learning Institute Participants*
Summary: Participants in this year's Scholarship of Teaching and Learning Institute will discuss their projects, study design, and takeaways from participating in the SoTL institute.

Room: 231 Harmon Hall
Time: 10:10-11:00
Faculty Presentations by Lynette Dixon and Stephanie Afful
Presenter(s): Lynette Dixon and Stephanie Afful
Summary: "From Expert to Guide: Integrating Motivational Interviewing into Nurse Practitioner Education" by Lynette Dixon "Navigating Burnout: Pedagogical Strategies for High-Risk Topics" by Stephanie Afful

Room: 250 Harmon Hall
Time: 10:10-11:00
Faculty Presentations by Ben Fulcher and Amanda Harrod
Presenter(s): Ben Fulcher and Amanda Harrod

Summary: “Failing Forward: Insights from Difficult Games” by Ben Fulcher; “St. Charles Community Health Collaborative Updates” by Amanda Harrod

Room: 254 Harmon Hall
Time: 10:10-11:00
Faculty Presentations by Patrick Harty
Presenter(s): Patrick Harty
Summary: “Perspectives on Applied Research in Unique Populations”

Room: 136 Harmon Hall
Time: 11:10-12:00
Tips for Successful FSAC Applications
Presenter(s): *Betsy Melick (facilitator)*
Summary: FSAC representatives from each College will share tips for applying for course releases for scholarly activity. This session will include a Q&A.

Room: 131 Harmon Hall
Time: 11:10-12:00
AI, Unleashed: A Faculty Demo Showcase
Presenter(s): *Dan Plate (facilitator), Laura Wehmer-Callahan, Matthias Wood*
Summary: “I didn't know AI could do that." If you've ever said or thought those words, this session is for you. Selected Lindenwood faculty will offer short demonstrations of the surprisingly creative ways they are using AI in their work, from refreshing course design and generating meaningful student feedback to streamlining research workflows and building student practice tools. Come ready to be surprised and leave with at least one new idea to try.

Room: 138 Harmon Hall

Time: 11:10-12:00

Same Course, New Look: How the Black Editor Transforms Teaching and Learning in Canvas

Presenter(s): *Kristen Levin and Michael Fetters*

Summary: Canvas Block Editor can improve engagement, visual presentation and usability of your courses. Kristen Levin and Michael Fetters present the setup, features, and techniques to help you re-envision your content to enhance students ' experiences in your courses. Whether a Canvas newcomer or a seasoned user, you 'll leave with actionable ideas and the confidence to start building block by block.

Room: 217 Harmon Hall

Time: 11:10-12:00

Faculty Presentations by Weston Anderson and Michiko Nohara-LeClair

Presenter(s): *Weston Anderson and Michiko Nohara-LeClair*

Summary: "Social Support and Social Undermining Among Police Cadets" by Weston Anderson; "Press Start to Connect: The Student Engagement Game" by Michiko Nohara-LeClair & Leslie Barry

Room: 229 Harmon Hall

Time: 11:10-12:00

Faculty Presentations by Sara Bagley and Annie Alameda

Presenter(s): *Sara Bagley and Annie Alameda*

Summary: "Memory Makers: High Impact Through A Service-Learning Project" by Sara Bagley; "How To Create Campus And Community Service Learning Aligned To Your Course Learning Outcomes: A Roadmap For Implementation And Sustainability" by Annie Alameda

Room: 243 Harmon Hall

Time: 11:10-12:00

Faculty Presentations by Justine Pas

Presenter(s): *Justine Pas*

Summary: "Transforming the Monolingual Mindset through International Collaboration"

Lunch (12:00-1:00) Harmon Hall Lobby

"From Lindenwood to Sarajevo" (12:10–1:00)
Dunseth Auditorium, Harmon Hall

"From Lindenwood to Sarajevo: Lessons Learned From a Fulbright U.S. Scholar"
Presenter: *Amy Estland*
Summary: Amy Estlund, Associate Professor of Public Health, discusses her Fulbright experience during Fall 2025. Attendees will learn about the Fulbright application process and timeline, hear about Amy's professional and personal experiences while teaching and living abroad, and understand how the Lindenwood community benefits from these types of prestigious experiences. Bring your lunch!

Networking Lounge (1:00-5:00)

LARC 325

Students, staff, and faculty are invited to join our community partners in the networking lounge! Join representatives from Carshield, Fastenal, Army ROTC, USPS, Job Seekers' Garden Club, Bayer, and St. Charles Department of Public Health for refreshments, connection, and conversation.

Student Poster Presentations: Session 1 (1:15–2:00)

LARC Lobby and 2nd Floor Balcony

#1: See Fast, Play Fast: Effect of Lacrosse Goggles on Visuomotor Reaction Time

Presenter(s): Isabella DiSciascio

Faculty Sponsor: *Kyle Sunderland*

Abstract: Women's lacrosse mandates goggles to prevent eye injuries, but they may limit peripheral vision, slowing reactions and affecting performance. PURPOSE To determine whether wearing lacrosse goggles alters peripheral visuomotor simple reaction time (SRT) in NCAA women's lacrosse athletes. METHODS Twenty-eight female collegiate lacrosse athletes (attack = 9, midfield = 8, defense = 11) completed two lab visits at least five days apart: familiarization and testing. The SRT task used a visuomotor device with five concentric rings (R1–R5). During 1-minute trials, a red light illuminated randomly, and participants responded as quickly as possible. Familiarization included five rounds of three trials without goggles. Testing included three rounds of three trials: the first a warm-up without goggles, followed by randomized goggle and no-goggle conditions. Paired-samples t-tests compared overall SRT, and two-way repeated-measures ANOVAs assessed quadrant- and ring-specific SRT. RESULTS Goggles significantly increased SRT (696.0±46.7 ms vs. 668.2±51.3 ms). No condition × quadrant or × ring interactions or quadrant effects were observed. A main effect for ring ($p<0.001$) showed slower SRT from center to periphery, with R5 slowest. CONCLUSIONS Lacrosse goggles slow overall SRT in NCAA athletes, producing a general decrement rather than a peripheral-specific deficit.

Judging Category: Original Research

#3: Navigating the Forced Partnership
Presenter(s): Samantha Levine
Faculty Sponsor: Daniel Plate
Abstract: I created a presentation for my Composition II class where we focus on navigating a new digital generation where AI is a big focus; through class debates and blog posts about our own interests and thoughts mainly centering around AI. My presentation highlighted my post, "Forced AI partnership", where I crafted a blog explaining how AI is reshaping our work places, and adapting to it is crucial for business to stay in the competition. My presentation explores navigating the future by becoming partners with AI. I also explored this concept personally on this project by using AI resources to help create this presentation.
Judging Category: Exploratory Project

#5: Effectiveness of Rule Modification and Contact Exposure Reduction in Adolescent Contact Sports
Presenter(s): Alex Martin
Faculty Sponsor*:* Brent Holtgrewe
Abstract: Clinical Question: In adolescent athletes participating in contact sports, does rule modification or contact restriction reduce sport-related concussion incidence compared with standard full-contact rules? Background: Sport-related concussion remains a major concern in youth athletics. Structural prevention strategies, such as limiting contact exposure, have been proposed as effective approaches, though their comparative effectiveness remains under review. Methods: A critically appraised topic (CAT) was conducted using Google Scholar to identify peer-reviewed studies from the past 15 years examining rule modification or contact restriction as primary prevention strategies. Six high-quality studies met inclusion criteria, including one meta-analysis, one systematic review, prospective cohort studies, and a policy statement. Results: Evidence consistently showed that reducing athlete-to-athlete contact—such as delaying body checking in youth hockey and limiting full-contact practices—significantly decreased concussion incidence. Studies on head impact exposure supported these findings. Equipment-based and education-only interventions demonstrated inconsistent effects. Conclusions: Rule modification and contact restriction are the most

consistently supported strategies for reducing sport-related concussion in adolescent contact sports. Policies that limit high-risk contact should be prioritized in prevention efforts
Judging Category: Exploratory Project

#7: Affirmation to No End: An Exploration of Sycophantic Chatbots and AI Psychosis
Presenter(s): Elseah Congiardo
Faculty Sponsor: Brynne Schroeder
Abstract: Recent years have seen the rapid increase of Artificial Intelligence (AI) technologies in nearly every aspect of modern-day life. Recent reports have shown that AI chatbots are playing a highly distressing and dangerous role in the lives of many, sometimes resulting in breaks from reality, known as psychosis. This research paper explores the mental health concern of AI psychosis through analyzing the individual experiences of those who have been significantly impacted by interactions with sycophantic AI chatbots. The tendencies of AI chatbots to be exceedingly encouraging and affirming without question stem from programming designed to keep users engaged on behalf of data procurement. For individuals who may be mentally unstable, this ceaseless sycophancy is a major contributor to AI psychosis in its confirmation of delusions and exacerbation of fears. Self-reported data from OpenAI is also incorporated to give perspective on the scale of this concern. This review of relevant research and case studies elucidates the potentially life-threatening consequences of AI psychosis. While emphasizing that AI psychosis is not a clinical diagnosis, this paper urges awareness of the devastating impacts of AI on individuals of varying degrees of mental wellness.
Judging Category: Exploratory Project

#9: Seeing Beyond the Surface: Understanding Visual Processing Disorder
Presenter(s): Sydney Goforth
Faculty Sponsor: Rebecca Panagos
Abstract: This poster was completed as a project in my Education of the Child with Exceptionality course focusing on Visual Processing Disorder (VPD). The purpose of this poster is to deepen understanding of VPD and

to provide educators with effective strategies to support academic success and inclusive practices in the classroom. A variety of research studies and educational resources were reviewed to develop this presentation, with a QR code included to provide access to all referenced materials.
Through research, I identified key characteristics of VPD and explored how difficulties with visual discrimination, spatial relationships, and visual memory can impact student learning across content areas. I compiled practical, classroom-based strategies for educators, including the use of multisensory instruction, assistive technology, modified materials, and structured visual supports to enhance accessibility and engagement for students with VPD. The project also includes an interactive simulation designed for use in K–12 classrooms. This activity allows students to experience challenges similar to those faced by individuals with VPD, promoting empathy, awareness, and inclusivity among peers. Overall, this exploratory project
highlights the importance of intentional instructional design and supportive classroom environments in helping students with VPD reach their full academic and social potential
Judging Category: Exploratory Project

#11: Past, Present and Future of the Dietary Guidelines of America and the Impact on Community Nutrition
Presenter(s): Jordyn Dearth
Faculty Sponsor: Annie Alameda
Abstract: The most recent addition of the Dietary Guidelines of America have been released to the public, and has caused many questions to the community. The guidelines serve not only as a resource for the general public and a resource for local and national policy regarding nutrition. Because community nutrition is directly shaped by these recommendations, exploring its past implementations, present implications and possible future actions can help in understanding how these guidelines influence public health at local and national levels. This project aims to explain the impact of the past Dietary Guidelines, show the newest Dietary Guidelines, and predict how the 2026 edition might be used to shape local nutrition policy. It will also explore how changes to

the guidelines have effected public health and how public health has influenced the making of said guidelines.
Judging Category: Exploratory Project

#13: Developmental Disruption or Adaptive Resilience? Developmental Stage as A Potential Risk or Protective Factor for Developmental Outcomes Related to COVID-19 School Closures
Presenter(s): Madison Darr
Faculty Sponsor: Brynne Schroeder
Abstract: This literature review examines how COVID-19 school closures affected social connectedness, identity development, and academic motivation across early, middle, and late adolescence. Drawing on Self-Determination Theory, this literature review synthesizes research on disruptions in social functioning, educational experiences, and developmental processes. Research suggests that these disruptions during school closures have contributed to altered motivation patterns (i.e. decreased intrinsic and extrinsic motivation), decreased psychological well-being, and weakened relatedness. These effects may vary by developmental stage, with younger adolescents being more dependent on structured peer interaction and older adolescents likely experiencing increased disruption to identity exploration and future goals. Despite these concerns, increased reliance on digital communication and major shifts in autonomy potentially supported some individuals. Overall, the review indicates that developmental stage plays a critical role in shaping both risk and resilience in response to pandemic-related disruptions, and this could further apply to research in similar fields.
Judging Category: Exploratory Project

#15: The Weight of Marijuana: Marijuana as a Gateway to Binge Eating
Presenter(s): Hailey Proctor
Faculty Sponsor: Rachael Gossett
Abstract: As many societies move toward the legalization of marijuana the other underlying side effects and symptoms of this drug must be analyzed so that users may be fully informed about the effects of their drug usage. Therefore, this exploratory project looks to evaluate the relationship between the use of marijuana as a recreational drug and binge eating. Throughout the project three main topics have been explored

including the adverse outcomes of binge eating and over eating, how cannabis use can play a role in binge eating, and if binge eating can be a contributing factor in initiating the use of marijuana. Throughout this exploration it was found that, women are more likely to experience the relationship between cannabis use and binge eating than men, and cannabis has been found to motivate the initiation of eating and an increased desire to continue eating. Binge eating can also be a predictor of initiating marijuana usage, meaning that people who are already partaking in binge eating practices may be more likely to partake in marijuana consumption.
Judging Category: Exploratory Project

