The theme for this year’s Celebration of Scholarship, Exploring the Multiple Perspectives of Scholarship, reflects an ongoing opportunity for members of the Lewis University community to search for the intersection of meaning and purpose with their academic pursuits. Through concurrent, poster, creative works, and business plan presentations, students and faculty from across the University will have the opportunity to share their scholarship, celebrate a milestone in their academic experience, and consider paths that remain to be explored.
PLENARY SESSION
St. Charles Borromeo Convocation Hall

05  Kryssi Staikidis, Ed.D. ................................................................. 11 AM-Noon

CONCURRENT SESSIONS
Academic Building

06  Session I .................................................................................... 1-1:45 PM
08  Session II .................................................................................. 2-3 PM
10  Session III ................................................................................ 3:15-4:15 PM
12  Session IV ................................................................................ 4:30-5:30 PM

CREATIVE WORKS
Oremus Fine Arts Center

14  President’s Art Exhibition Works on Display
(Brent and Jean Wadsworth Family Gallery) .................................. Noon-5:30 PM
13  Creative Works Performances (Studio Theater) .................... 2-4 PM

POSTERS
Academic Building (Posters on display from Noon- 5:30 PM)

15  Session A .................................................................................. 2-3 PM
19  Session B .................................................................................. 3:15-4:15 PM
23  Session C .................................................................................. 4:30-5:30 PM

BUSINESS PLAN COMPETITION
St. Charles Borromeo

28  Judging (Convocation Hall) ....................................................... Noon-4:30 PM

PRESENTERS INDEX
32

RELATED EVENTS
35

COMMITTEE
36
Lewis University is proud to sponsor the Seventh Annual Celebration of Scholarship. Providing an opportunity for the University to showcase the scholarly and artistic work of its graduate students, undergraduate students, and faculty, this annual scholarly event is co-sponsored by the Culture of Inquiry Coordinating Committee; the School of Graduate, Professional, and Continuing Education; the Colonel Stephen W. and Lyla Doherty Center for Aviation and Health Research; the Lowell Stahl Center for Entrepreneurship and Real Estate Studies; the History Center: Urban, Cultural and Catholic History of the Upper Midwest; the Center for Ministry and Spirituality; the University Faculty Development Committee; and the Scholars Academy.

The theme for this year’s Celebration of Scholarship, *Exploring the Multiple Perspectives of Scholarship*, reflects an ongoing opportunity for members of the Lewis University community to search for the intersection of meaning and purpose with their academic pursuits. Through concurrent, poster, creative works and business plan presentations, students and faculty from across the University will have the opportunity to share their scholarship, celebrate a milestone in their academic experience, and consider paths that remain to be explored.

*The Lewis University Celebration of Scholarship will present scholarly work in the following formats throughout the afternoon.*

**CONCURRENT SESSIONS**

Students and faculty will give a 15-minute presentation on a research topic or paper they have written. Concurrent sessions will be scheduled in rooms in the Academic Building from 1-5:30 PM. Registration for presenters and information regarding the various Celebration of Scholarship events will be available throughout the day in the hall between the Academic and Science Building.

**POSTER SESSIONS**

Research posters will feature the results of research projects, internships and class presentations. Posters will be displayed in the Mathematics and Computer Science Wing of the Academic Building and Science Center from Noon-5:30 PM with the authors present at times as designated in this program.

**CREATIVE WORKS**

These include any piece that has been written, published or produced in a fine arts field, including music, art, theatre, literary reading, poetry, etc. These exhibits will be displayed from Noon-5:30 PM in the Art Gallery with performances taking place in the Studio Theatre of the Oremus Fine Arts Center from 2-4 PM.

**BUSINESS PLAN COMPETITION**

The annual Lewis University Business Plan Competition, hosted by the Lowell Stahl Center for Entrepreneurship and the College of Business, encourages entrepreneurship among students throughout the Lewis community. The College of Business recognizes that potentially successful business ideas can come from a wide range of disciplines and may originate from an individual or a group of individuals. These presentations are scheduled from Noon-4:30 PM in the Convocation Hall. A networking and awards reception will follow from 5-6 PM in the Flight Deck.
Dear Colleagues:

It is my privilege to welcome everyone to the seventh Annual Celebration of Scholarship. I am pleased to be a part of this important Celebration that recognizes the scholarly accomplishments of the undergraduate and graduate students and faculty members of Lewis University. This year’s theme of *Exploring the Multiple Perspectives of Scholarship* highlights the variety of ways in which scholarship may be woven into the life of a university.

Students have been working with their respective faculty mentors for the last year to investigate, create and present the new ideas and knowledge that you will experience as a part of this year’s Celebration of Scholarship. This year’s celebration will include 54 concurrent sessions, 116 posters, 14 business plan competition presentations and a variety of creative works.

The Plenary Session at 11 a.m. in Convocation Hall will feature Kryssi Staikidis, Ed.D., Associate Professor of Art and Design Education at Northern Illinois University. We are privileged to have this artist, scholar and social critic as our keynote speaker. Following her remarks there will be multiple sessions, posters, displays and presentations in the Academic Building and Science Center, St. Charles Borromeo, as well as the Oremus Fine Arts Center throughout the afternoon and evening.

This day is possible because of the commitment of many faculty and staff. Thank you to the School of Graduate, Professional, and Continuing Education; the Planning Committee; the subcommittees and the many volunteers who give their time to make this event a success. Thank you to the Chair of the committee, Dr. Sarah Powers, Assistant Professor in the Biology Department and Co-Chair-Dr. Erica Kwiatkowski-Egizio, Associate Professor, Secondary, Middle & Foreign Language Program, College of Education.

Faculty and student research, scholarly pursuits and creative works are fundamental to the life of the University. It is with great pride we celebrate the work that has been done and with great hope we look to the future to see these efforts continued.

Enjoy this Celebration of Scholarship and blessings to all.

Sincerely,

David J. Livingston, Ph.D.
President
Dear Colleagues:

It is with great pride and enthusiasm that Lewis University once again sponsors the annual Celebration of Scholarship. Now in its seventh year, the Celebration of Scholarship highlights the scholarly accomplishments of our undergraduate students, graduate students and faculty. Lewis University is fortunate each year to be able to showcase to the community the many research and scholarly initiatives, and creative works happening on our campus. We are proud of the mentoring relationships that have formed and will continue to thrive between our faculty and students from these endeavors.

This year’s theme, **Exploring the Multiple Perspectives of Scholarship**, reflects the ongoing opportunity for the Lewis University community to search for meaning and purpose with their academic pursuits. It is a fitting theme that parallels Lewis University's commitment to academic excellence across the University.

We are honored this year to have as our Keynote Speaker, Dr. Kryssi Staikidis, Associate Professor of Art and Design Education at Northern Illinois University. It is our privilege to welcome Dr. Staikidis to our campus for this showcase event.

We are also grateful for all those who have worked diligently to make this Celebration a reality and a success. Thank you to the many faculty and staff who serve on the Celebration of Scholarship Coordinating Committee, various sub-committees and other volunteer capacities. A special thanks to Dr. Sarah Powers, Assistant Professor in the Biology Department who served as Chair this year and to Co-Chair, Dr. Erica Kwiatkowski-Egizio, Associate Professor, Secondary, Middle & Foreign Language Program in the College of Education. Our gratitude is also extended to Dr. Anne Rapp, Interim Dean, School of Graduate, Professional, and Continuing Education and to former Dean, Office of Graduate Studies, Dr. Nan Yancey, who have provided leadership and guidance to this annual event.