#17: Nazca Aquifer: Sustainability Assessment of Groundwater Use
Presenter(s): Lauren Roberts
Faculty Sponsor: Ana Londono
Abstract: The Nazca aquifer in the Nazca province of Peru is a key resource for both agricultural use and the community. It provides a source of clean, potable water in an otherwise arid climate. An understanding of climate history and anthropogenic sources helps establish a baseline for water use and how rainfall patterns affect recharge, thereby influencing aquifer stability in the region. Analysis from the Gravity Recovery and Climate Experiment (GRACE) and the Geospatial Interactive Online Visualization and Analysis Infrastructure (GIOVANNI) was used to understand current trends in groundwater depletion and the extent to which anthropogenic and climate events affect water use. Anomalies in typical water-equivalent changes link El Niño events to fluctuations in irrigation patterns. Both have shown evidence of impacting the recharge pattern in the Nazca aquifer and contribute to the consistent decline over time.
Judging Category: Exploratory Project

#19: A Comprehensive Analysis of the World's Largest Entertainment Conglomerate: The Walt Disney Company
Presenter(s): Judah Davis, Brendan Finnerty
Faculty Sponsor: Dr Renee Porter
Abstract: This project presents a comprehensive strategic and operational analysis of The Walt Disney Company to identify key gaps

within its current business model. Using an integrated management policy approach, the study evaluates external and internal influences on Disney's competitive position through the application of established analytical frameworks, including PESTEL, Porter's Five Forces, the VRIO framework, and SWOT analysis. Peer-to-peer comparisons of the company's financial health and capacity for growth were then assessed utilizing liquidity, leverage, efficiency, and profitability ratios. In compiling such strategic and financial insights, this analysis aims to inform the development of a purposeful SMART goal recommendation, addressing both organizational and operational shortfalls.
Judging Category: Exploratory

#21: Concussion History and Reaction Time in College Athletes
Presenter(s): Katelyn McGrail
Faculty Sponsor: Dr. Kyle Sunderland
Abstract: Concussion in sports is a common injury athletes encounter. The full effects concussions could have are not fully clear as they will affect every individual differently. Reaction time is an important feature of sports and concussions may negatively impact reaction time which can affect performance. A Dynavision D2 will be used to assess athletes' reaction time. Participants will complete five rounds consisting of three 1-minute bouts each, and the average of the final three rounds will be calculated to determine reaction time. Athletes will complete a survey at the time of testing to collect the number of concussions they've encountered and when their most recent one occurred. The purpose of this research is to assess if there's a correlation between concussion history and reaction time.
Judging Category: Proposal Project

#23: Growth Promotion in Dwarf Millet: An Analysis of Gibberellic Acid Treatment
Presenter(s): Emma Lewis, Gracie Jones, Alejandro Molina, Robert Larsen
Faculty Sponsor: Joshua Neely, Sagar Kalauni
Abstract: In this project, we explored how Gibberellic Acid (GA3), a natural growth hormone in plants, affects the development of dwarf Setaria Viridis. Dwarfism in these plants is due to either a lack of this

hormone or the inability to process it correctly. Plants from multiple mutant families and a wild-type control were grown under controlled conditions using a paired-tray experimental design. One tray in each pair received GA3 treatment, while the other served as a control. Seeds were planted, monitored for germination, and maintained with consistent light, temperature, and watering conditions throughout the experiment. When the plants sprouted on week 2 and again on week 4, soil nutrient solution was added to both trays. Beginning the third week of growth, GA3 solution was applied to treatment trays on days 14, 16, and 18, and plant responses were observed and recorded carefully. Data collection included germination rates, plant height, number of tillers, panicle emergence, and panicle length. Phenotypic variations among mutant families were recorded and compared to the wild type. The results contributed to identifying traits associated with GA-mediated regulation of plant development and growth patterns in grasses.
Judging Category: Original Research

#25: Lindenwood Football Program Mental Health
Presenter(s): Tayvon Freeman
Faculty Sponsor: Amanda Harrod
Abstract: Student athletes often navigate intense academic, athletic, and social pressures, yet many do not seek the mental health support they need. This project focuses specifically on the mental health beliefs, attitudes, and help-seeking barriers among student-athletes within the Lindenwood University Football Program. Primary data were collected through an anonymous Qualtrics survey distributed to 100 rostered football players, aiming to capture their perspectives on stigma, comfort levels, perceived barriers, and awareness of available mental health resources. Data were analyzed using SPSS with descriptive frequencies to identify patterns unique to this team environment. The study is grounded in existing research highlighting that fewer than half of student-athletes experiencing mental health concerns seek care, often due to internal and external pressures. Findings from this project provide insight into how athletes perceive mental health support and what factors may encourage or discourage them from accessing services. This research has meaningful implications for designing targeted interventions, improving athlete-

centered mental health education, and informing broader efforts to enhance well-being within collegiate sports programs.
Judging Category: Original Research

#27: How does the concentration of Gibberellic Acid (GA3) impact the growth of different Setaria Viridis mutants?
Presenter(s): Liz Rittenour, Gracey Horn, Lawson Veit, Grant Juris, Rodrigo Suarez Almajano
Faculty Sponsors: Joshua Neely, Sagar Kalauni
Abstract: We tested the relationship between gibberlin and plant growth through the use of gibberellic acid and different dwarf millet variants. Subjects were split into two groups: group one with no gibberellic acid application, and group two with periodic gibberellic application. Each group consisted of 17 pots. Each row held one mutant variant, while the bottom left pot was removed to store water. The objective was to have significant data by the end of the semester to prove the relevant relationship of gibberellin and plant growth.
Judging Category: Original Research

#29: Complete Synthesis of a Beta-linked Disaccharide
Presenter(s): Abby Dunn
Faculty Sponsor: Scott Hasty
Abstract: The continual need to develop strategies and methods for oligosaccharide synthesis drives carbohydrate chemists to discover new glycosides. This push has led to the discovery of an attractive 6-methylpyrid-2-yl leaving group for chemical glycosylation. Presented are three syntheses of the molecules 2-mercapto-6-methylpyridine, glycosyl donor 6-methylpyrid-2-yl-2,3,4,6-O-acetyl-1-thio-β-D-glucopyranoside, and glycosyl acceptor methyl-2,3,4-O-benzyl-α-D-glucopyranoside. The 2-mercapto-6-methylpyridine molecule was affixed to the requisite sugar to produce the glycosyl donor, 6-methylpyrid-2-yl-2,3,4,6-O-acetyl-1-thio-β-D-glucopyranoside. This sugar was then coupled with methyl-2,3,4-O-benzyl-α-D-glucopyranoside using silver triflate (AgOTf) to obtain the targeted disaccharide.
Judging Category: Exploratory Project

#31: Effects of Menstrual Cycle Phases on Muscular Strength and Ligament Laxity
Presenter(s): Nicole Waldo Johnson
Faculty Sponsor: Dr. Jessica Moon
Abstract: Female participation in sport continues to increase, yet women remain largely underrepresented in research. Due to hormonal differences, additional research is needed to understand how menstrual cycle (MC) phases influence performance and injury risk. Females experience higher incidences of anterior cruciate ligament (ACL) injuries, which may be influenced by hormonal fluctuations. The purpose of this study is to examine how MC phases and changes affect muscular strength and ligament laxity at the knee. Muscular strength and ligament laxity will be tested twice during the MC: once during the early follicular phase (EFP) and the second set are to be collected during the ovulatory phase (OP). Ligament laxity will be measured using arthrometer testing of the ACL at varying forces on both legs to calculate a compliance index. Muscular strength will be evaluated using maximal-effort knee extensions at two velocities using an isokinetic dynamometer to determine peak torque and hamstring-to-quadricep ratios. It is expected that muscular strength and ligament laxity will increase during the OP compared to the EFP. These findings may help identify periods of increased ACL injury risk phases in female athletes.
Judging Category: Proposal Project

#33: Evaluating the Effects of Increased Concussion Research on Diagnosis and Evaluation within the Athletic Training Profession
Presenter(s): Lauren Lehmann
Faculty Sponsor: Michael Tzianos
Abstract: This research project aims to evaluate how concussion evaluation and diagnosis have evolved and how these changes have affected an athletic trainer's treatment abilities. A comprehensive review of current and past research was conducted to assess all changes in the evaluation techniques, return to play process, as well as the increase in awareness of the public. Additionally, a survey sent to current practicing athletic trainers in the St. Louis area provided insight into current practices in the field and assessed changes they have seen throughout their careers. By comparing earlier research and survey results, a

foundation has been established to assess how advances in research have changed the ability to diagnose and treat concussions over time. The findings have suggested an increase in diagnosis and evaluation abilities, but they have shown to have been consistent for the past 5-10 years.
Judging Category: Exploratory Project

#35: An Evaluation of Data from a Regional Transportation Office
Presenter(s): Kendall Klewer, Joselyn Wood, Maxwell Cook
Faculty Sponsor: Mary Silverglate
Abstract: The given client is the regional office of a state department of a transportation agency that oversees five counties within the state. The regional office has provided information pertaining to areas such as financials, car accidents, and contractors which will be used to explore a variety of data trends and insights. The goal of the data exploration is to determine if there are other ways in which money can be reallocated to create an optimized spending plan for future projects. Actual award cost versus estimated award cost, contractor versus timeliness of projects, and type of job versus employers in a county are just a few examples of tests that will be run to explore data. The R and Python programming languages along with Microsoft Excel will be used for the duration of the project.
Judging Category: Exploratory Project

#37: Functional Outcomes of Trauma Exposure in College Students
Presenter(s): Luisa Gonzalez, Reghan Gacki
Coauthor: Paula Carvalho
Faculty Sponsor: Brittany Goodman
Abstract: The current study investigates trauma exposure in college students and how it relates to social and attentional functioning. Participants were undergraduate students (Mage = 20.8), the majority of which were women (72%), who completed informed consent followed by demographic questions, a trauma exposure assessment, a modified perceived social functioning scale, and a self-report assessment of attentional focusing and shifting abilities. To objectively assess attention, participants completed a modified Simon Task (Steudte-Schmiedge et al., 2014), followed by an adapted social stress task (Zibetti, 2024) including a mock interview and a mental arithmetic task. Heart rate variability

(HRV), respiration, and electrodermal activity (EDA; sweat response) were recorded during the social stress task. Participants were categorized into two groups for analysis: a low-severity trauma group and a high-severity trauma group. While no differences in HRV were observed between the groups at any period, the high severity group scored significantly higher on EDA than the low
severity group during the speech ($p = .011$), arithmetic ($p = .005$), and recovery ($p = .003$) periods. Additional findings will also be presented. These findings may contribute to a deeper understanding of the cognitive and social impacts of trauma within university populations.
Data collection is almost complete and data processing is ongoing. We hypothesize that participants with higher trauma exposure will demonstrate worse attention control, lower social functioning, elevated skin conductance and lower HRV during the social stress task, indicating heightened stress reactivity and deficits in stress response regulation. Findings may enhance understanding of the cognitive and social implications of trauma in university populations.
Judging Category: Original Research

#39: Sudden Cardiac Arrest & Newly Diagnosed Arrhythmogenic Cardiomyopathy in a High School Athlete
Presenter(s): Jacob Rolfes
Faculty Sponsor: Mike Tzianos
Abstract: A high school soccer player experienced sudden cardiac arrest during competition and required immediate CPR and AED use. Following resuscitation, physicians ruled out commotio cordis and identified findings consistent with arrhythmogenic cardiomyopathy, supported by a prolonged T-wave on EKG while all other laboratory and catheterization results were normal. The athlete later received an ICD and pacemaker, prompting significant physical, emotional, and lifestyle adjustments. This capstone project examines the emergency response, the role of trained medical personnel at sporting events, and the implications of early cardiac screening for adolescent athletes. Through consented family interviews, structured questionnaires, and case-based data collection, the project explored how medically supervised low intensity exercise may support psychological well-being and quality of life compared to complete activity restrictions. This case aims to raise awareness of hidden cardiac

conditions, improve emergency preparedness in school athletics, and highlight systems level considerations for athlete safety.
Judging Category: Exploratory Project

#41: The Growth Effects of Gibberellin Acid on Setaria viridis
Presenter(s): Riley Massey, Molly Suppa, Isabella Calmet,
Coauthor(s:) Allison Schrumpf, Jamie Karase
Faculty Sponsor: Joshua Neely, Sagar Kalauni
Abstract: This study examined the effects of gibberellic acid (GAs) on growth in dwarf mutant families of Setaria viridis, a model grass species used to investigate hormone-regulated plant development. Dwarf phenotypes in grasses are often associated with disruptions in gibberellin biosynthesis or signaling, making them ideal for evaluating hormone response. Eight mutant families were analyzed using a paired experimental design, where each family was equally distributed between a control group and a GAs-treated group. Seeds were planted in pots with four seeds per pot, maintaining consistent representation of each family across treatments. During the third week of growth, the treatment group received GAs applications on days 14, 16, and 18, while the control group received only water. Plant growth was monitored weekly to assess differences in development between treatments. Results indicated that GAs-treated plants showed increased growth compared to controls, suggesting that the dwarf phenotype in these families is likely linked to deficiencies in gibberellin production rather than signal perception. These findings support the role of gibberellins in stem elongation and developmental regulation, and contribute to understanding the genetic mechanisms underlying growth variation in grasses, with potential implications for crop improvement.
Judging Category: Original Research

#43: An Explainable AI Approach to Team-Based Learning in Business Analytics Education
Presenter(s): Alex Wolf
Faculty Sponsor: Gokhan Egilmez
Abstract: Integration of team-based learning (TBL) is among the important pedagogical approaches to increase course engagement and expose students to craft their team player skills prior to graduation. In this

study, we investigated the critical factors impacting students' overall course and team-based learning (TBL) performance in undergraduate business analytics cohorts over a sample size of 211 students from 7 sections. Select explainable artificial intelligence (AI) methods merged with machine learning (ML) were included to identify critical predictors of overall course and TBL performance. Three team formation methods were investigated: random, self, and Parker's team-player style survey-based, which assesses a student's team player skills in 4 areas: contributor, collaborator, communicator, and challenger. And three types of TBL projects were deployed on different course sections, including: exploratory, service-learning, and work-based learning. Results indicate that the structured team design (Parker's survey-based), consistent engagement, and strong performance on core assessments significantly improve both overall academic performance, engagement, and team-player effectiveness.
Judging Category: Original Research

#45: Artura
Presenter(s): Aidan Byrnes
Faculty Sponsor: Adam Donohue
Abstract: This project is an experimental performance exploring dancers as musical instruments. With funding received through the Lindenwood PRIDE Mini-Cycle grant, a network of custom-built wearable sensors will be worn by two dancers to send data regarding orientation, motion, and position in 3D space. This data will be processed in custom software to translate this data into sound or other musical information in real-time. Rather than acting solely as accompaniment, the music will be derived directly from each dancer through gestures and motion. The generated musical material that one dancer creates will be responded to with improvisation by the other dancer. This results in a feedback loop of improvisation between the dancers and the music. The movement shapes the music, and the music reshapes the movement. This project emphasizes artistic discovery and collaboration. It promotes exploration in contemporary practices involved with experimental music and dance while also exploring the relationship between technology and human expression.
Judging Category: Creative Project

#47: Exploration of Thiouracil Manipulations
Presenter(s): Ally Sprague
Faculty Sponsor: Dr Scott Hasty
Abstract: Thiouracil is a prospective leaving group for increasing the selectivity of carbohydrate glycosylation reactions. Previous work demonstrated the potential use of thiouracil being successfully introduced onto a glucose sugar. Now, the focus leans into manipulating the thiouracil and sugar moieties. These manipulations require multiple steps to deprotect and re-protect the conjoined groups. The goal now is to find the proper manipulations needed to achieve the highest yields of the targeted glucose-thiouracil combinations. This new molecule will then be investigated to determine its potential within the carbohydrate coupling reactions.
Judging Category: Exploratory Project

#49: Markovnikov and Anti-Markovnikov Addition of Hydrochloric Acid to Styrene
Presenter(s): Justin Malawey
Faculty Sponsor: Dr. Delgado
Abstract: Markovnikov and Anti-Markovnikov additions describe organic reactions where a halide (group 7 element) bonded to a hydrogen is added to a double bond, resulting in its elimination. Markovnikov addition describes where the halide bonds to the more stable carbon and the hydrogen to the less stable carbon of the double bond. In an Anti-Markovnikov addition, the placement is reversed by the addition of peroxide. While these mechanisms are well established, Lindenwood does not currently have a lab experiment demonstrating the different effects. The goal of this project was to develop a lab that demonstrates the differences. The additions were performed on styrene because its stable ring structure directs to the remaining double bond. This double bond has vinyl carbons that are classified as primary and secondary benzyllic. There being a large difference between the stability of the potential carbocations being formed should result in two very distinctly different products. This difference could be easily determined by IR and NMR analysis. Hydrochloric acid (HCl) was used due to its liquid form and prevalence. The products of both syntheses were distilled, then analyzed

by IR spectroscopy to confirm the products. NMR analysis was unable to be run due to time restraints.
Judging Category: Exploratory Project

#51: Neuromuscular Function and Balance in Young Adults: Feasibility and Reliability of Strength and Conditioning Assessments
Presenter(s): Riley Fritzsche
Faculty Sponsor: Dr. Jessica Moon
Abstract: Neuromuscular assessments are widely used in exercise science however; the reliability of comprehensive functional testing batteries in healthy young adults remains unclear. Since sex and hormone status may influence performance, this study proposes that neuromuscular outcomes will differ across males, naturally cycling females, and hormonal contraceptive users. This pilot study will evaluate the feasibility and test-retest reliability of a neuromuscular assessment battery in adults aged 18–35 using a repeated-measures design. Participants will complete two identical testing sessions separated by 5–10 days. Assessments will include balance on force plates, handgrip strength, a 5-repetition chair-rise, and the 3-meter Timed Up-and-Go, alongside neuromuscular performance measures such as the isometric mid-thigh pull and isometric and isokinetic knee extension using a dynamometer. Standardized procedures, including warm-ups, joint positioning, and verbal cues, will be replicated across sessions. The goal of this research is to establish reliable protocols and identify potential performance differences across groups, informing future investigations of neuromuscular function in aging populations, particularly during the menopausal transition.
Judging Category: Proposal Project

#53: Environmental Stability Drives Development in Drosophila melanogaste.
Presenter(s): Nestor Omar Rivera Guevara
Faculty Sponsor: Joshua Neely
Abstract: The development of Drosophila melanogaster is highly sensitive to environmental conditions, particularly temperature, which has been shown to influence both developmental rate and lifespan. Previous studies report that higher temperatures accelerate development but may

reduce adult longevity, while field observations in related Drosophila species indicate that stable environmental conditions support greater population success compared to fluctuating ones. Building on this, the present study examined the combined effects of temperature and humidity on fruit fly development. Groups of 10 female flies were placed in culture tubes containing standard medium, with three replicates per treatment. After 48 hours of egg-laying, adults were removed to maintain a controlled number of eggs. Four distinct environmental conditions were tested, and temperature and relative humidity were recorded every two days over a two-week period. Results showed clear differences across conditions. Cooler environments produced approximately 200 larvae, but none developed into adulthood. In contrast, warmer and more stable conditions yielded about 100 adult flies, with roughly 10 completing full development. These findings support previous research on temperature-dependent development and further suggest that environmental stability and moderate humidity enhance developmental success in Drosophila melanogaster.

Judging Category: Original Research

#55: The Chaotic Carbohydrate: Mannose

Presenter(s): Malee Putman

Faculty Sponsor: Scott Hasty

Abstract: The efforts of developing efficient thiomidate-based leaving groups have remained a primary focus in complex carbohydrate synthesis. Over the past few years, the group has investigated the use of 4,2'pyridine-2-mercaptopyrimidine as a glycosol donor leaving group, more specifically, the reactivity with glucose and galactose sugars. Incorporating this bicyclic thiomidate onto different glucose and galactose sugars bearing acetyl, benzoyl, and benzyl protection has allowed us to examine and determine the viability of the leaving groups' reliability under standard activation conditions. Here we present the results of mannose bearing benzyl and benzoyl protecting groups with the thiomidate. Additionally, the coupling of these sugars with a glycosyl acceptor occurs under silver triflate activation. We have determined that this thioimidate reacted efficiently in the coupling of carbohydrates. These studies and results have helped to confirm the effectiveness of

4,2’pyridine-2-mercaptopyrimidine as a leaving group for complex carbohydrate synthesis.
Judging Category: Exploratory Project

#57: Thinking Across Languages: The Relationship Between Bilingualism and Divergent Creative Thinking
Presenter(s): Hailey Veninga, Carys Arend
Faculty Sponsor: Brittany Goodman
Abstract: Bilingualism is associated with enhanced cognitive flexibility and executive control, yet its relationship to creativity remains underexplored. This study examined whether bilingual participants (n = 13) demonstrate higher creative performance than monolingual participants (n = 57), and whether language used during a task relates to divergent thinking. Adult participants (N = 70), were categorized as monolingual or bilingual and completed two Alternative Uses Task prompts (paperclip and safety pin), assessing fluency, flexibility, originality, and elaboration. Monolingual participants completed both prompts in their first language (L1), while bilingual participants completed one in L1 and one in their second language (L2). The majority of participants were White/European American (51.2%), women (54.3%), and middle class (48.6%). Independent-samples t-tests showed no significant differences between bilingual and monolingual participants on any creativity variables (p-range = .061 - .119, Cohen’s d range = .379 - .538). However, examination of the means showed that bilingual participants scored higher than monolingual participants across all creativity measures. Considering the small sample and unequal distribution groups as well as the larger effect sizes, findings suggest a possible advantage in divergent thinking among bilingual participants and indicate a need for further research to better understand how bilingualism may relate to creativity
Judging Category: Original Research

Student Oral Presentations: Session 1 (2:00–2:45)

Room: LARC 03
Moderator: Michiko Nohara-LeClair

2:00–2:15
¡Bienvenido a Perú!
Presenter(s): *April White*
Faculty Sponsor: *Michiko Nohara-LeClair, Pre-Art Therapy*
Abstract: Peru is a country where ancient history and modern life come together in a really unique way. This presentation takes a relaxed look at what makes Peru so special, from the famous peaks of the Andes to the busy streets of Lima. We'll explore the country's deep roots in the Incan Empire and see how those traditions are still a huge part of daily life for people today. Beyond the history, we'll dive into the everyday culture that defines Peru. This includes a look at the incredible food scene, which is famous worldwide for mixing different global flavors into something totally original. We will also talk about the diverse landscape, covering everything from the coastal beaches to the deep Amazon rainforest. By the end of the talk, you'll have a better feel for the laid-back yet vibrant spirit of the Peruvian people and the beautiful scenery they call home. It's a simple introduction to a country that has a little bit of everything for everyone.
Judging Category: Exploratory Project

2:15–2:30
Synesthesia: A cognitive Phenomenon
Presenter(s): *Samantha Williams*
Faculty Sponsor: *Michiko Nohara-LeClair, Psychology*
Abstract: Synesthesia is a perceptual phenomenon in which stimulation of one sensory pathway automatically triggers the stimulation of another. Several types, including grapheme-color, sound-color, lexical-gustatory, and over 70 more have been discovered. This project explores the cognitive and neurological foundations of synesthesia, focusing on current research and evidence that has been found regarding cross-activation between sensory regions of the brain and increased neural connectivity. The presentation examines common forms of synesthesia,

methods researchers use to verify its consistency, and how neuroimaging has contributed to understanding this condition. It also highlights the lived experiences of synesthetes and discusses how the phenomenon can influence creativity, memory, personality and perception and learning methods. By integrating scientific research with real-world examples, this project aims to demonstrate how synesthesia challenges traditional assumptions about how the senses function independently and offers broader insight into the complexity and diversity of human perception.
Judging Category: Exploratory Project

2:30–2:45
Learning Across Cultures: A Comparative Exploration of Switzerland and Denmark
Presenter(s): *Lacey Talton*
Faculty Sponsor: *Michiko Nohara-LeClair, Psychology*
Abstract: My project examines the key aspects of lifestyle, social, and cultural differences between Switzerland and Denmark while also highlighting shared values that contribute to their high quality of life. Through an exploratory comparison, this presentation goes into aspects such as food culture, social structure, education, and cultural norms. Switzerland's diverse influences from neighboring countries are reflected in its regional traditions, which place a strong emphasis on community and local identity. At the same time, Denmark demonstrates a culture rooted in simplicity, sustainability, and social equality. Both countries prioritize well-being, though they approach it through different cultural structures. By evaluating these differences and similarities, my project aims to deepen the understanding of how culture relates to behaviors, values, and the overall functioning of a society. Ultimately, this exploration encourages a broader appreciation for global perspectives and highlights the importance of cultural awareness in an increasingly interconnected world.
Judging Category: Exploratory Project

Room: LARC 05
Moderator: Emily Colmo

2:00–2:15
The Voice and the Medium: Pearl Curran, Patience Worth, and the Making of Female Intellectual Authority
Presenter(s): *Amber Allen*
Faculty Sponsor: *Marcus Smith, Human culture and society*
Abstract: Pearl Lenore Curran was a middle-class housewife with limited formal education, who produced over a million words of literary work through alleged spirit communication in her role as a medium. This project examines the Patience Worth phenomenon in early 20th-century St. Louis to explore the ways that women navigated intellectual authority within restrictive gender norms. Specifically, it seeks to explain how Pearl Curran was able to gain public intellectual credibility despite her lack of formal training and how Curran's work as a medium allowed her to appear both socially acceptable and intellectually significant. Examining séance transcripts, newspaper coverage, as well as literary critics, this research analyzes how authority was constructed across Mrs. Curran's private living room and public spaces. Rather than emerging fully formed, Pearl's authority was created and negotiated through countless interaction in the séance room. It was then amplified and thrown into national attention through print media and finally contested by scientific scrutiny. By examining this case as a microhistory, the study contributes to scholarship on women, religion, and authorship in early 20th century America by showing how female intellectual authority was not a thing that was freely given or simply granted but actively performed and mediated. **Judging Category:** Exploratory Project

2:15–2:30
Help end this everlasting war: a pilot's view on aerial reconnaissance in the First World War.
Presenter(s): *Emily Harkins*
Faculty Sponsor: *Marcus Smith, Human culture and society*
Abstract: Wilbur D. Kennedy was one of many Americans who served in the skies during the First World War. He conducted aerial reconnaissance along the Western Front with the 12th Aero Squadron. Few of these

aviators are remembered today, and aerial reconnaissance is often overlooked by historians of the First World War. Two scholars, Sam Hager Frank and James Streckfuss argue that aerial reconnaissance played a vital military role in the First World War, but both focus on only the military benefits as seen by military planners during the War. This paper seeks to explore how the aviators themselves viewed their contribution to the war effort by examining Wilbur D. Kennedy as a case study. Examining his personal letters, this paper will show that Kennedy's outlook changed over time from excitement about flight and indifference to service during training, to a recognition of the significance of his contribution to the war effort as he flew on the Front. Kennedy's viewpoint demonstrates that the views of reconnaissance aviators need to be further explored as a vital part of understanding the value of aerial reconnaissance during the First World War. **Judging Category:** Exploratory Project

2:30–2:45
The German way of connection
Presenter(s): *Kendall Michelson*
Faculty Sponsor*: Marcus Smith, Human culture and society*
Abstract: Throughout the 1800s, German immigrants settled in the St. Louis area. As in many other U.S. cities, they created societies that organized groups for singing, gymnastics, and other performing arts. Scholars have examined the activities of German American performing arts societies in St. Louis and described the immense popularity of these cultural activities. But why were these social art activities so important to these German immigrants? Many scholars attribute the importance of these cultural activities to a desire to keep ties to the homeland. However, such cultural practices connected Germans in st. louis not only to their homeland in the past, but also to each other in the present. This paper will demonstrate how German immigrants were able to find community in Missouri through German-specific performing arts groups. **Judging Category:** Exploratory Project

Room: LARC 09
Moderator: Kyle Coble

2:00–2:15

Caravaggio: Self-Portraiture in the Baroque: A Barometer of Sin, Spectacle, and Redemption

Presenter(s): *Samantha Ducas*

Faculty Sponsor: *James Hutson, Art History*

Abstract: This paper examines the function of self-portraiture in the work of Michelangelo Merisi da Caravaggio, arguing that it operates not as a means of artistic self-fashioning, but as a site of theological and psychological confrontation. Rather than presenting a stable or idealized identity, Caravaggio repeatedly inserts his own likeness into narratives of sickness, execution, and martyrdom, aligning the artist's body with sin, mortality, and the possibility of redemption. Through close analysis of Young Sick Bacchus, David with the Head of Goliath, and The Martyrdom of Saint Matthew, this paper demonstrates how Caravaggio collapses the distinction between artist and subject, transforming self-portraiture into a form of visual confession. Drawing on the religious climate of the Counter-Reformation, it argues that these self-insertions reflect a broader cultural emphasis on penitence, affect, and the salvific potential of suffering. Ultimately, this study positions Caravaggio's self-portraiture as a radical departure from Renaissance models of artistic identity. Rather than asserting mastery or permanence, Caravaggio stages the self as fractured, culpable, and subject to judgment. In doing so, he redefines the role of the artist as one not elevated above the world, but entangled within its moral and existential crises.