Thank you to all who have contributed to the ongoing success and growth of this annual event. The spirit of Association permeates this day and speaks to our commitment to our Mission values of knowledge, wisdom, justice and fidelity all toward our efforts to promote student learning.

Sincerely,

Stephany Schlachter
Provost
11 AM – NOON

ST. CHARLES BORROMEO CONVOCATION HALL

Welcome
Dr. Anne Rapp, Interim Dean, School of Graduate, Professional, and Continuing Education

Remarks
Dr. David Livingston, President, Lewis University

Introduction of Keynote
Dr. Sarah Powers, Assistant Professor of Biology; Chair, 2018 Celebration of Scholarship

Keynote Address
Dr. Kryssi Staikidis, Associate Professor of Art and Design Education, Northern Illinois University

Audience Questions
Facilitated by Dr. Powers

Closing Remarks
Dr. Stephany Schlachter, Provost, Lewis University
KEYNOTE

EXPLORING THE MULTIPLE PERSPECTIVES OF SCHOLARSHIP

KRYSSI STAIKIDIS, ED.D.

Kryssi Staikidis is an associate professor of Art and Design Education at Northern Illinois University. She holds a Doctor of Education Degree in Art and Art Education from Teachers College Columbia University in New York City, a Master of Fine Arts in Painting from Hunter College in New York City, and a Bachelor of Science degree in Anthropology and Art History from Columbia University.

Her research interests are indigenous research and pedagogy, art studio practice as a site for research, and critical pedagogy in the classroom. She has published in Studies in Art Education, The Journal of Art Education, Visual Arts Research, Visual Culture and Gender, The Journal of Social Theory in Art Education, and The Journal of Qualitative Inquiry; has multiple book chapters in art education and general education anthologies; and received the National Art Education Association Western Region Award in 2014 and the J. Eugene Grigsby Jr. Award, for contributions to multicultural and social justice scholarship in art education in 2015. During years 2011-2013, Dr. Staikidis served as Editor-in-Chief of The Journal of Social Theory in Art Education.

She sits on seven editorial boards of premier research and teaching journals in art education. In 2017, her co-edited book Transforming Our Practices: Indigenous Art, Pedagogies, and Philosophies was published by the National Art Education Association.
CONCURRENT SESSIONS

(See Presenters Index on Pages 32-34)

SESSION I

1-1:45 PM

**AS-132-A**
Moderator: Dr. Pramod Mishra

**Beneath the Ashes: Herculaneum and Material Culture**
Undergraduate Student Project in Humanities

Skyler Wurst
Dr. Dennis Cremin

Drawn from a capstone paper, this presentation defines Material Culture and how historians use objects to interpret the past. The presentation provides the case study of Herculaneum, a port town that was destroyed by the 1st century eruption of Mount Vesuvius. The paper utilized three objects; a scroll from the Villa Papyri, three statues of women, and the remains inside a boathouse, as well as an eye witness account.

**AS-134-A**
Moderator: Dr. Daisy Sherry

**Gene Therapy to Treat Tachyarrhythmias in Post-myocardial Infarction Patients**
Undergraduate Student Project in Math & Science

Emily Richard
Dr. Marne Bailey

Arrhythmias contribute significantly to the morbidity and mortality of patients post heart failure. This thesis presentation focuses on the mechanisms of arrhythmias and associated gene therapy approaches to correct them.

**AS-150-A**
Moderator: Dr. Mallory Havens

**A Novel Vaccine Against Common Biological Weapons**
Undergraduate Student Project in Math & Science

Ian Scholl
Dr. Marne Bailey

The current vaccines against anthrax and the plague, two of the most common agents in biological weapons, are not available to the public due to their harsh side effects. F1mutV-PA is a novel vaccine that has been shown to confer effective resistance against both anthrax and the plague. This one vaccine can offer a safer, more cost efficient, and more effective defense against these deadly diseases.

**AS-134-A**
Moderator: Dr. Daisy Sherry

**Self-Formation in Caste and Communism**
Undergraduate Student Project in Humanities

Kayla Chambers
Dr. Pramod Mishra

The stories within “The Bridegroom” by Ha Jin and journey of the main character Balram in “The White Tiger” reveal how power and hierarchy in Indian and Chinese societies, one built on communism, another on caste system, entrench on the formation of identity and self. Through an examination of symbols, character development, language, and scholarly articles, I define how these societies inhibit self-formation and how these citizens respond to their constraints.

**AS-150-A**
Moderator: Dr. Mallory Havens

**The “Thrifty Genotype” Hypothesis: Is It Potentially Harmful in Today’s Society?**
Undergraduate Student Project in Math & Science

Jaclyn Filewicz
Dr. Jennifer Roberts

Researchers and physicians alike have been on the search to explain the increased number of obesity and diabetes cases in the United States. A ‘thrifty’ gene has been the center of focus for many years to possibly explain the rapid increase in these cases.

06 Session I 1-1:45 PM
08 Session II 2-3 PM
10 Session III 3:15-4:15 PM
12 Session IV 4:30-5:30 PM
**AS-155-A**  
Moderator: Dr. Huma Zia  
**Design in the World of Science**  
Undergraduate Student Project in Performing Arts  
Audrey Pearson  
Dr. Amanda Harsy  
Bridging the gap between the general public and scientific researchers is an important part of aiding the community in understanding scientific findings. This presentation will discuss some of the issues and questions that are involved in visualizing scientific research. Specifically, we discuss the design issues involved in modeling DNA self-assembly using graph theory and mathematics.

**AS-156-A**  
Moderator: Dr. Martha Wilkins  
**Privatization of Water Services in Fairmont, Illinois**  
Undergraduate Student Project in Humanities  
Allison Trendle  
Dr. Christie Billups  
Privatization of public services and utilities, such as water service, is becoming more commonplace for a variety of reasons. However, this often leads to an increase in service charges placing undue burdens on the poorest members of a community. Fairmont, Illinois suffered when Lockport Township privatized their water service. This project examines the costs and benefits of privatizing the water service in Fairmont.

**AS-157-A**  
Moderator: Prof. Therese Jones  
**Application of External Load on Vertical Jump and G-Forces**  
Undergraduate Student Project in Math & Science  
Mohammad Shatat  
Dr. Zach Binkley  
This study will measure how different external loads effect vertical jump forces and jump height.

**AS-158-A**  
Moderator: Dr. David Failing  
**A Nanoporous Biomimetic Cellulose-Based Composite Bead that Incorporates the Antimicrobial Metal-Organic Framework HKUST-1**  
Graduate Student Project in Math & Science  
Caterpillar Scholar Award  
Thomas Rickhoff  
Dr. Daniel Kissel  
The scarcity of drinkable water has become an ever-increasing global concern making the development of advanced water filtration systems a high priority. In this research, an advanced nanoporous composite bead composed of cellulose acetate embedded with a copper-based metal-organic framework, HKUST-1 is investigated for use as an adsorbent material for the remediation of methylene blue. Additionally, it is demonstrated that the incorporation of HKUST-1 into cellulose acetate inhibits the growth of the bacterium *Escherichia coli*.
This study analyzes the portrayal of romance on television in 2017. A content analysis was conducted by creating a coding sheet with instructions to give numeric values for several traits and characteristics of observed couples. Several intriguing observations that were made after extrapolating the data will be discussed along with their implications. By analyzing television content, this study provided insights regarding the potential influences television has on society’s perceptions of romance.

Caminos De Michoacan
Undergraduate Student Project in Social Sciences
Magaly Lozea
Dr. Jackie White
The personal narratives collected from few of the many Latino immigrants within the U.S. reveal some of the causes for immigration, as well as the opportunities and challenges faced by the respondents. Learning about immigration helps deepen an understanding of culture and history.

Sound Attenuation in College Students
Undergraduate Student Project in Social Sciences
Natalie Palm, Allison Trendle
Dr. Chiwan-Shyang Jih
Sound attenuation in college students was studied through the use of common and uncommon words. Results from a dichotic listening task showed that participants in the experimental group whose list consisted of words related to danger, pleasure, and academics, recalled significantly more words from their unattended ear than participants in the control group, who heard a list of more common words. This suggests that uncommon words may have a lower threshold for college students.

Modern Romance on Television
Undergraduate Student Project in Social Sciences
Matthew Buckley
Dr. David Anderson
This study analyzes the portrayal of romance on television in 2017. A content analysis was conducted by creating a coding sheet with instructions to give numeric values for several traits and characteristics of observed couples. Several intriguing observations that were made after extrapolating the data will be discussed along with their implications. By analyzing television content, this study provided insights regarding the potential influences television has on society’s perceptions of romance.

A Deficiency in the Filaggrin Gene Causes Atopic Dermatitis and Other Related Atopic Disorders
Undergraduate Student Project in Math & Science
Kamille Agustin
Dr. Jennifer Roberts
Atopic dermatitis (AD) is a chronic inflammatory skin disease that precedes allergic rhinitis and asthma. A mutation in the filaggrin gene is a major factor for the cause of atopic dermatitis and other related allergies. An insufficient amount of the filaggrin gene results in a weak skin barrier, which allows more water loss that causes the dry and scaly skin. This deficiency also triggers the inflammatory and allergic immune response (atopic eczema and allergies) by allowing allergens to enter through the epidermis. Ultimately, further understanding the filaggrin protein/gene can lead to better treatment options for AD as well as other atopic disorders.

A Deficiency in the Filaggrin Gene Causes Atopic Dermatitis and Other Related Atopic Disorders
Undergraduate Student Project in Math & Science
Kamille Agustin
Dr. Jennifer Roberts
Atopic dermatitis (AD) is a chronic inflammatory skin disease that precedes allergic rhinitis and asthma. A mutation in the filaggrin gene is a major factor for the cause of atopic dermatitis and other related allergies. An insufficient amount of the filaggrin gene results in a weak skin barrier, which allows more water loss that causes the dry and scaly skin. This deficiency also triggers the inflammatory and allergic immune response (atopic eczema and allergies) by allowing allergens to enter through the epidermis. Ultimately, further understanding the filaggrin protein/gene can lead to better treatment options for AD as well as other atopic disorders.

Vestibular Rehabilitation Therapy on Patients with Unilateral or Bilateral Vestibular Hypofunction
Undergraduate Student Project in Math & Science
Ruth Velazquez
Dr. Jennifer Roberts
Individuals with unilateral or bilateral vestibular hypofunction face many risks of injury due to their constant feeling of dizziness, imbalance, and sense of disequilibrium. Vestibular rehabilitation therapy includes different exercises that target the vestibular system and balance.

Vestibular Rehabilitation Therapy on Patients with Unilateral or Bilateral Vestibular Hypofunction
Undergraduate Student Project in Math & Science
Ruth Velazquez
Dr. Jennifer Roberts
Individuals with unilateral or bilateral vestibular hypofunction face many risks of injury due to their constant feeling of dizziness, imbalance, and sense of disequilibrium. Vestibular rehabilitation therapy includes different exercises that target the vestibular system and balance.

Depression: Causes, Effects, Treatment
Undergraduate Student Project in Math & Science
Amanda Lach
Dr. Jennifer Roberts
Depression is one of the most common mental disorders affecting more than 350 million people of all ages globally. The World Mental Health Survey found on average 1 in 20 people reported experiencing an episode of depression within the previous year (Grosso et al, 2014). With a growing need for treatment options, omega-3 fatty acids have gained attention regarding the efficacy in treatment for mental illnesses as an alternative for natural and synthetic antidepressants that have been used.

Drosha’s Non-traditional Role on Gene Expression
Undergraduate Student Project in Math & Science
Stephanie Nguyen
Dr. Valerie Vander Vliet
Drosha generally functions in identifying and excising RNA hairpins from large transcripts, but it was recently shown to regulate gene expression through a role other than miRNA biogenesis. Drosha appears to act as an alternative splicing factor for exons that form hairpin structures resembling a Drosha-binding substrate. The activity of the microprocessor complex in the splicing of an alternative exon reveals a nontraditional mechanism for controlling gene expression.

CRISPR/CAS9 for Inhibition of HIV Infection
Undergraduate Student Project in Math & Science
Ashley Velez
Dr. Valerie Vander Vliet
Human Immunodeficiency Virus (HIV) disables the body’s ability to fight infections and eventually can cause Acquired Immunodeficiency Syndrome (AIDS). Clustered Interspaced Short Palindromic Regions (CRISPR) is a DNA editing technique. Studies have established that through the use of CRISPR-Cas9 gene editing, multiple mechanisms can be utilized in determining how to inhibit the HIV-1 virus. Mechanisms of HIV replication inhibition via CRISPR-Cas9 include: Inhibition of replication, Activation and disruption of latent HIV-1 virus, Trim5α, and genome editing of CD4+ T-cells.
Polycyclic Aromatic Hydrocarbons and their Role in Breast Cancer
Undergraduate Student Project in Math & Science
Constantinos Panayiotides
Dr. Valerie Vander Vliet
Breast cancer is the leading diagnosis of cancer in women. Studies have shown that polycyclic aromatic hydrocarbons are linked to several kinds of cancer. The purpose of this presentation is to review the effects that these common pollutants exhibit on mammary glands and to discuss possible mechanisms of action.

A Step Toward a Better Life After Sex Trafficking
Undergraduate Student Project in Humanities
Ashleigh Murphy
Dr. Natalia Tapia
For victims of sexual trafficking, some services that are beneficial are unavailable because of age or funding, which can lead to additional trauma. Exploring the age criteria for admission, length of stay, whether residential or nonresidential services are offered, educational programs, medical care, trauma therapy, vocational training, and other relevant variables for organizations around the United States that provide services for this population, will provide much-needed data to identify areas for improvement.

AS-156-A
Moderator: Prof. Bettie Komar
The Exonerated: A Look into the Current Reentry Process for the Wrongfully Convicted
Undergraduate Student Project in Social Sciences
Ana Trujillo
Dr. Carlene Sipma-Dysico
The Reentry process is one that has haunted the country for decades now, and for someone who has been wrongfully convicted, it makes life after prison almost as difficult as incarceration itself. The problems within the reentry system must be addressed, and the barriers to rebuilding a life after incarceration must be made public. The exonerated need a voice.

Differences in Bereavement Between Military Combat and Civilian Homicide Deaths: Impact of Value-based Identity on Grieving
Undergraduate Student Project in Social Sciences
Denise Williams
Dr. John Greenwood
Empirical study combining new data with archival data.

AS-157-A
Moderator: Br. Thomas Dupré
StrategoBot: An Intelligent Agent for a Two Player Stochastic Game
Undergraduate Student Project in Math & Science
Keller Dellinger, Quinn Stratton, Edwin Moses
Dr. Piotr Szczurek
An intelligent agent for autonomously playing Stratego.

Agent Decision Making Given Imperfect Information in Texas Hold’em
Undergraduate Student Project in Math & Science
Thomas Lenz, Fidel Ramirez
Dr. Piotr Szczurek
Agent decision making given imperfect information in Texas Hold’em.

Reddit Based Artificial Intelligence Chatbot
Undergraduate Student Project in Math & Science
Alexander Klouda, Matthew Ratajczyk, Samuel Santillo
Dr. Piotr Szczurek
This research focuses on implementing machine learning to create a complex software agent. This agent is capable of referring to conversational data from a social news website to formulate responses to a human interrogator.