Judging Category: Exploratory Project

2:15–2:30

Equal in Life, United in Death: Female Agency and Marital Intimacy in Etruscan Funerary Art

Presenter(s): *Sophia Johnson*

Faculty Sponsor: *James Hutson, Art History, AI, and Visual Culture*

Abstract: This paper examines representations of women and marriage in Etruscan funerary art; revealing new information about gender dynamics in ancient Etruria. While the neighboring Greek and Roman societies privileged male authority, often confining women to domestic and subordinate roles, the remaining visual culture of Etruria presents a remarkably different social model. Etruscan marriage is conceptualized as

a partnership grounded in mutual affection, shared social presence, and female agency .Iconography, naming conventions, and funerary inscriptions attest to women's recognized social identity, with religious beliefs reinforcing this parity. Even scenes of sexuality and childbirth, which are largely absent or stigmatized in Greek and Roman art, appear in Etruscan funerary and ritual contexts as sacred aspects of life. Although the surviving evidence is overwhelmingly funerary, its consistency across media suggests a coherent cultural identity. Etruscan art imagines death not as separation, but as a perfected companionship: complete in an eternal banquet as a celebration of life and intimacy. By foregrounding female autonomy and conjugal reciprocity, Etruscan visual culture complicates the narrative of a patriarchal ancient Mediterranean, and demonstrates the diversity of gender systems in antiquity.
Judging Category: Exploratory Project

2:30–2:45
Early Consumer Purchase Indicators for Art as a Non-Traditional Investment
Presenter(s): *Evangeline Busso*
Faculty Sponsor: *Kyle Coble, Marketing*
Abstract:
The purpose of this study is to better understand what motivates people to invest in art by conceptualizing cosmopolitanism as an attitude toward investing in art, which includes three factors: personality traits, values, and consumer behavior. The study builds on previous research on cosmopolitan consumers by identifying factors that affect investment intentions, specifically open-mindedness, materialism, consciousness of kind, global consumption orientation, and international exposure. The researchers developed a survey to collect data on these independent variables and the dependent variable, investment attitudes. The study will contribute to consumer behavior literature by applying theories and concepts such as the Theory of Planned Behavior. Through statistical analysis, the researchers hope to discover which factors of cosmopolitanism are the strongest predictors of people's investment intentions and how socio-economic status can impact people's perceived behavioral control. Art can be seen as both a cultural good and an economic good. By looking at what motivates consumers to purchase art

internationally, the study will allow for a better understanding of how identity and values affect consumer decision-making.
Judging Category: Original Research

Room: LARC 309
Moderator: Susan Edele

2:00–2:15
Dying to Fit In: When in Rome — The Fashion-Beauty Complex and the Making of Whiteness, 1910-1925
Presenter(s): *Emerald Brown*
Faculty Sponsor: *Marcus Smith, History*
Abstract: The American fashion-beauty complex from 1910 to 1925 served as a technology of Whiteness and aided in the assimilation of European immigrants, as shown through the major publications of the day such as Ladies' Home Journal, McCall's, and the Woman's Home Companion. These magazines constructed a slender, fair, disciplined body as the price of admission to American identity. This project shows how the print media promoted the American ideal during a period of mass migration and eugenicist panic. Drawing from fashion plates, advice columns, advertisements, and fiction from these periodicals, alongside reducing guides, this paper examines attempts at racial formation during the early 20th century. It argues that the fashion-beauty complex did not merely reflect the burgeoning American fashion aesthetic, but actively taught Irish, Italian, Polish, and Jewish women to erase ethnic markers through diet, grooming, reducing garments, and the policing of "degenerate" fashion. Through examining how the same periodicals exoticized distant cultures (Bulgarian, Japanese, Mexican) while erasing threatening ones (Italian, Spanish), this project shows the flexible and consumptive nature of Whiteness. The cost of admission, for the women who wished to fit in, was a lifetime of discipline, restriction, and the erasure of one’s own culture.
Judging Category: Exploratory Project
2:15–2:30
The River City’s Sound: Community in the St. Louis Blues
Presenter(s): *Colton AuBuchon*

Faculty Sponsor: *Marcus Smith, History*

Abstract:

The blues of St. Louis possess a unique sound that has been shared through generations, yet it has often been overlooked in scholarship on blues history. Situated between two major centers of blues development, the Mississippi Delta and Chicago, St. Louis has received far less attention than these more prominent areas. While scholars have extensively examined the origins of Delta blues and the electrified urban sound of Chicago, far fewer studies have looked at St. Louis as a critical transitional place within this musical tradition. This paper argues that the St. Louis blues sound emerged not just from musical traits, but from the communities and musicians who sustained it through everyday performance and practice. Drawing on sources such as The Bluesletter, musician accounts, and local performance history, this study demonstrates how migration, local venues, and community networks shaped a blues culture that blended Delta traditions with ragtime and jazz influences.

Judging Category: Exploratory Project

2:30–2:45

Ty Cobb: The Villainous Hero

Presenter(s): *Eric Belarde*

Faculty Sponsor: *Marcus Smith, History*

Abstract: Ty Cobb is remembered today as one of the greatest baseball players to ever play, and the many accomplishments and accolades he received were due to his extreme love and passion for the game. But after his death, there were many that did not see it that way. Authors such as Al Stump, a man that became frustrated working with Cobb on his biography, had published works that created Cobb into a villain after his death, with accusations of intentionally injuring players, engaging in fistfights and going as far as killing a man. Recent research has made it clear that these accusations are far from the truth. Charles Leershen, publishing Ty Cobb: A Terrible Beauty, writes to correct the false rumors about the legendary player into a heroic player. This paper's unique contribution joins the side of Charles Leershen with an examination of Cobb's personal letters to Taylor Spink, publisher of the Sporting News, a baseball newspaper in Saint Louis. Cobb's letters contain his personal

feelings of respect towards other players during his playing career, that have been absent from the argument regarding the reputation for or against Cobb.
Judging Category: Exploratory Project

Room: LARC 311
Moderator: Barbara Hosto-Marti

2:00–2:15
Free Expression in Two Democracies: An Exploratory Comparison of Constitutional Frameworks
Presenter(s): *Mackenzie Cameron*
Faculty Sponsor: *Barbara Hosto-Marti, Political Science*
Abstract: The British Common law system was inherited by Canada and the United States; however, their constitutional frameworks have interpreted free expression differently. New York Times v. Sullivan entrenched a robust protection of speech under the First Amendment through the "actual malice" standard, whereas R. v. Keegstra upheld restrictions on hate speech under the Canadian Charter of Rights and Freedoms. These cases illustrate how different constitutional designs, judicial philosophies, and political cultures in the countries have shaped the boundaries of free expression in democratic societies. My study looks at the history of both countries and understanding how and why the countries' constitutions and charters have become what they are today. This is an important topic as every day people exercise their freedom of speech.
Judging Category: Exploratory Project

2:15–2:30
Who Should Govern AI? Federalism and the Future of Artificial Intelligence Regulation
Presenter(s): *Kadence Berry*
Faculty Sponsor: *Barbara Hosto-Marti, Political Science*
Abstract: Artificial intelligence (AI) is rapidly transforming society, raising urgent questions about how it should be governed within the United States' federal system. As individual states begin to adopt their

own AI-related policies while the federal government increasingly relies on executive orders and agency guidance, a key question emerges: who should regulate AI—state governments or the federal government? This project explores that question through a constitutional and policy-focused analysis. Drawing on principles of federalism, the Commerce Clause, and relevant Supreme Court precedent, this presentation evaluates the strengths and limitations of both state and federal approaches to AI regulation. It also examines the growing role of presidential power in shaping national AI policy, particularly in the absence of comprehensive federal legislation. By synthesizing legal frameworks and current policy developments, this project argues that while states can serve as important laboratories of innovation, a unified federal approach is ultimately necessary to effectively regulate a borderless and rapidly evolving technology like AI. This analysis contributes to broader discussions about governance, innovation, and the future of regulatory authority in the United States.

Judging Category: Exploratory Project

2:30–2:45

False Realities: AI Deepfakes and Perceptions of American Prisons

Presenter(s): *Elijah Northcutt*

Faculty Sponsor: *Barbara Hosto-Marti, Political Science*

Abstract: Artificial intelligence (AI) is an extremely complex and evolving field in modern society. This research proposal will investigate the impact that AI deepfakes have on human perception. More specifically, the impact of human perception on the American prison system. Previous research reveals deep fake technology can produce realistic content, individual behavior can be altered, and all while AI facial recognition software is becoming prevalent in the criminal justice system. Participants will be given an anonymous survey looking at prison related images. Some of which were generated by AI, others that are real images. Participants will determine multiple factors. These factors include: the expansion of existing knowledge an image has on a person, the emotional response to the image, how realistic the image was, if the image incited a need to create change, and if the participant can determine whether the image is AI generated or not. After examining the findings, this research will add to the existing literature regarding

effectiveness of AI deepfakes. Additionally, this research stands to note the need for caution when using AI in fields such as the criminal justice system, political landscape, and other places where humans have the ability to be manipulated by AI deepfakes.
Judging Category: Exploratory Project

Room: LARC 319
Moderator: Shana Youngdahl

2:00–2:15
The Lady Capulet: Shakespeare Thriving in a Modern World
Presenter(s): *Mechelle Enloe*
Faculty Sponsor: *Michael Harding, Theatre*
Abstract: The Lady Capulet was born from both admiration and curiosity—a desire to reimagine Shakespeare's Romeo and Juliet while still honoring the brilliance of the playwright himself. Though his voice once echoed powerfully through the hallways of time, its descent into the vault of history has dulled its edge. Yet the essence of his language endures, continuing to inspire artists and audiences alike, just as he himself drew inspiration from the stories that came before him. In this spirit of reinvention and continuity, The Lady Capulet embraces the long tradition of retelling, offering a fresh perspective on a familiar tragedy. This production has reframed the narrative through a contemporary lens, inviting audiences to reconsider the stories and voices that are often left unheard. Throughout the creative process, actors, designers, and crew collaborated closely to navigate the delicate balance between preservation and innovation. Each artistic choice became part of an ongoing dialogue between past and present, seeking not only to honor Shakespeare's legacy but also to breathe new life into it. The result is a work that respects its origins while boldly claiming its own voice.
Judging Category: Creative Project

2:15–2:30
A Twistedly Tragic Tale
Presenter(s): *Stephanie Greenhalgh*

Faculty Sponsor: *Shana Youngdahl, Creative Writing*
Abstract: A Twistedly Tragic Tale is a historical, paranormal young adult novella about twin sisters, Jane and Lizzie, who have been magically trapped in the same body since birth. The story begins in a Chicago brothel in 1937, where Lizzie intends to steal a powerful sapphire to help her and her sister escape the life they've fallen into. A terrifying evening leads to a successful theft. With the help of their landlady and an Enchantlas, a magical guidebook, Jane and Lizzie flee the city. As they take the train south, their Enchantlas guides them toward the Legend of the Laurant, a goddess known for granting wishes and balancing the imbalanced. Not only do the girls fantasize about leading regular, normal solo lives, but Lizzie discovers she could never live without her sister, and Jane realizes she would do anything for her freedom. Anything. This is not a 'happily ever after' story; this is a twisted tale about the making of a villain. The presentation will include a short reading from the story and a discussion of the writing process, highlighting the importance of understanding villains and relating to YA readers.
Judging Category: Creative Project