AS-158-A
Moderator: Dr. Mark Letcher
The Effect of Angular Speed on Pitching Statistics
Undergraduate Student Project in Math & Science
Ryan Smith
Dr. Ryan Hooper
In Major League Baseball, the rate at which a pitch rotates directly impacts several statistics. Increasing the average angular speed of pitches appears to increase the number of strikeouts per inning pitched (SO/IP) and lower the exit velocity of batted balls. The physical structures and pitching mechanics of pitchers on Lewis University’s baseball team will be analyzed in order to test discrepancies in the relationship between height and angular speed from previous research.

Muon ID Detector Simulation for the Mu2e Collaboration at Fermilab
Undergraduate Student Project in Math & Science
Jackson Waters
Dr. Ryan Hooper
As a part of the Mu2e experiment at Fermilab, the Muon ID Detector system, which will detect muons, needs to be built. A realistic simulation for this detector will allow for the proper construction of this device.

Scanning Fabry-Perot Interferometer
Undergraduate Student Project in Math & Science
Kyle Sullivan
Dr. Charles Crowder
The Fabry-Perot Interferometer will be used to measure minute changes in wavelengths and display the change in a concentric circle pattern.
SESSION III
3:15-4:15 PM

AS-134-A
Moderator: Dr. Lynn Tovar
Leadership in the 21st Century - A Look at Different Leadership Styles Effective in Today’s Organizations
Graduate Student Project in Humanities
Dr. Lesley Page, Megan Graves, Katherine Grimaldi, Greg Gulledge
Dr. Lesley Page
Leadership is needed for organizations and employees to reach their greatest potential. Organizational outcomes and employee engagement can be fostered by different leadership styles. This panel presentation will focus on the impact of transformational, charismatic and spiritual leadership. Each leadership style will be discussed and compared using current research and literature to evaluate its impact in meeting the needs and challenges of organizations and employees in the 21st century.

Challenging Neuroscience on Mereological Grounds: Toward Understanding the Mereological Fallacy
Faculty Project in Humanities
Dr. Arsalan Memon
Most neuroscientists argue that consciousness is either located in the brain or reducible to neural activity. I challenge both of these neuroscientific claims on mereological grounds or through a part-whole analysis. I argue for an anti-reductionist position on consciousness, which sheds light on why neuroscience has not been able to solve the hard problem of consciousness and why my position can more adequately explain some pathological cases where the unity of consciousness is fundamentally affected.

AS-150-A
Moderator: Dr. Bonnie Kyburz
Breaking with Tradition: Sherman Alexie and Lorraine Hansberry Change the English Canon
Undergraduate Student Project in Humanities
Jacob Volk
Dr. Jackie White
The need for a change in the English canon for literature and learning is addressed. Analysis of two works emphasize the thesis.

Living in the Sunken Place: An Analysis of “Get Out”
Undergraduate Student Project in Visual Arts
Michael Lane
Dr. Simone Muench
This essay analyzes the elaborate themes and messages in "Get Out," reaching back through time to detail its many influences, as well as looking forward at the almost certain impact it will have on cinema in the future.

The American Gothic and the Carnivalesque in Something Wicked This Way Comes
Faculty Project in Humanities
Dr. Jamil Mustafa
Something Wicked This Way Comes (1962), is the story of how the boys Will Halloway and Jim Nightshade confront and defeat Cooger and Dark's evil carnival, exemplifies both the Gothic and the carnivalesque qualities of Ray Bradbury's imagination. Contrary to current scholarly opinion, Bradbury’s novel is not an escapist fantasy but a distinctively constructed allegory that represents and critiques American Cold War paranoia in a quintessentially Gothic and carnivalesque fashion – by illustrating how laughter conquers fear.

AS-155-A
Moderator: Prof. Nanci Reiland
First Human Trial Proposed to Test HLA-A*0201 Restricted NY-ESO Redirected T cells with CRISPR Edited Endogenous T cell Receptors
Undergraduate Student Project in Math & Science
Sergio Gonzalez
Dr. Valerie Vander Vliet
While autologous stem cell transplantation is a promising treatment option for myeloma, researchers have expanded T cell mediated treatments to now incorporate CRISPR-Cas gene editing therapies as a potential method of cancer eradication for patients. This study concerns the mechanism and potential risks of the use of CRISPR in the treatment of multiple myeloma, and emphasizes how the emergence of CRISPR mediated treatment options have stemmed from immunotherapies focalized on T cell manipulation.

Treatment Mechanisms and Prevention Agents of Chronic Traumatic Encephalopathy
Undergraduate Student Project in Math & Science
Rebeckah Eickmann
Dr. Valerie Vander Vliet
Chronic Traumatic Encephalopathy (CTE) is a neurodegeneration characterized by abnormal accumulation of hyperphosphorylated tau protein within the brain and can only be detected post mortem. CTE is due to multiple traumatic brain injuries (TBIs) resulting from high impact activity to the head. One possible treatment that has been studied in mice and in vivo is the antibody, prolyl isomerase Pin1, that has shown the protection against the development of the neurodegeneration of the tau.
Aromatase Inhibitors in the Treatment of Pelvic Pain and Infertility Associated with Endometriosis
Undergraduate Student Project in Math & Science
Clarydyan Gray
Dr. Valerie Vander Vliet

Endometriosis is a gynecological condition that is characterized by endometrial tissue found outside of the uterus. Two major symptoms are pelvic pain and infertility. Current treatments for endometriosis include ovarian estrogen suppressants and surgery. Endometrial lesions have exhibited high levels of aromatase which initiate the production of estrogen, leading to lesion growth. The addition of aromatase inhibitors are able to control local estrone production in lesions without compromising fertility.

AS-156-A
Moderator: Dr. Erik Baker
Accuracy in Aviation Maintenance Planning
Graduate Student Project in Math & Science
Edgar Oviedo
Dr. Matthew Franklin

Scheduled (planned) maintenance for commercial airlines consist of nightly preventative maintenance tasks and inspections to keep aircraft airworthy (safe to fly). Individual maintenance tasks are each supposed to require a certain number of maintenance man-hours based on manufacturer recommendations and airline standards. However, tasks sometimes require more man-hours than was originally planned, due to complications such as weather, experience level of the technicians, or scarcity of tools or parts. This study will compare tasks of planned man-hours to their actual required man-hours.

The Future Market for Large Unmanned Cargo Aircraft in the National Airspace System
Graduate Student Project in Business
Mark Collins
Dr. Erik Baker

Due to safety concerns and public perception of drone safety, it is believed that unmanned cargo aircraft will be developed before large scale use of autonomous passenger aircraft. Therefore, this thesis examines the history of large unmanned cargo aircraft (LUCA), current and future regulations for use, future technology, potential economic impact, and future markets for enabling LUCA to fly in the national airspace system (NAS). This examination will also evaluate the limitations facing LUCA integration. These include technology, security, safety, public perception, liability, and other limitations. It will also evaluate LUCA market opportunities to help provide insight for future LUCA stakeholder investment.

Evaluating a Functional Aircraft Cockpit Display for High Altitude Energy Management
Faculty Project in Math & Science
Doherty Center for Aviation and Health Research
Dr. Erik Baker

A repeated-measures, within-subjects design was conducted on 58 participant pilots to assess mean differences on energy management (EM) situation awareness (SA) response time (RT) and response accuracy between a conventional electronic aircraft display, a primary flight display (PFD), and an ecological interface design (EID) aircraft display, the OZ concept display. EMSA is the perception, comprehension, and projection of the management of kinetic and potential energy of an aircraft. An initial hypothesis was that increased EMSA would decrease a flight crew’s potential for loss of control-in-flight (LOC-I) incidents.