Room: LARC 322
Moderator: Sara Bagley

2:00–2:15
Professionalized, Not Equalized: Media Narratives in International Women's Hockey
Presenter(s): *Katherine Auld*
Faculty Sponsor: *Elisabeth Erickson, Sports Management*
Abstract: Media coverage of women's hockey has not always treated players as elite athletes, often focusing on personality, youth development, or "firsts." Race and age have also shaped how athletes are discussed and which stories receive attention. With the creation of the Professional Women's Hockey League (PWHL) in 2023, the sport now has a stronger professional presence, which may be shifting how the sport is covered. Focusing on coverage of the U.S. Women's hockey team in the 2026 Winter Olympics and utilizing Birrell and McDonald's Reading Sport methodology (2000), this study examines coverage of the women's

hockey tournament across media outlets such as NPR, ESPN, NBC, and Reuters. It also considers how teams with more PWHL players tend to receive greater media attention in North America.
Judging Category: Original Research

2:15–2:30
Three for three: Media analysis of Harper Murray and the state of women's sports media
Presenter(s): *Kaiya Dunn*
Faculty Sponsor: *Elisabeth Erickson, Sports Management*
Abstract: In 2023, Nebraska volleyball was expected to win the NCAA National Championship, but lost to Texas, 3-0. In the post-game press conference, freshman Harper Murray said from the dias that Nebraska volleyball would win each of the three NCAA Division I Championships over the next three years. Using Birrell and McDonald's Reading Sport methodology (2000), this paper will examine the state of women's sport media, the media response reflecting broader systemic issues in sports coverage and the lack of contextual reporting. Coverage of Harper Murray reflects a broader pattern in women's sports media, where female athletes are often judged more for their tone or attitude than their performance, allowing criticism and controversy to overshadow their achievements as well as the growth of women's sports.
Judging Category: Original Research

2:30–2:45
Framing the Game: How Media Coverage Shapes Public Perception of Athletes
Presenter(s): *Benedetto Buzzetta*
Faculty Sponsor: *Sara Kaufman, Communications*
Abstract: This proposal explores communication practices within sports media, focusing on how athletes engage with audiences across multiple platforms. The study is situated primarily in the mass communication context, examining how traditional sports media outlets shape narratives and public perception. It also incorporates digital communication by analyzing athlete interactions on social media, where messages are often unfiltered and immediate. Additionally, the project considers public communication through press conferences, interviews, and official

statements distributed to broad audiences. By comparing these contexts, the study aims to identify how messaging strategies differ and how they influence audience engagement and perception. This research will provide insight into the evolving role of athletes as communicators in a rapidly changing media landscape
Judging Category: Proposal Project

Student Poster Presentations: Session 2 (2:45–3:30)
LARC Lobby and 2nd Floor Balcony

#2: Dietary preferences and food-seeking behavior of discoid cockroaches, *Blaberus discoidalis* cont.
Presenter(s): Robert Larsen, Sadie Ariola
Faculty Sponsor*: Joshua Neeley*
Abstract: *Blaberus discoidalis*, also known as discoid cockroaches, inhabit the tropics of South America where their diet consists of leaf litter and decaying organic matter on the ground. This experiment expands on research from two previous years, originally based on the loitering time of the roach's different food types. Such as peanuts, leaf litter, and bananas. The experiment this year was to determine which food was preferred by determining how much it was eaten. Each food item, peanuts, banana, and leaf litter (peanuts alone are crushed) were dried in an oven for 24 hours and weighed before and after each trial. Following a fasting period for 24 hours three discoids haphazardly chosen were placed in an enclosure with the food items, a water dish, and an egg carton as a shelter area. Expanding the knowledge on the dietary preference of discoids will push forward further research on this understudied species.
Judging Category: Original Research

#4: Positive Correlations Between Olympic Weightlifting Performance and Countermovement Vertical Jumping Performance
Presenter(s): James Tice
Faculty Sponsor: Patrick Harty

Abstract: In recent years, force plate vertical jump testing has greatly increased in popularity in the strength and conditioning space. PURPOSE: To examine any potential relationships between force plate vertical jump parameters and more traditional metrics of weightlifting performance such as snatch to clean and jerk ratio. METHODS: 14 male and 18 female collegiate weightlifters completed three rounds of countermovement vertical jumps with 30 seconds of rest between attempts. Competition results from all 2025 competitions were used to generate best Total, Sinclair points, Q-points, and best Snatch to Clean and Jerk Ratio. RESULTS: Vertical jump height, peak propulsive force, Sinclair, and Q-points were significantly greater in males vs females ($p<0.001$), though no sex differences were detected in snatch to clean and jerk ratio ($p=0.740$). In the full sample, jump height displayed strong positive relationships with Total ($R=0.707$, $p<0.001$), Q-points ($R=0.842$, $p<0.001$), and Sinclair ($R=0.847$, $p<0.001$). Peak propulsive force showed moderate correlations with the same outcome variables ($R=0.586$-0.776, $p<0.001$), while snatch to clean and jerk ratio was not correlated with any outcome ($R=0.034$–0.240, $p\geq0.185$). CONCLUSIONS: Vertical jump metrics appear to have a stronger relationship with key weightlifting performance parameters compared to more traditional metrics such as strength ratios.
Judging Category: Original Research

#6: Limits to Human Reason
Presenter(s): Violette Geerling
Faculty Sponsor: Michiko Norhara-LeClair
Abstract: Human reasoning operates on a continuum that integrates rational analysis with intuitive and emotionally driven thought. While rationality is often idealized as logical and evidence-based, irrational thinking is not merely a flaw; it often plays a functional or adaptive role. Drawing on work by Galotti (2008), Michalik-Jeżowska (2019), and others, this paper explores how reasoning interacts with unconscious processes in everyday decision-making, sports performance, and social behavior. Findings indicate that irrational cognitive tendencies, though often maladaptive, can, under certain conditions, enhance resilience, focus, and social cohesion. The integration of rational and irrational

elements within human cognition illustrates the complexity and context-dependence of how people interpret and respond to their environments.
Judging Category: Exploratory Project

#8: Effects of Gibberellic Acid on Mutant Millet
Presenter(s): Claire Swiderski,Eric Gant,Kimberly Karlsson,Neil Telfer,Jonathan Becker
Faculty Sponsor: Joshua Neely, Sagar Kalauni
Abstract: Millets are grasses with small seeds grown as a cereal crop, a major food crop, especially in equatorial regions and in developing countries. Millet plants can develop a dwarfism mutation that leads to less growth and lower yields than normal millet plants. This mutation can be related to a deficiency or insensitivity to a plant growth hormone called gibberellin. We used two experimental groups of millet plants, a control group and a group that received gibberellin treatments. By treating the plants with gibberellin, we observed increased growth in mutant and wild-type millet plants. We measured the length of each plant from the soil to the tip of the longest leaf, as well as the emergence of the first panicle, the seed producing part of the plant, and the total number of panicles and tillers on each plant. Statistical analysis showed a difference in growth between gibberellin-treated millets and millets in the control group. Particularly, the gibberellin group had faster emergence of panicles. Gibberellin treatments could be used to increase millet yields, potentially benefiting countries where millet is a major agricultural product.
Judging Category: Original Research

#10: Chasing the Greenlight: The False Promise of the American Dream
Presenter(s): Ellianna Maneage
Faculty Sponsor: Dr. Justine Pas
Abstract: The Great Gatsby shows the relentless pursuit of the green light symbolizing the love and success reveals F. Scott Fitzgerald's argument that the American Dream is built on a false promise. That an individual is driven by such dreams and aspirations that they can never achieve because of privilege and moral emptiness. How can a dream that so many Americans desire to accomplish be so corrupt in many aspects? Is there such a thing as living the successful life of a wealthy man or

woman? The goal to be happy and maintain status couldn't be more far away from the truth of what the world we live in today is actually.
Judging Category: Exploratory Project

#12: Effects of Gibberellic Acid on Growth of Mutant Type Millet
Presenter(s): Rebecca Laird, Charmaine Dao, Kayneisha Hepburn, Madison Brown, Hailey Veninga
Faculty Sponsor: Joshua Neely, Sagar Kalauni
Abstract: The grass Setaria viridis has frequently been employed in research due to its short life cycle, small genome, and close relationship to food crops like maize (corn). Setaria is utilized to study the genetic processes governing reproductive development. In this experiment, the effects of gibberellic acid (GA) therapy on several Setaria viridis mutant families have been investigated. This experiment also aims to detect variations in plant height phenotype by comparing GA-treated plants with untreated control plants. The researchers collected and planted eight dwarf millet seeds and one wild type mutant seed and planted in a 'control' tray and a 'treatment' tray. Gibberellic acid was administered to each plant in the treatment tray on days 14, 16, and 18 while the control tray was given just water. Height of each plant was recorded to assess the effect of gibberellic acid on mutant type plant growth. Results showed that there was a significant effect on the mutant type plants while there was very little to no effect on the wild type plants.
Judging Category: Exploratory Project

#14: Longitudinal Fueling Status of High School Female Athletes
Presenter(s): Kaylee Turner, Abigail Rickermann
Faculty Sponsor: Tom Godar, Brent Holtgrewe, Michael Tzianos
Abstract: Low energy availability (LEA) is a clinically significant concern in adolescent female athletes due to its impact on growth and development, bone health, hormonal function, performance, recovery, and cognitive outcomes. Despite established associations, a clear longitudinal understanding of how LEA relates to injury and illness rates across an academic year remains limited, representing a clinical gap in athletic training and sports medicine literature. The purpose of this capstone project was to develop a comprehensive Institutional Review Board (IRB) protocol to support a future longitudinal investigation

examining LEA and its relationship to injury and illness incidence in high school female athletes. The proposed study utilizes a prospective, observational design including baseline assessments (demographics, health history, LEAF-Q) and weekly injury/illness tracking via a secure online platform. Emphasis was placed on ethical considerations, including recruitment of minors, parental consent, participant assent, and strict data privacy protections. Pending IRB approval, a pilot study will be conducted to evaluate feasibility, participant compliance with weekly reporting, and the effectiveness of data collection procedures. Pilot data will inform methodological refinement, variable tracking, and statistical planning (e.g., injury/illness rate comparisons using Poisson regression), strengthening the overall study design before full-scale implementation. This work has direct clinical application for athletic trainers and healthcare providers by improving early identification of at-risk athletes and informing prevention strategies. Additionally, findings may enhance education for athletes, parents, and coaches, ultimately contributing to safer sport participation and improved long-term health outcomes.
Judging Category: Proposal Project

#16: Turning Service into Stability: Measuring Self-Sufficiency Outcomes at Presbyterian Children's Homes & Services
Presenter(s): Olivia Wolf, Alex Wolf
Faculty Sponsor: Gokhan Egilmez
Abstract: Community organizations play a critical role in helping vulnerable children, youth, and families achieve stability and independence. This service learning project partnered with Presbyterian Children's Homes and Services (PCHAS) to evaluate how well its programs support client progress toward self sufficiency. Using discharge data from the Arizona Self Sufficiency Matrix, students analyzed outcomes across multiple program types and four service sites. The evaluation found strong improvements in areas related to immediate stabilization, including personal safety, legal status, substance use recovery, and disability support. However, clients continued to face ongoing challenges in childcare access, housing stability, parenting skills, children's education, and employment—areas closely tied to long term independence. Differences between Single Parent Family and Transitional Living–Adult programs highlighted distinct client needs and variations in

how self sufficiency domains applied across populations. Additional site level differences pointed to inconsistencies in outcomes and opportunities for shared learning and program improvement. Overall, the project demonstrates how data driven, community engaged research can strengthen service delivery, promote equity across sites, and support evidence based decision making in human services organizations.
Judging Category: Civic Engagement Project

#18: A statistical evaluation of dispatch data from a suburban police department
Presenter(s): Seth Baur, Callie Demarest, Andrew Rain, Desirae Snyder
Faculty Sponsor: Mary Silverglate
Abstract: This research investigates trends of dispatch and staffing data for a small suburban police department in Missouri. One of the goals of this research is to look into the staffing trends of the officers. By analyzing trends in the clock-on/clock-off data of these officers, we enable the police department to more efficiently place their resources during busy periods and to predict days that have been busy in the past. In addition, we explore the relationship between different aspects of weather and the number of events that occur in a day, which could further improve staffing. Finally, we analyze the effect of location on number of events by mapping occurrences by street name, which could be used to improve logistics and resource allocation. By looking into the various aspects of our data, we give a well-rounded analysis of the efficiency of the police department. To help the police department understand seasonal and geospatial trends in events that require officers to respond. Furthermore, by providing insights from an outside perspective, the police department may be able to adjust different aspects of their everyday operations to become better integrated into the local community.
Judging Category: Civic Engagement Project

#20: Clinical Evaluation and Rehabilitation of a Complex Non-Contact Knee Injury in a Collegiate Athlete
Presenter(s): Shelby Pritt
Faculty Sponsor: Michael Tzianos

Abstract: This case follows the rehabilitation of a 22-year-old collegiate lacrosse player recovering from a complex knee injury. During the initial evaluation, the athlete presented with pain, swelling, and limited active range of motion, secondary to pain. The rehabilitation protocol used a combination of ACL, MCL, and meniscus standardized rehabilitation parameters. The primary goal of rehabilitation was to safely return the athlete play the following season. This case highlights the importance of knee health and the role of preventative exercise programs in reducing injury risks. This case covers the rehabilitation of a complex right knee injury primarily focusing on a complete tear of the anterior crucial ligament (ACL) and medial collateral ligament (MCL), a complex tear of lateral meniscus posterior horn, and a partial thickness tear of the proximal lateral collateral ligament. The surgical interventions was a bone patella tendon bone graft for reconstructing the ACL, an allograft hamstring with internal binding for reconstructing the MCL, and an autograft and allograft for reconstructing the lateral collateral ligament.
Judging Category: Exploratory Project

#22: Exceptionality Project: Other Health Impairments
Bailey Lusch, College of Education and Human Services, Lindenwood University
Presenter(s): Bailey Lusch
Faculty Sponsor: Rebecca Panagos
Abstract: As a project for my Education of the Child with Exceptionality class, I created this poster on Other Health Impairments (OHI). I'm a future art educator preparing to teach K-12. The purpose of this poster is to provide insight into the challenges students with OHI face and to inform educators on strategies to promote academic success and inclusion in their classrooms. I reviewed literature on common health-related exceptions, such as chronic illnesses, genetic conditions, and other conditions that affect learning, which led to the development of a simulation activity that illustrates fatigue, difficulty concentrating, and physical challenges students might face. This demonstration allows participants to experience the classroom from the perspective of a student with OHI. My goal is to highlight how Universal Design for Learning (UDL) strategies and differentiated instruction can increase engagement, motivation, and success for all students.