AS-157-A
Moderator: Dr. Ibrahim Mescioglu
Educating Caregivers on Asthma Management Utilizing Innovative Pediatric Nursing Student Clinical Experiences
Undergraduate Student Project in Nursing
Casey Lakumb, Samantha Svhla
Prof. Anne McShane

Low-income families are at higher risk for chronic health conditions, necessitating effective health promotion education for their caregivers. Pediatric nursing faculty and student nurses presented Asthma Management and Indoor Air Quality content to Head Start staff and administrators, which enhanced their awareness of chronic disease management. American Lung Association funding provided incentives for the staff to participate in interactive games, which facilitated retention of the content.

A Patient Portal Push Toward Acceptance and Utilization of the Technology
Graduate Student Project in Nursing
Deborah Kornacker
Dr. Stacie Elder

Federal stakeholders have promoted online portals to engage patients and providers in care coordination. National stages of Meaningful Use 2 and 3 offered monetary incentives to encourage attainment of federal portal benchmarks related to registration and utilization numbers. The aim of this program evaluation is to assess the impact of a 90-day patient portal marketing and education initiative on Meaningful Use benchmark attainment. This descriptive study will examine portal utilization factors related to patients’ and providers’ acceptance and utilization of online patient portals.
SESSION IV
4:30-5:30 PM

Enhancing Primary Care Interactions with Patient-Provider Partnerships
Graduate Student Project in Nursing
Nanci Reiland
Dr. Kathleen Fitzgerald
This scholarly project, as part of the Doctor of Nursing Practice curriculum, involves assessing needs and implementing a plan for enhancing partnerships between patients and primary care providers at a local federally qualified health center.

AS-158-A
Moderator: Dr. Jerry Kavouras
Determination of Fluid Viscosity and Applications through Damped Oscillation Analysis
Undergraduate Student Project in Math & Science
Justin Fortes
Prof. James Hofmann
This study utilizes video analysis to track the position of a mass vertically oscillating through a fluid in order to determine the viscosity of the damping media.

Reverse Propulsion System on Airdropped Equipment
Undergraduate Student Project in Math & Science
Nicholas Malinowski
Prof. James Hofmann
The aim of this research is to create a reverse propulsion system for equipment that is dropped out of aircraft. The research will be small scaled and will primarily focus on reducing the speed of the impact upon reaching the ground.

Syringe Design
Undergraduate Student Project in Math & Science
Jason Hoffmeister
Prof. James Hofmann
This project will be a syringe that removes bubbles from liquid medicine inside of it.

AS-155-A
Moderator: Dr. Jung Kim
Current and Future Treatment Using Encapsulated Pancreatic Islets as a Treatment for Type 1 Diabetes Mellitus
Undergraduate Student Project in Math & Science
David Tarter
Dr. Valerie Vander Vliet
While encapsulated pancreatic islets are a promising treatment for Type 1 diabetes since it is theoretically a functional cure for Type 1 diabetes, the small clinical trials done on humans has shown to not be effective at protecting the islets from the immune system. However, recent studies have shown that increasing the size of the capsules and changing the structure of the capsule has proven to help the capsule remain in its configuration.

Genetic Modification by Means of CRISPR for Xenotransplantation
Undergraduate Student Project in Math & Science
Alejandra Haro
Dr. Valerie Vander Vliet
This presentation analyzes the use of clustered regularly interspaced short palindromic repeats (CRISPR)/Cas9 system to overcome the problems associated with xenotransplantation of pig organs. Due to the shortage of organs available and the long list of patients waiting, this has the potential to eliminate the problem.

Rheumatoid Arthritis and the Effects of Omega-3 Supplementation
Undergraduate Student Project in Math & Science
Omar Meza
Dr. Valerie Vander Vliet
Rheumatoid Arthritis is characterized by swelling and discomfort in the joint and bone erosion. Medications being prescribed for rheumatoid arthritis can have life threatening side effects. Omega-3 has been proven useful in treating rheumatoid arthritis. It has been shown to reduce bone erosion, inflammation, and autoantibody presence.

AS-156-A
Moderator: Dr. Elizabeth Sturm
LACU 2018 Racial Justice Lasallian Colloquy
Faculty Project in Education
Prof. Kristin Callahan, Dr. Jeffery Trask, Dr. Daisy Sherry, Dr. Erica Davila
Lewis faculty members will present the proceedings of the LACU 2018 Racial Justice Lasallian Colloquy. They will discuss the shared vision for racial justice developed by the participating faculty and the plan to promote this vision institutionally among the Lasallian colleges.

Teachers, Twitter, and Global Citizenship Education
Faculty Project in Education
Faculty Scholar Award
Dr. Laura Quaynor
This study will share findings from an analysis of scheduled Twitter chats on global education, focusing on 1) the ways participants interact and 2) the facets of global education discussed. Results suggest that Twitter provides a space for global educators to experience affirmations and personalized learning. Educators in this study tended to focus on student knowledge and feelings, rather than educating students about human or civil rights. Equality and environmental concerns were the most common global issues discussed.

Special thank you to our Moderator Alternates, Dr. Ryan Hooper and Prof. R. Eric Jones.
2 PM
Irene Ryan Audition
Undergraduate Student Project in Performing Arts
Sean Gallagher, Jessica Sheppard
Jo Slowik
An audition package performed at the Irene Ryan scholarship auditions at KCACTF this year.

2:10 PM
Natural State
Undergraduate Student Project in Performing Arts
Ashley LaFayette, Kayla Chambers, Sean Gallagher, Jordan Elmer
Kristin Callahan, Dr. Mike McFerron, Dr. Simone Muench, Keith White
A collaborative piece consisting of a poem with corresponding music, a live theater performance, along with an animation.

2:20 PM
Loop
Undergraduate Student Project in Performing Arts
Lance Fozo, Samantha Gennett, Zackary Abu-Shanab, Jordan Elmer
Kristin Callahan, Dr. Mike McFerron, Dr. Simone Muench, Keith White
Poem written and preformed, along with visuals and a music composition.

2:40 PM
Praise
Undergraduate Student Project in Performing Arts
Audrey Pearson, Zakiya Cowan, Kayla Carson, Pablo Moreno
Kristin Callahan, Dr. Mike McFerron, Dr. Simone Muench, Keith White
Poem written and preformed, along with visuals and a music composition.

3:20 PM
The Motion of the Brag
Undergraduate Student Project in Performing Arts
Israel Vega, Patricia Damocles, Jennifer Glynn, Jordan Elmer
Kristin Callahan, Dr. Mike McFerron, Dr. Simone Muench, Keith White
An animated short, written, scored, voice acted and animated by students from each department.

3:30 PM
Nest
Undergraduate Student Project in Performing Arts
Delaney Blaylock, Dominique Dusek, Jennifer Glynn, Devon Williams
Kristin Callahan, Dr. Mike McFerron, Dr. Simone Muench, Keith White
A collaborative performance of poetry, music, and animation.

3:50 PM
Parameters
Undergraduate Student Project in Performing Arts
Betsaira Cadena Noguez, Bree Scott, Devon Williams, Sean Gallagher
Kristin Callahan, Dr. Mike McFerron, Dr. Simone Muench, Keith White
Performance collaborated with the music, theater, English, and design department.

CREATIVE WORKS
(See Presenters Index on Pages 32-34)
The President’s 10th Annual Art Exhibition Winners
On display in the Brent and Jean Wadsworth Family Gallery, Oremus Fine Arts Center.