Judging Category: Exploratory Project

#24: Dopamine, Addiction, and Cocaine
Presenter(s): Addison DeLisle
Faculty Sponsor: Sara Bagely
Abstract: Cocaine is a powerful stimulant that strongly affects brain function by altering the dopamine system. This project examines both the short- and long-term neurological effects of cocaine, focusing on molecular, cellular, and brain-wide changes. Short-term use increases dopamine in the synapse, causing intense euphoria, heightened alertness, and impaired decision-making. Repeated use leads to long-term changes, including fewer dopamine receptors, structural changes in the prefrontal cortex and striatum, and reduced synaptic plasticity, which contribute to addiction, cognitive problems, and emotional instability. Drawing on neuroimaging, behavioral studies, and molecular research, this project highlights how cocaine progressively reshapes brain circuits. Understanding these effects is key to developing better interventions and treatments for addiction, showing how brain chemistry, structure, and behavior are deeply connected.
Judging Category: Exploratory Project

#26: Coping Across Generations: A Study of Stress Responses in College Students and Older Adults
Presenter(s): Cheyanne Harding
Faculty Sponsor: Annie Alameda
Abstract: This study examines how coping strategies differ between college-aged students and older adults when responding to stress. Participants include Lindenwood University students enrolled in HFS 20500 and older adult community members participating in the WISE Cyber Seniors program. Using an anonymous Qualtrics survey, participants complete the Response to Stress Experience Scale (RSES), which measures spiritual, resiliency-based, and problem-solving coping strategies. The purpose of this research is to better understand how coping mechanisms vary across developmental stages and to identify patterns that may support mental health and well-being. It is hypothesized that older adults will report greater use of spiritually-based and resiliency-focused coping strategies, while college-aged students will report higher

use of problem-solving strategies. This project also promotes civic engagement by fostering intergenerational interaction through a shared research experience. Findings from this study may contribute to developmental psychology research and inform targeted wellness programs for both younger and older populations. Results will be presented at the Lindenwood University Student Showcase, with the goal of increasing awareness of effective coping strategies across the lifespan.
Judging Category: Civic Engagement Project

#28: Mannosides: A Sticky Situation
Presenter(s): Morgan Romanski
Faculty Sponsor: Scott Hasty
Abstract: Mannose chemistry is notoriously difficult due to the electronic structure of the molecule. The dipole moments on the molecule provide stability, meaning adding and removing substituents come with many obstacles. This results in numerous byproducts, prevents reactions from going quickly, or prevents the reaction from occurring at all. In this project, the issue of producing a mannose molecule with the desired leaving group for glycosylations is investigated using two different methods of synthesis of attaching 2-mercaptopyridimine to a benzylated mannose on carbon 1. These two methods investigate and aim to solve the issue of epoxide formation and the mannose molecule returning to its original form, as well as producing the desired product in substantial amounts. Ultimately, a mannose with the appropriate leaving group can be used in future glycosylation reactions that further investigate alpha and beta selectivity.
Judging Category: Exploratory Project

#30 Understanding the Impact of Therapeutic Recreation on Patient Outcomes
Presenter(s): Faith Atkins, Emma Jones
Faculty Sponsor: Heather Pennington
Abstract: This exploratory project examines the role of Therapeutic Recreation (TR) in improving overall well-being and quality of life for individuals across diverse populations. The purpose of this project is to analyze how leisure-based interventions can be adapted to meet the physical, cognitive, emotional, and social needs of patients in various

settings. By synthesizing current research and professional practices, this project highlights how TR contributes to rehabilitation, identity rebuilding, and long-term wellness. The project focuses on how recreational therapists use individualized, evidence-based approaches to help patients re-engage in meaningful activities following injury, illness, or disability. It also explores the impact of adaptive equipment, community resources, and patient-centered care in promoting independence and confidence.
Judging Category: Exploratory Project

#32: Paget-Schroetter Syndrome Case Study
Presenter(s): William Lara
Faculty Sponsor: Tom Godar
Abstract: The purpose of this study is to bring awareness to Paget-Schroetter Syndrome (PSS) and improve recognition of early signs and symptoms. PSS is a rare, specific classification of upper-extremity thoracic outlet syndrome. It is primarily caused by repeated overhead motions and activities. PSS consists of compression of the axillary or subclavian veins that branch out through the arm, which leads to injury of the endothelial tissue, resulting in a deep vein thrombosis (DVT). This can lead to a multitude of problems in the arm and usually must be resolved through a surgical decompression procedure. In this study, I focused on a single case of PSS in a college-age male who had recently undergone surgery to his upper-extremity prior to the onset of his symptoms and diagnosis. Finally, I researched other cases of PSS to compare and contrast with this case and highlight any abnormalities that may be present in this case.
Judging Category: Exploratory Project

#34: The Colors of Judgement
Presenter(s): Kimberly Sanchez
Faculty Sponsor: Justine Pas
Abstract: My painting illustrates three crucial scenes in the Scarlet Letter. Three of where the main character appears to be on a scaffold. I highlight each characters respective colors to contrast the gray atmosphere the puritan town depicted in the novel. Using Hawthorne's novel as my main source, I referenced the symbolism used by the author

himself and created my painting called the Colors of Judgment. My main focus was to use Hawthornes symbolism and show it in my painting, to show the importance of symbolism and colors that novels carry to represent themes.
Judging Category: Creative Project

#36: Exploratory Analysis of a Regional Nonprofit & Family Services Organization
Presenter(s): Allison Schrumpf, Eleri Tye
Coauthor(s) Hailey Veninga
Faculty Sponsor: Mary Silverglate
Abstract: Nonprofit organizations are essential in supporting youth's mental health in their communities, and the data they collect allows us to evaluate program effectiveness and how services can be improved to better support their communities. This project aims to evaluate program and provider outcomes, client demographics, and assessment scores for a regional nonprofit and family services organization to better understand client success, program effectiveness, and the impact of COVID-19. The dataset includes client demographic information, programs, zip codes, first and last session assessment dates and scores, discharge types, and provider IDs. To investigate score changes, we are analyzing the correlation between the two scoring measures that the agency uses, either client or provider reported. Additionally, we are aiming to find the best indicators for score increases by demographic information such as gender, race, and zip code of residence or pandemic related changes. We have found that during the Covid period, the agency was serving significantly less clients than in years prior and after. We have also found a smaller correlation than expected between the two scoring metrics and are actively investigating what this means. We also aim to recognize differences among client subgroups such as zip codes, races, or genders.
Judging Category: Civic Engagement Project

#38: Violence in Prison Systems
Presenter(s): Chloe Runyan
Faculty Sponsor: Rachael Gossett
Abstract: This project is based around the different forms of violence in the prison systems such as, inmate on inmate violence, correctional

officer violence, psychological abuse and violence, and medical violence within the prison systems. The research goes over the causes of the violence by exploring overcrowding issues, lack of mental and physical health resources, inadequate staffing, poor living conditions, and poor management of the facilities. This project is a compilation of scholarly articles and academic journals presenting the data explaining the causes and effects. This project aims to better understand why there is so much violence in prison systems and help support the ideas of solutions to getting rid of the problems causing the violence to make the prison systems better places for the prisoners and the workers within them. This exploratory project is focused on understanding a problem with hopes of developing solutions in the future.
Judging Category: Exploratory Project

#40: Method Optimization for Separation of Active Pharmaceutical Ingredients in Common Over-the-Counter Allergy Tablets by High Performance Liquid Chromatography
Presenter(s): Justin Malawey
Faculty Sponsor: Dr. Firestine
Abstract: High Performance Liquid Chromatography (HPLC) is an instrumental technique that separates a mixture into individual components. There are 5 main parts to this instrument: the mobile phase, injector, pump, column, and detector. The mobile phase is one or more polar liquids in which a sample will be injected and dissolved via the injector. This solution is then pumped through a column containing a nonpolar solid, which then separates the components of the sample based on varying polarities. After the analytes are separated, the detector will indicate when a component leaves the column, and a chromatogram is produced. This research aimed to develop a procedure for instrumental analysis to be used in an educational setting. A procedure for the separation of the active ingredients in an allergy medication, using mobile phases of water and methanol, was adapted to be usable on the instrumentation possessed by the university. Further study was conducted to improve the quality of the resulting chromatograms.
Judging Category: Exploratory Project

#42: Experiencing Tet Online: A Digital Ethnography of Foreigners on Instagram

Presenter(s): My Tien Phuong

Faculty Sponsor: Professor Benjamin Kaplan

Abstract: This project looks at how foreigners experience Tet (Vietnamese Lunar New Year) on Instagram. I used digital ethnography to observe posts, captions, and comments during Tet 2026. The goal is to understand how people learn about Vietnamese culture online. Many users share photos and videos of food, decorations, and family time. Even if they are not from Vietnam, they show interest and respect for the culture. Through likes, comments, and sharing, people also build a sense of connection. As a Vietnamese student in the United States, I also reflect on my own experience. Seeing Tet online helps me feel closer to home while living far away. This project shows that social media can help people connect across cultures. It also shows how online spaces can support identity and belonging in a global world.

Judging Category: Exploratory Project

#44: Understanding Attachment to God and Close Relationships After Perinatal Loss

Presenter(s): Alicia McConachie

Faculty Sponsor: Brittany Goodman

Abstract: Experiencing perinatal loss is a singular type of grief that can profoundly affect someone's thoughts, feelings, connections with others, and sense of faith (Brier, 2008). However, research on attachment processes related to adjustment after perinatal loss is sparse. The parent study from which the data for the current project were taken aimed to assess the psychological, interpersonal, and religious correlates associated with perinatal loss in adults who suffered miscarriage, stillbirth, or infant loss in the past three years. The current secondary study focuses on attachment-related measures and their relationships with posttraumatic growth and stress symptoms. Participants were recruited using Prolific, an online recruitment platform, and completed an online survey which included the Attachment to God Inventory (AGI) and the Experiences in Close Relationships-Revised (ECR-R), assessing attachment anxiety and avoidance in both spiritual and romantic domains. Data are collected and analysis is currently in progress. This research will expand current

understanding of attachment systems after perinatal loss to inform clinical assessment, spiritual care, and trauma-informed care of grieving parents.
Judging Category: Original Research

#46: Microwave-assisted Synthesis of Banana Oil
Presenter(s): Victor Mercade
Faculty Sponsor: Scott Hasty
Abstract: Organic syntheses are often plagued by prolonged reaction times and cost inefficiencies. This study focused on the optimization of banana oil synthesis via microwave-assisted esterification using a household microwave. The cost of this reaction was reduced to $0.93, making it economically viable for a diverse range of educational levels. Additionally, the use of a household microwave drives down equipment costs even further. The initial optimization was conducted across four microwave units of varying wattages 1200-700 W to evaluate the influence of instrument specifications on reaction parameters. Analysis of reaction conversion using ^{1}H NMR spectroscopy revealed no statistically significant differences, with all microwaves yielding 85-97% optimally at a 10% power setting over a 5-minute period. Reaction conditions were further optimized using classroom-sized quantities. Due to the increased sample number, a scale-up adjustment was required in power settings to 30% to achieve consistent percent conversion rates of 85-95%. These refined conditions successfully reduced both reagent consumption per reaction and overall time, demonstrating the viability of household microwaves as an accessible and green platform for organic synthesis.
Judging Category: Original Research

#48: Restoring Quadriceps Strength, Power, and Hypertrophy Following Long-Term Deficits with a Post-Operative ACL Repair
Presenter(s): Ajdin Tasic
Faculty Sponsor: Tom Godar
Abstract: This case study will look at a Division I football wide receiver who is approximately three years post-operative from an ACL reconstruction via quad tendon graft. He presents with significant quadriceps deficits and visible atrophy years later due to ineffective early rehabilitation. Complications from severe quadriceps deficits provide a negative impact in sport with acceleration/deceleration, cutting, or

explosive change in directions. Outcome measures included quadriceps strength symmetry through BioDex testing, power was assessed through force plates, and girth measurements at the thigh for change in muscle size. The goal was to evaluate the potential gains through targeted rehabilitation in a high-level athlete several years post-surgery. This case brings awareness to the potential for significant strength and muscle deficits to persist years after ACL reconstruction when early rehabilitation is insufficient and help inform future rehabilitation strategies for athletes with delayed or inadequate post-operative care.
Judging Category: Original Research