1ST PLACE
Bryan Sisk, “Depression,” Photography and Acrylic

2ND PLACE
Larissa Barnat, “Mercury,” Oil

3RD PLACE
Zachary Meredith, “The Way Life Goes,” Acrylic

HONORABLE MENTION
Kayla Feigl, “Trapped in a Perfect World,” Printmaking

Madeline Janich, “Tranquility,” Photography and Graphic Design

Angela Morris, “Waiting,” Pastels and Pastel Pencils

Jacqueline Nelson, “Bone,” Photography

Elizabeth Samoska, “Stephanie,” Oil

Schuyler Staley, “Beauterus,” Collage, Watercolor, Pen, Photoshop

Hanna Swanberg, “Yellow, White, and Pink,” Digital Print

Julianna Walen, “Adoration,” Fluid Acrylics
SESSION A
2-3 PM

1. Small Businesses’ Use of the Social Media Platform Snapchat To Enhance Their Success and Brand Awareness
Undergraduate Student Project in Business
Hannah Roberts
Dr. Shan Lin
Over the past few years, social media has taken a major step forward in furthering the successfulness of businesses across the globe. One particular social media platform that has become used more often by businesses who are reaching out to millennials is Snapchat. This research analyzes the activity on Snapchat to demonstrate the immense impact it can have on a small, non-profit organization’s success. The results of this study will provide small businesses with powerful insights as to how to use this specific platform which will give them the ability to greatly enhance their success in the field of Social Media and Marketing.

4. Feminine Insurgency: A Character Analysis of The Metamorphosis and A Raisin in the Sun
Undergraduate Student Project in Humanities
Patricia Damocles
Dr. Jackie White
This conference paper analyzes the universality of sexism seen in two seemingly disparate texts: the English translation of Kafka’s originally German novella, The Metamorphosis, and the African-American-based drama, A Raisin in the Sun and how, as a pair, they reveal how difficult it is to overcome systemic oppressions such as patriarchy.

7. Empowerment in the Prison Setting
Undergraduate Student Project in Nursing
Erin Chirikos, Lauren Gray, Casey Lakumb, Megan Mathis, Samantha Svihla
Prof. Nanci Reiland
Prison inmates in the United States correctional system are at high risk for poor health. Five student nurses in the Lewis University College of Nursing and Health Professions Community Health course conducted health empowerment classes to inmates at the DuPage County Jail. Outcomes of this health-promotion intervention reflected improved knowledge of health concepts and greater self-empowerment among this vulnerable population.

10. Using CUDA
Undergraduate Student Project in Math & Science
Nicola Soto
Dr. Ray Klump
This project explores the use of parallel programming techniques, specifically with Nvidia's CUDA platform, to harness the power of graphical processing units (GPUs) to solve computationally challenging tasks.

13. Comparing the Impact of Mastery-based Testing to Traditional Testing in Mathematics Courses
Undergraduate Student Project in Education
Christy Carlson, Lauren Klamerus
Dr. Amanda Harsy
This project researched Mastery-based Testing in upper level mathematics courses to investigate the fixed and growth mindsets of students, along with their happiness levels throughout the duration of the course, in order to see if there was any relation between the time the student took the survey and their educational mindset and/or happiness levels.

15. Decreasing Incidence of Labral Tears in Collegiate Baseball Players
Undergraduate Student Project in Math & Science
Emma Maki
Dr. Laura McDonald
Glenoid labrum tears are prevalent among overhand athletes. The goal of this research was to identify if evidence supports strengthening the shoulder musculature over maintaining range of motion in the shoulder for reducing risk of labral tears in baseball players. Though this project initially was completed specific to collegiate baseball players, the results can be applied to all athletes.

19. A Cost-Benefit Analysis of Unmanned Aircraft Systems Use in Law Enforcement Settings
Undergraduate Student Project in Social Sciences
Caitlin Krull
Dr. Andrea Krieg
Over the past few years, many police departments have implemented use of an unmanned aircraft system, but no cost-benefit analysis has been done to determine how the unmanned aircraft system affects department costs. The proposed study would analyze the costs and benefits associated with surveillance by unmanned aircraft systems, using an experiment followed by an analysis of all the data, in order to determine whether an unmanned aircraft system is a good investment.
Chains and Ladders
Undergraduate Student Project in Math & Science
Gail Bragg
Prof. Margaret Juraco
This project discusses Markov Chains and how they are used to create the board game for Chutes and Ladders. It provides examples of Markov Chains and shows each step in creating the game board.

Smart Materials for Application in Wound Management Technology
Undergraduate Student Project in Math & Science
Lauren Werth
Dr. Jason Keleher
This research focuses on synthesizing a biomimetic, “smart” wound dressing, which can sense the point of saturation to indicate when the dressing should be changed.

Muscle Energy Techniques and Low Back Pain
Undergraduate Student Project in Math & Science
Emily Espinosa
Dr. Laura McDonald
The goal of this research was to determine if there is enough evidence to support the use of muscle energy techniques when treating patients with low back pain. Five separate articles that used these techniques to treat low back pain were reviewed. Overall, it was determined that muscle energy techniques, in addition to core stabilization exercises were effective in reducing low back pain. Though these techniques seem to be effective, no recommendation for change of practice is suggested due to the fact that the evidence used was found to be biased and not of high quality.

Does Child Abuse Lead to Crime?
Undergraduate Student Project in Social Sciences
Sara Blackerby
Dr. Andrea Krieger
Research found support for a strong correlation between child abuse and violent behavior (Watts & McNulty, 2013). This study proposes an analysis of official records from DCFS and Illinois Juvenile Detention Center. Through stratified and systematic random sampling, a comprehensive list is created, and all participants are evaluated with a survey. This study has potential to offer groundbreaking findings that would help understand how child abuse affects a juvenile’s psychological state and future delinquency.

Investigating the Effect of Ceria Oxidation States on Oxide Removal Relevant to STI CMP
Undergraduate Student Project in Math & Science
Katherine Wortman-Otto, Cynthia Saucedo, Tanner Bedwell
Dr. Jason Keleher
STI Chemical Mechanical Planarization (CMP) is a process used to selectively remove bulk oxide and achieve angstrom level uniformity on a tetraethyl orthosilicate (TEOS) substrate. The purpose of this work is to modify ceria nanoparticles from the Ce4+ state to the unoxidized Ce3+ using novel reducing agents to increase material removal rate. Additionally, the ceria nanoparticles were characterized using UV-Vis and photon correlation spectroscopy in order to track the transition from Ce3+ to Ce4+.

Exploring the Nucleation Kinetics of Biomimetic Carbon Quantum Dot Synthesis
Undergraduate Student Project in Math & Science
Abigail Linhart
Dr. Jason Keleher
Carbon quantum dots (C-dots) have recently gained much attention as alternatives to semiconductor quantum dots, however, the mechanism of nucleation is not clearly understood. The focus of this research is to explore the mechanism through the kinetic study of the acid catalyzed hydrolysis of biomimetic precursors, more specifically sugars, for the synthesis of C-dots. Initial results have shown that fructose as the carbon source has provided the highest fluorescence in comparison to other precursors including sucrose, lactose, and dextrose. This indicates that the nucleation mechanism is dependent on the five-membered ring opening present in fructose which is not the prevailing mechanism in the stable six-membered ring of comparison sugars.