#50: Driven or Pressured: Motivation's Connection to Psychological Outcomes in Collegiate Student-Athletes
Presenter(s): Chloe Ceballos
Faculty Sponsor: Sara Bagley
Abstract: Student athletes face unique physical, psychological, and social demands that may increase their risk for mental health challenges. This study intends to examine the connection between intrinsic and extrinsic motivation, self-esteem, sport anxiety, and athlete burnout among collegiate student-athletes. Participants will be recruited through social media to participate in an online survey that assesses these variables. Pearson's r correlations will be used to evaluate the relationships among subscales from these measures. We posit there will be significant associations between motivation, self-esteem, sport anxiety, and burnout. This is important to research because existing studies haven't assessed these variables together. Findings may contribute to existing literature by clarifying how motivation is associated with athlete's well-being and persistence in their sport.
Judging Category: Proposal Project

#52: The St. Charles Water Shutdown: An Analysis on the Findett Corporation Superfund Site
Presenter(s): Carmen Weier
Faculty Sponsor: Ana Londono
Abstract: The Findett Corporation Superfund Site, or also known as the Hayford Bridge Road Groundwater Site, in St. Charles, Missouri was historically used for reprocessing industrial fluids. The site is

contaminated with hazardous materials including volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs), which have impacted both soil and groundwater. This study examines the environmental and public health risks associated with this site using Geographic Information Systems (GIS) mapping to spatially analyze contaminant plumes, proximity to residential areas, and critical areas such as the Elm Point Well Field, a major drinking water source located nearby. The analysis integrates historical contamination data and hydrogeological features to assess current exposure risks and model potential future migration of contaminants to highlight the ongoing vulnerability of nearby populations due to groundwater transport pathways. It shows the importance of continued remediation efforts and provides a spatial framework to protect community health and local water resources.
Judging Category: Exploratory Project

#54: Horned Oak Galls and Their Dispersal on Lindenwood's Campus
Presenter(s): Timothy Sesterhenn
Faculty Sponsor: Peyton Birkenmeier
Abstract: Horned oak galls are woody growths found on the branches of oak trees (Quercus sp.). These growths are caused by the parasitic wasp, Callirhytis cornigera. These wasps produce the galls by piercing the branch with their ovipositors and laying eggs into the branch. Based on the severity of infestation, these galls can cause severe damage or even death to oak trees. This research determined the dispersal and severity of horned oak galls infesting the different species of oak trees around the heritage side of Lindenwood. This was done by walking around the heritage side of campus and observing different species of oak trees to determine if they contained tree galls and the severity of galls. Then, using an existing map of oak trees on the heritage side on ArcGIS, each tree was documented to determine the presence, or absence, and severity of infestation on each tree.
Judging Category: Original Research

#56: Methodological Framework for Functional Outcomes of Trauma Exposure in College Students
Presenter(s): Paula Carvalho

Coauthors: Reghan Gacki, Luisa Gonzalez
Faculty Sponsor: Brittany Goodman
Abstract: The current project is a proposal for an ongoing study that investigates trauma exposure in college students and its relationship with social and attentional functioning. It will include an in-depth discussion of the methodology for this study, which is noteworthy as it includes both subjective and objective measures of functional outcomes. Undergraduate students from Lindenwood University are recruited and complete questionnaires through Qualtrics, assessing trauma exposure, social functioning, and attentional control. Trauma exposure is measured using the Life Events Checklist (Weathers et al., 2013), while social and attentional functioning are assessed using the Practical and Social Functioning Scale (Weisman, 1990) and the Attentional Control Scale (Derryberry & Reed, 2002). To obtain an objective behavioral measure of attention, participants complete a modified Simon task (Steudte-Schmiedge et al., 2014), which assesses attentional control and response inhibition. Participants also complete a social stress task adapted from the Trier Social Stress Test (Zibetti, 2024). Physiological responses of respiration, skin conductance, and heart rate variability are recorded using BIOPAC equipment (BIOPAC Systems, Inc., Goleta, CA). This project will provide insight into the methodological choices of the ongoing study as well as ideas and guidance for those interested in this type of research.
Keywords: trauma exposure, attention, social functioning, physiological responses, college students
Judging Category: Proposal Project

Student Oral Presentations: Session 2 (3:30–4:15)

Room: LARC 03
Moderator: Joshua Neeley

3:30-3:45
Pets, Gender, and Bias: The Interplay of Pet Attitudes and Gender Perceptions
Presenter(s): *Kay DeKock*

Faculty Sponsor: *Michiko Nohara-LeClair, Social and Behavioral Sciences*

Abstract: Patriarchal cultures may enforce misogyny through both explicit and implicit measures. Animal symbolism has at times been used to express such implicit negative biases in the United States (Gruen & Probyn-Rapsey, 2018). Women and cats have been heavily associated in American culture, and cat-related traits and terms have been used to dehumanize and ostracize women historically (Alex, 2024; Gruen & Probyn-Rapsey, 2018). In consideration, the current study was designed to investigate a possible association between cat-hate and misogyny. Cat-hate was scored using a modified Pet Attitude Scale (PAS-M; Munsell et al., 2004) and gender bias was measured through an Implicit Association Test (IAT) I created. I hypothesized an association between women and cats and a tendency for those who dislike women to dislike cats. Results showed that cats are associated with femininity, but not necessarily with women, and that there is a small but positive relationship between misogyny and cat-hate. With these findings alone, it may be concluded that the relationship between women, misogyny, cats, and cat-hate is weak and not a legitimate indirect measure of misogyny. This may imply that cultural stereotypes do not always relate directly or indirectly to prejudiced attitudes, but they are still important to consider.

Judging Category: Original Research

3:45-4:00

Through Different Lenses: Understanding Perceptions of Accessibility and Physical Disabilities at Lindenwood University

Presenter(s): *Ava Bilton*

Faculty Sponsor: *Michiko Nohara-LeClair, Social and Behavioral Sciences*

Abstract: This presentation will share the results of my study that aimed to uncover and assess perceptions towards physical disabilities and accessibility at Lindenwood University. Previous research identified that disabled students face barriers in higher education that prevent them from feeling included and equal. My study paid particular attention to exploring individuals' implicit biases towards physical disabilities by

utilizing an Implicit Association Test (IAT). My methodology included a pre-IAT, group assignment, Lindenwood-specific scenario questions, a post-IAT, and a background survey. I gathered information regarding accessibility and perceptions of the campus while simultaneously encouraging exposure. The results of my study found that people do have biases towards physical disabilities. Additionally, participants reported a variety of accessibility issues present at Lindenwood University. These results bring awareness to how physically disabled students are perceived and the experiences they encounter at Lindenwood University, while also shedding light on the importance of exposure and possible improvements.
Judging Category: Original Research

4:00-4:15
The adaptiveness of diet in *Blaberus discoidalis*
Presenter(s): *Reed Morrison, Elizabeth Dill, Hallie Sellers*
Faculty Sponsor: *Joshua Neely, Natural Sciences*
Abstract: The consumption of nutrients such as carbohydrates and protein is absolutely necessary to growth, survival, and reproduction in animals, including in our study organism, *Blaberus discoidalis*. In our experiment, we sought to answer the question of whether food preference is adaptive in the subtropical cockroach species *Blaberus discoidalis*. To study this, we provided three different diets to three experimental groups of *B. discoidalis* and measured the mass of the discoids who were subjected to each respective diet. One group received a 5:1 ratio of a high carbohydrate diet of oats, another a 5:1 ratio of a high protein diet of shrimp pellets with some oats mixed in, and the third group received a control diet of leaf litter. Statistical analysis was done to determine the rate of growth in each treatment and the statistical significance, and survival rates for each treatment were calculated. The results indicate that a high protein diet leads to a faster rate of mass increase in the individuals in the high protein treatment group.
Judging Category: Original Research

Room: LARC 05
Moderator: Emily Colmo

3:30-3:45

From Fission to Flowers: How the St. Charles Countians Against Hazardous Waste Cleaned Up Weldon Spring

Presenter(s): *Gavan Miller*

Faculty Sponsor: *Marcus Smith, Human culture and society*

Abstract: After the closure of the Weldon Spring Chemical Works in 1966, the town of Weldon Spring, Missouri faced an environmental issue that threatened the health of nearby residents: radioactive contamination. The presence of this contamination eventually prompted the local community to organize various groups including the St. Charles Countians Against Hazardous Waste (SCCAHW). Through this grassroots organization, town residents pushed to halt the dumping of radioactive materials and advocated for decontamination of the site and environmental justice for those affected. There is much scholarship on the impact of grassroots environmentalist groups globally, but very little about the SCCAHW's involvement in Weldon Spring. In this work, I will argue that through the SCCAHW, and its cooperation with local, state, and national environmental organizations, as well as academic institutions, and state lawmakers, the residents of Weldon Spring brought about legal change and the eventual containment of radiological materials in Weldon Spring, Missouri.

Judging Category: Exploratory Project

3:45-4:00

An Evil Destiny: The Misfortunes of the Japanese Exhibit at the St. Louis World's Fair

Presenter(s): *Orion Melton*

Faculty Sponsor: *Marcus Smith, History*

Abstract: World's Fairs showcased the cultures and technological achievements of the world. At the 1904 World's Fair in St. Louis, Missouri, multiple exhibits showcasing Japanese culture proved particularly popular. Historians and other scholars have shown that organizers of World's Fairs designed exhibits of non-Western cultures to reinforce their belief in Western superiority. Scholarship on the Japanese exhibit in St. Louis has predominantly focused on the success of Japanese

representation at the fair. Fair Japan stood out from non-Western exhibits in its popularity. Western organizers and fairgoers often extended a level of respect to Japanese culture not afforded to other non-Western cultures. Japan had industrialized rapidly the previous few decades and had set out to portray itself as a modern nation and the Fair presented a prime opportunity to show to the World their efforts of industrialization. These, efforts, however, faced multiple challenges. By examining newspapers, correspondence, and other fair documents, this project demonstrates that Fair Japan, though an outward success, was plagued internally and externally by a myriad of troubles.
Judging Category: Exploratory Project

4:00-4:15
The Family on Gravois Creek: How a Family Estate Helped Shape a Future General and President
Presenter(s): *Landon Alpers*
Faculty Sponsor*: Marcus Smith, History*
Abstract: Ulysses S. Grant was one of the most famous figures in American History. We know him as a famous Civil War general, most known for his victories at Shiloh, Vicksburg, and Appomattox. He is also well-known as the eighteenth President of the United States, serving during the Reconstruction Era. Historians have said a lot about these triumphs and accolades that Grant had in his life. But what about his life before all those accolades? Very few scholarships has been written about his time at the White Haven estate, the home of his wife's family, the Dents. The estate would become a second home for Grant and played a pivotal role in shaping his character, life, and legacy. By examining letters and personal documents from Grant, his family, and loved ones during his time at White Haven and his time away from it, this paper will show that his connection to and his disconnection from his second home helped shape the man we know today.
Judging Category: Exploratory Project
Room: LARC 09
Moderator: Dan Plate

3:30-3:45

Connect2Vote: Gamifying Civic Engagement

Presenter(s): *Roy [Ruth] Moeller, Jamarion Fisher, Jadyn Clark*

Faculty Sponsor: *James Hutson, Computer Science*

Abstract: Youth voter turnout has historically been much lower than that of older age groups, especially during midterm elections. Among many reasons why this is, some lack the resources to understand how to vote and others feel it is pointless in the first place. This project consists of an AI assisted website that aims to utilize already existing social webs and behaviors between peers to encourage young people to vote more. Users are encouraged to "invite" others to vote and in turn gain points for influencing others to vote. In addition, the contents of the website itself aim to make information about voting more accessible, less intimidating, and to get people more involved by gamifying the process of educating others. In seeing the resources laid out before them and by being personally asked by their peers to vote, they will feel a stronger sense of community, be more educated, and in turn be more civically engaged.

Judging Category: Civic Engagement Project

Room: LARC 309

Moderator: *Mary Silverglate*

3:30-3:45

Revitalizing Nonprofit Education at Lindenwood University: A Proposal for an Interdisciplinary Nonprofit Administration Course

Presenter(s): *Piper Colantone*

Faculty Sponsor: *Steven Coleman and Renee Porter, Management*

Abstract: A proposal to establish an interdisciplinary nonprofit administration course at Lindenwood University. This civic engagement project supporting a new course at Lindenwood is based on original research. The original research was qualitative, based on interviews with key stakeholders involved in the development of a new course. Interviews were conducted with three categories of interviewees: nonprofit leaders, faculty, and students. After analyzing the interviews in each category and as a whole, common themes were identified that suggest interest in,

benefits of, and the need for nonprofit education. From the conclusion of this original research, a proposal was formed to create an interdisciplinary nonprofit administration course for Lindenwood students. Any student, from any major, would be able to take this nonprofit administration course to discover and develop their understanding and education of nonprofit organizations and how it can relate to their future industry. A nonprofit administration course would reflect Lindenwood's mission, "Real Experience. Real Success." through collaboration with nonprofit organizations, allowing students to have hands-on experience and engage in service-oriented learning with nonprofit organizations relating to their field. **Judging Category:** Civic Engagement Project

3:45-4:00

Evaluation of RIT Scores at a Midwestern Urban Charter K–8 School

Presenter(s): *Mattie Ohlsen, Jamie Karase, Melissa Baker, Catherine Philipps*

Faculty Sponsor: *Mary Silverglate, Math*

Abstract:

This research focuses on Rasch UnIT (RIT) scores administered through the Northwest Evaluation Association (NWEA) for the seasonal, predictive Measures of Academic Progress (MAP) Growth Test for a small, urban K-8 charter school. The NWEA administers end of year (EOY) MAP Growth Tests, and these seasonal (Fall, Winter, Spring) predictive tests are utilized to demonstrate student longitudinal growth, along with indicating how each student will do on the EOY MAP Growth test. As a charter school, they operate like a public school but are privately sponsored, having the goal of testing equivalent or better to the nearby public schools. By examining average RIT scores within grades and key years, the data shows that pre-COVID-19 testing years students reached the benchmark scores. However, after returning from the COVID-19 shutdown, there has been a decline in student scores. This research will show that there are many factors when it comes to student testing, including but not limited to, time taken on assessment, gender, and students' strengths/weaknesses, which is demonstrated through regression analysis and other statistical modeling. This research should

help educators know how their students are testing over the years and how they can tailor their teaching to their students' needs.
Judging Category: Civic Engagement Project

Room: LARC 311
Moderator: **Sara Kaufman**

3:30-3:45
The Story of a Crisis: How Framing Shapes What We Believe
Presenter(s): *María Paula Morales Palacios*
Faculty Sponsor: *William Warren, Human Culture & Society - Political Science*
Abstract: Most people do not experience a crisis as it happens. They experience the version that reaches them first, whether that is a headline, an image, or a short post that gives meaning to the situation before all the facts are known, and that first version often has a lasting impact on how individuals interpret what is happening and what they believe should be done about it. This project explores how the presentation of a crisis influences emotional reactions and policy preferences during international conflict, focusing on the ways in which different narratives and images can guide people toward supporting security-based responses, such as force, or diplomacy-based responses, such as negotiation. Drawing from research in political communications and psychology, the study proposes analyzing social media posts and public reactions to ongoing conflicts in order to understand how people respond in real time without the structure of surveys or experiments. By examining how emotions, such as anger, empathy, and fear, appear in response to different forms of crisis communication, this research highlights how quickly and powerfully storytelling can shape public opinion in a world where information spreads faster than it can be fully understood.
Judging Category: Proposal Project

3:45-4:00
Mental Health Resource Awareness Amongst Police Cadets

Presenter(s): *Taylor Bertubin*
Faculty Sponsor: *Weston Anderson, Criminology and Criminal Justice*
Abstract: Officers are routinely exposed to trauma, critical incidents, and workplace stressors. The goal of this future exploratory study is to investigate whether police cadets are aware of and utilize mental health resources within the academy, and if supervisors promote these resources. By having a better understanding of these areas among cadets specifically, more can be done to help improve mental health resource usage earlier in officers' careers and help prevent consequences such as burnout before they occur. The future research project involves surveying cadets at three different academies in a major city in a Midwestern state.
Judging Category: Proposal Project

Room: LARC 319
Moderator: Ben Fulcher

3:30-3:45
Project Harvest
Presenter(s): *Christopher Del Gesso*
Faculty Sponsor: *Ben Fulcher, Game Design*
Abstract: Project Harvest is a first-person psychological-horror roguelite about how we treat the people we control. Each run through a shifting corn maze is framed as an experiment run by an evil scientist, but the deeper subject is the player's relationship to their avatar: how easily we risk, reset, and rationalize harm when the body isn't "ours." The project starts from a simple belief: we learn from play. With that, the developer accepts responsibility to do more than entertain—to hold up a mirror and offer room to grow without preaching. The maze rearranges each run, but the question stays put: if we condemn the scientist for treating a subject as disposable, what does it mean when we do the same to our character in the name of "gameplay"? Built in Godot, Project Harvest uses repetition to teach self-reflection, asking the player to finish with more than a win state. **Judging Category:** Creative Project

3:45-4:00

Private Eye Pierce & The Ink Spill
Presenter(s): *Christopher Del Gesso, Ashley Haberberger, Matthew Nichols, Kevin McGhee, Kaya Wilson, Bella Howe, Samuel Nienaber*
Faculty Sponsor: *Ben Fulcher, Game Design*
Abstract: Private Eye Pierce & The Ink Spill is a 2D point-and-click narrative adventure set in a comic-noir office building, where the mundane slowly gives way to the surreal. You play as Pierce, a washed-up detective investigating a mysterious ink spill that's spreading through the city and now creeping into his own workplace. Explore a monochrome office floor, talk to strange coworkers, and solve simple, story-driven puzzles as you work toward escaping the building and continuing the case. This demo focuses on atmosphere, character, and tone over difficulty. Puzzles are designed to feel like believable obstacles in Pierce's world, not logic tests, and are meant to support storytelling and mood rather than challenge the player. Inspired by classic film noir, absurdist adventure games, and narrative-driven mysteries, Private Eye Pierce & The Ink Spill leans into mood, pacing, and character over fast gameplay or high stakes. If you enjoy narrative adventure games, comic aesthetics, and slow-burn mystery with a surreal edge, this one's for you.
Judging Category: Creative Project

4:00-4:15
Normandy Documentary
Presenter(s): *Marcus Brown*
Faculty Sponsor: *Ben Scholle, Cinema Arts*
Abstract: This presentation describes the second documentary I completed for my Documentary Production class. It's a 360-degree virtual reality Documentary about the school district I'm from, Normandy School's Collaborative, formerly called Normandy School District. The presentation explains the founding, rise, fall, and comeback of Normandy. Also included in the presentation is a discussion of all past schools that have been operated since the establishment, and the current schools today. The film was shot with a GoPro camera to make it more interactive with the schools and the neighborhood around them. I did voice-over narrations for the short documentary film. News articles presented are from the downfall of the district when they lost their accreditation and

were renamed to the Normandy School Collaborative. There are some images of the famous people who graduated from Normandy High School. Additional research for the project was obtained by the Normandy High School Alumni Association and "100 Years of Normandy" by Carolyn Bratton Altepeter in 1994. The Documentary is over seven minutes long, including a tribute to the Normandy community.
Judging Category: Exploratory Project

Room: LARC 322
Moderator: Geremy Carnes

3:30-3:45
The Gospel of Glamour: A Christian Woman's Style Blueprint
Presenter(s): *Osaromwenyeke Osemwota*
Faculty Sponsor: *Chajuana Trawick Ferguson, Fashion Business & Entrepreneurship*
Abstract: The Gospel of Glamour: The Christian Woman's Style Blueprint is a luxury branded, sustainability focused, faith based style guide that addresses a gap in fashion, theology, and sustainability scholarship. Existing literature either systematizes fashion, explores the spiritual significance of dress, or examines sustainable and luxury practices—but none integrates these dimensions into a prescriptive, actionable framework for Christian women. The guide draws on Scripture as its foundational authority, including passages from Genesis, Exodus, Psalms, Proverbs, and other books of the Bible. It frames clothing as both practical provision and a visible expression of covenantal identity. It synthesizes secular fashion methodology, modest fashion scholarship, and sustainable luxury principles to establish a coherent system. Principles of silhouette, proportion, wardrobe architecture, and coordination operate alongside theological imperatives of modesty, dignity, and stewardship. Sustainability functions as lifecycle longevity and generational responsibility, while luxury is reinterpreted as craftsmanship, excellence, and intentionality rather than excess. By bridging doctrinal insight with technical fashion knowledge, the guide offers a structured, repeatable format that empowers Christian women to dress expressively and

timelessly, honoring both faith and aesthetic discernment. It demonstrates that fashion functions as a disciplined, faith aligned practice, integrating spirituality, sustainability, and luxury into everyday wardrobe choices.
Judging Category: Exploratory Project

3:45-4:00
A Feminist and Psychological Criticism of Mary Shelley's Frankenstein
Presenter(s): *Alyssa Hutchings*
Faculty Sponsor: *Geremy Carnes, English*
Abstract:
This essay proposes an integrated feminist and psychological interpretation of Mary Shelley's Frankenstein, arguing that gender ideology and psychological development are inseparable within the novel. While the feminist criticism has long emphasized the exclusion and silencing of women, and psychological criticism has focused upon the trauma, abandonment, and fractured identity; this essay contends that these approaches must be read together. Victor Frankenstein's act of creation represents a patriarchal appropriation of feminine reproduction that produces both monstrosity and psychological damage. The absence of mothers functions as both a feminist critique of women's exclusion of authorship and agency and both as a formative psychological wound that cripples characters' capacities for attachment, nurture, and responsibility. Through Victor and the Creature as mirrored doubles, Shelley exposes Romantic masculinity as a system that damages both women and men. Frankenstein thus reveals the patriarchy to not only as a social injustice, but as a psychologically destructive force.
Judging Category: Exploratory Project

4:00-4:15
Hester Prynne's Monstrous Birth
Presenter(s): *Caitlin O'Toole*
Faculty Sponsor: *Justine Pas, English*
Abstract: The term 'monstrous birth' has been utilized to describe pregnancies that have complications before the child is born or that are deemed irregular in any other way. This research paper focuses on the

Puritan concept of the ‘monstrous birth’ and the various interpretations in American literature, specifically in Nathaniel Hawthorne’s The Scarlet Letter. The Puritans believed that a ‘monstrous birth’ was a punishment from God based on the sinful actions of the mother. The research concluded that while Hester Prynne’s birth did not have any physical complications, she still feared that her child was ‘irregular’ due to the circumstances of her conception. This research further explores how these fears affected the way Hester raised and interacted with her daughter, and the way that the Puritans believed Hester’s daughter to be ‘monstrous.’
Judging Category: Exploratory Project

Judging Award Categories

Alpha Chi's People's Choice Award

Based upon the votes of attendees, the overall top presentation will receive this award. One poster or oral presentation will be awarded. Please use the QR code below to vote!

Top Original Research Project

This award is given to the presenter(s) who has conducted original research that includes data collection, analysis, and implications for the field of study. The highest scoring poster and the highest scoring oral presentation in this category will be awarded.

Top Creative Project

This award is given to the presenter(s) who demonstrates creativity in the form of visual art, physical expression, literary innovation, and/or aural composition. The highest scoring poster and the highest scoring oral presentation in this category will be awarded.

Top Exploratory Project

This award is given to the presenter(s) who provides an in-depth exploration of a topic with attention to effective analysis and/or synthesis of information. The highest scoring poster and the highest scoring oral presentation in this category will be awarded.

Top Proposal Project

This award is given to the presenter(s) who has suggested research or another innovative project in the form of a proposal that outlines what is to be done, but the project has not been conducted. The highest scoring

poster and the highest scoring oral presentation in this category will be awarded.

Top Civic Engagement Project

This award is given to the presenter(s) who has implemented a project focused on connection with and/or service to the campus and/or the community at large. The highest scoring poster and the highest scoring oral presentation in this category will be awarded.

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Acknowledgements

The LU Showcase Committee is grateful for the generous amount of time and energy the Lindenwood community has invested in supporting faculty and students for this event. We extend a special thanks to President Dr. John Porter, Provost Dr. Kathi Vosevich for their continued support of this event.

We thank the many faculty members who presented and who nominated students and assisted with their projects and presentations. Your work ensures the high quality of the showcase, where amazing faculty and student work from across campus is displayed and celebrated. We also thank the faculty and staff who volunteered as judges and technical support, you made this day possible.

We send our gratitude to the wonderful staff throughout the university who assisted with planning, arranging rooms and schedules, helping with publicity, and so many other tasks to make this showcase a success.

Thank you to Brandon Perkins and his team for their work printing posters for the conference, Virginia Hazelwood-Gaylor and the Lindenwood Learning Academy for facilitating faculty presentations, and Paul Huffman for coordinating publications of abstracts and posters to Digital Commons.

We thank the Lindenwood chapter of the Alpha Chi Honor Society for generously funding the Alpha Chi People's Choice Award. Additionally, we would like to thank our community partners: Carshield, Fastenal, Army ROTC, USPS, Job Seekers' Garden Club, Bayer, St. Charles Department of Public Health, Nationwide Assistance, and Timberland High School for sponsoring the other Judging Category Awards.

Finally, thanks to the many students, faculty, and staff who have continued to demonstrate rigor, collaboration, and innovation at Lindenwood University and their willingness to share with the community at the 2026 showcase. We look forward to next year's event!

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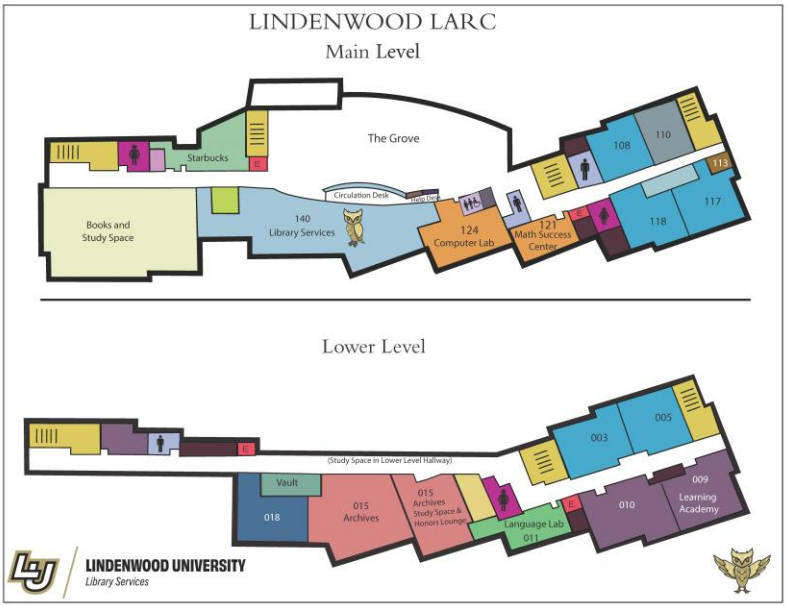
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Starbucks
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124 Computer Lab
121 Math Success Center
108
110
113
117
118
Lower Level
(Study Space in Lower Level Hallway)
Vault
018
015 Archives
015 Archives Study Space & Honors Lounge
Language Lab
011
003
005
010
009 Learning Academy
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244b
244c
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217
205
207
209
213
214
3rd Floor
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