Uncovering the Effects of Hard and Soft Agglomerates on Film Formation, Material Removal Rate and Defectivity via Chemical Mechanical Planarization
Undergraduate Student Project in Math & Science
Maria Salinas
Dr. Jason Keleher
Chemical Mechanical Planarization (CMP) utilizes a synergistic relationship between both chemical and mechanical parameters in order to enhance the polishing process on various surfaces. This process incorporates colloidal dispersions (slurries) in order to planarize the topography of wafer surfaces to achieve an ultra-smooth uniform surface. Achieving angstrom level uniformity is required for the manufacturing of integrated circuits (IC), dynamic random access memory (DRAM) and flash memory. Preliminary results suggest that the impact of aggregates on the material removal rate (MRR) is highly dependent on the synergy between chemistry and film formation. This mechanistic study shows that the addition of salt to the CMP slurry increases the MRR and the rate of film formation on the surface of the substrate; however, the particle does not appear to agglomerate.

Probing the Efficiency of Amino Acids to Cross-Link a Biomimetic Hydrogel Functionalized with Copper Nanoparticles
Undergraduate Student Project in Math & Science
Doherty Center for Aviation and Health Research
Heather R. Lange, Costa M. Panayiotides, Caroline J. Stefanon
Dr. Jason Keleher
Hydrogels are of great interest in the medical field as an alternative to current wound management technology due to their supramolecular matrices and flexible behavior. This research incorporates structurally diverse amino acids, such as glycine and arginine, to increase cross-linking within the polymer network. Additionally, copper nanoparticles have been synthesized and incorporated to enhance the antimicrobial properties of the hydrogel.
**55 Design of a High-Removal Rate TSV Slurry for Advanced Cu Chemical Mechanical Planarization Applications**

Undergraduate Student Project in Math & Science

**Neera Mistry, Madison Hill**

Dr. Jason Keleher

The development of technologies such as Through-silicon Via (TSV) have emerged at the forefront of copper (Cu) Chemical Mechanical Planarization (CMP) to increase packing density, improve efficiency of Cu interconnects, and ultimately obtain global planarization. Preservation of the Cu surface has been further classified by electrochemical surface analysis such as open-circuit potential (OCP).

**58 The Effects of Cleaning Chemistry on the Surface Electrochemistry of Metals**

Undergraduate Student Project in Math & Science

**Dina Hejja**

Dr. Jason Keleher

Corroded metals cost the United States economy approximately $300 billion per year due to continual replacement. Various environmental conditions can influence the degradation which is governed by the metals’ ability to undergo redox reactions. When metals become corroded, the component can either be replaced or cleaned, though this can be expensive or hazardous as current cleaning chemistries require highly acidic or alkaline conditions. Supramolecular assemblies such as micelles, liposomes, and polyelectrolytes can safely clean the surface of metals that have been oxidized without changing the surface quality. Preliminary results show that the addition of these cleaning chemistries can alter the rate of corrosion, resulting in a more efficient defect-free cleaning process.

**61 Index of Refraction of Liquids**

Undergraduate Student Project in Math & Science

**Joshua Lincoln**

Dr. Charles Crowder

This project measures the index of refraction of different liquids to a high degree of certainty.

**64 Using Molecular Modeling to Explore Organic Reactions Mechanisms**

Undergraduate Student Project in Math & Science

**Sarah Bettag**

Dr. Jason Keleher

This research regards using molecular modeling software to simulate organic chemistry reactions.

**67 Structural Mutations in Exon 5 of the elf4H Gene in the Promotion of Drosha Splicing**

Undergraduate Student Project in Math & Science

**Alexandra Lockhart, Andnrea Distor**

Dr. Mallory Havens

As a ribonuclease III enzyme, Drosha's main function is to generate miRNA through cleaving RNA transcripts, however, in the elf4H gene, the hairpin structure allows for an alternative splicing function. This project focuses on introducing point mutations in exon 5 of the elf4H gene in order to manipulate the structure and promote Drosha splicing.

**70 Cyclin D3 Mutations and the Effects on Eukaryotic Cells**

Undergraduate Student Project in Math & Science

Doherty Center for Aviation and Health Research

**Sarah Nelson**

Dr. Sarah Powers

Cyclin D3 is an essential protein in the G1 to S phase of the cell cycle. Mutations of cyclin D3 have been linked to various cases of cancer, which may correlate with abnormal proliferation or transcriptional regulation. This project focused on evaluation of 8 mutations within the cyclin D3 protein, including the effect on the tertiary structure of the proteins and cell proliferation and viability when expressed.

**73 Using Artificial Intelligence and Linear Algebra Methods to Improve Predictive Modeling and Analysis of Sports Ranking Systems**

Undergraduate Student Project in Math & Science

**Brandon Joutras, Adrian Siwy**

Dr. Amanda Harsy

This project utilizes an intelligence system to improve existing linear algebra methods used in ranking sports teams. Specifically, it looks to improve the performance of the Massey Method by automating the implementation of the model.

**76 The Effects of Silica Matrix Functionalization on Drug Delivery**

Undergraduate Student Project in Math & Science

**Mikayla Bertrand**

Dr. John Parker

The network of micro and mesopores found within the matrix of a sol-gel silica can be utilized in the transport and delivery of various products, such as drugs, flavoring, and dyes. By adding organic functionality to the matrix and adjusting the pore density throughout, a delayed release effect of these products is produced. This study focuses on the loading and kinetic release of the NSAID 5-aminosalicylic acid, which was measured over time using UV spectroscopy.

**79 Analysis of the Viability of Anthocyanins and Various Dyes as Sensitizers in Dye-Sensitized Cells through Molecular Modeling**

Undergraduate Student Project in Math & Science

**Erik Sanchez**

Prof. James Hofmann

Due to the low production cost and high conversion efficiencies, dye-sensitized solar cells (DSCs) are increasing in popularity as a cheap alternative to contemporary silicon based solar cells. While previous ruthenium-based dyes provide remarkably high conversion yields in DSCs as well as long-term sustainability, their hazardous properties do not make them ideal. Natural dyes, found in fruits and vegetables, are currently being tested as sensitizers in DSCs. Anthocyanins are a group of natural dyes whose viability as sensitizers will be analyzed using the molecular modeling program Spartan to observe intermolecular interactions between the dye and the TiO2 films used in cells. The results will be compared to previous experimental data.

**82 Altered elf4H Expression Changes Metastatic Properties of Human Cells**

Undergraduate Student Project in Math & Science

Doherty Center for Aviation and Health Research

**Abigail Bieker, Elizabeth Przekwas**

Dr. Mallory Havens

Overexpression of each elf4H isoform has been shown to cause metastasis in human cells. The data collected indicates that overexpression of the isoform including exon 5 as well as a 50/50 ratio of both isoforms increased growth rates of non-cancerous cells. However, an increase of the isoform including exon 5 decreases migration rates in cancerous and non-cancerous cells. This data indicates that elf4H could be a potential therapeutic molecular target for cancer.
Green Loop Plan

Undergraduate Student Project in Social Sciences
Emily Guske, Jeremy Hutton, Lexi Laniewski
Br. Jose Martin Montoya Dura
Across the world, young people face social and environmental conflict. This project was created to bring serenity to high risk adolescents by implementing educational activities in natural areas. In turn, the areas selected will be environmentally sustained by the local community. The Green Loop Plan will help to ease social conflict while building a healthy relationship between humans and nature.

Incorporating AutoCAD Software in Preliminary Testing and Design of New Parts in Manufacturing

Undergraduate Student Project in Math & Science
Tyler Dundek
Prof. James Hofmann
This research focuses on working with a manufacturing company to generate computer models to test safety and stability of new machine parts.

A Study on the Durability of Performance Enhancing Swimwear

Undergraduate Student Project in Math & Science
Elizabeth Senese
Dr. Jason Keleher
This work studies the effects of chlorine on swimwear that is designed to aid in athlete performance. The lifespan of this elite swimwear is incredibly short, believed to be the result of stretching and weakening of bonds between the fibers of the fabric. By looking at the effects of the chlorinated water on the suit fabric, the wear on the suit can be examined on a chemical level.

Development of an Inexpensive SiPM-Based Muon Detector

Undergraduate Student Project in Math & Science
William Kostecka
Dr. Joseph Kozminski
In this study, a muon detector was constructed out of inexpensive components, including an Arduino Uno circuit board and a silicon photomultiplier (SiPM).

Comparison of Vert Sensors vs. Jump Mat in conjunction to Vertec

Undergraduate Student Project in Math & Science
Mohammad Shatat
Dr. Zach Binkley
This study will attempt to validate the two new ways to measure vertical jump height. We will take the collected data and compare them to the already reliable and validated vertec.

Improving Medication Education for Patients Applying SAID the MED

Undergraduate Student Project in Nursing
Beata Dziedzic, Bailey Sparkman, Madeline Seliga, Angela Rini, Kaitlyn Kman, Hollie Sinn, Sabrina Kaskowski
Prof. Katherine McDannel
The area of medication education for patients in a hospital setting illustrates a need for improvement. Adherence to a medication regimen can be improved through patient education during hospital admission. This presentation is meant to present SAID the MED as a creative approach for improving medication education to patients. This approach includes a 4-step method as an easy acronym for both patients and staff members to utilize.

Observations of Plasma Behavior Near Breakdown Voltage

Undergraduate Student Project in Math & Science
Michael Gromski, Joe McGuire
Dr. Joseph Kozminski
This project describes work on observations of plasma’s behavior near breakdown voltage. The experiment allows presentation of a benchtop example of plasma behavior.

Conservation of the GAPC Gene Sequence Across Plant Species

Undergraduate Student Project in Math & Science
Alyssa Large
Dr. Sarah Powers
Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) is an important enzyme for glycolysis that can catalyze glyceraldehyde-3-phosphate (G-3-P) to 1,3-diphosphoglycerate. GAPDH is encoded by the gene GAPC in plants and is expected to be retained across plant species. GAPC genes from several oak and maple trees were cloned and aligned. Data annotation was performed by mapping intron-exon segments to determine the corresponding proteins that are built. A phylogenetic tree was built showing a common distant ancestor.

The Relationship Between Parental Divorce and Children’s Deviant Behavior

Undergraduate Student Project in Social Sciences
Patrick Kenny
Dr. Andrea Krieg
The divorce rate in the United States is 40-50 percent (Anderson, 2014). Studies show that the divorce of a parent can induce depression and aggressive behavior, which can lead to deviant behavior (Kalter et al., 1989). The current study will contain qualitative research and a follow-up survey to test the effects of parental divorce on a child’s deviant behavior. This research can be used to help parents ease their children through divorce.
SESSION B
3:15-4:15 PM

2. Muon ID Detector Simulation for the Mu2e Collaboration at Fermilab
   Undergraduate Student Project in Math & Science
   Jackson Waters
   Dr. Ryan Hooper

   As a part of the Mu2e experiment at Fermilab, the Muon ID detector system, which will detect muons, needs to be built. A realistic simulation for this detector will allow for the proper construction of this device.

5. Marxism Brings Two Texts Together: The Metamorphosis and A Raisin in the Sun
   Undergraduate Student Project in Education
   Nichole Olson
   Dr. Jackie White

   This essay studies the relationship between Franz Kafka’s, The Metamorphosis and Lorraine Hansberry’s, A Raisin in the Sun through a Marxist theoretical lens.

8. Stretching vs. Dry Needling: The Road to Recovery for Sprinters with Hamstring Strains
   Undergraduate Student Project in Math & Science
   Mercedes Porter
   Dr. Laura McDonald

   Hamstring strains are prevalent in sprinting. Traditional treatment consists of strengthening, stretching, and rehabilitation techniques similar to other muscle injuries. Dry needling has emerged as an additional technique that may provide treatment benefit by reducing muscle spasm and pain. A systematic literature search and critical appraisal of relevant articles did not yield enough evidence to support the use of dry needling over traditional rehabilitation techniques for sprinters with hamstring strains.

11. Predictive Modeling and Analysis of Softball Tournament Results Using Linear Algebra
    Undergraduate Student Project in Math & Science
    Carley Maupin
    Dr. Amanda Harsy

    This project regards predictive modeling and analysis of softball tournament results using linear Algebra.

14. Predictive Modeling and Analysis of Golf Teams Using Linear Algebra
    Undergraduate Student Project in Math & Science
    Marissa Koronkiewicz, Hannah Schultz, Austin Buente
    Dr. Amanda Harsy

    Using a weighted Massey Method to predict results for future golf tournaments could potentially lead to better predictions than just using win percentage. This is due to the ability to apply weights and incorporate factors outside of just past tournament results.

17. Modeling DNA Self-Assembly Using Graph Theory
    Undergraduate Student Project in Math & Science
    Quinn Stratton, Keller Dellinger, Simon Merheb, Audrey Pearson
    Dr. Amanda Harsy

    This poster explores the graph theoretical formalism of nanotube construction and related design strategy problems which arise from self-assembling DNA.

20. The Effectiveness of Lower Body Stretching in Order to Prevent Lower Body Muscle Strains
    Undergraduate Student Project in Math & Science
    Alexis Alzona
    Dr. Laura McDonald

    This research project analyzed the benefits of lower body stretching in order to prevent lower body muscle strains. In different sport settings, especially in the high schools, many teams neglect performing a warm up and stretch or they are not executing the stretching techniques correctly due to time or simply lack of education. This critically appraised topic can help to inform clinicians working in this population to decide if stretching will decrease injury incidence, resulting in improved function and overall health for the athletes.

23. Evaluation of Alzheimer’s Disease with Neuronal Stem Cell Implementation
    Undergraduate Student Project in Humanities
    Michael Freeman
    Dr. Laura McDonald

    Alzheimer’s Disease (AD), a neurodegenerative disease like dementia, is prevalent in adults ages 65 and older, with one in ten people demonstrating symptoms. Induced pluripotent stem cells (iPS) accept all tissue types in the body and may aid in identifying possible treatments for AD. This project performs a systematic review to investigate the effects of implementation of iPS to increase the proliferation and differentiation of neuroglia within patients with AD.

    Undergraduate Student Project in Math & Science
    Michael Sulwer
    Dr. John Parker

    Previous research indicated that by creating gold nanoparticle arrays and shining a light source through this array, it is possible to achieve a local light enhancement in the gaps between the nanoparticles in the array. The research involves developing techniques to allow for the development of nanoparticle arrays on the substrate of a light emitting diode (LED) using capillary self-assembly.

29. The Effects of Anxiety on Stroop Performance and Physiological Measures of Stress
    Undergraduate Student Project in Social Sciences
    Natalie Palm, Allison Trendle
    Dr. Ann Jordan

    The Stroop effect measures an individual’s cognitive inhibition and flexibility. The results support Stroop’s findings that participants generally perform the fastest on Word Reading followed by Color Naming, Interference, and Switching. The results suggest that there was a significant difference of some physiological measures of anxiety within subjects, with levels rising as task complexity increased. The results also suggest that anxiety level (high versus low) had no significant effect on Stroop performance or physiological measures.
**Examining Laboratory Notebook Practices in the Introductory Physics Lab**

Undergraduate Student Project in Math & Science

Michael Zwartz

Dr. Joseph Kozminski

This presentation will discuss the changes in laboratory notebook beliefs and practices of physics students through three semesters of introductory lab work. Also, preliminary results on what methods of training are most beneficial to students will be shared.

**Analysis of Alternative Splicing in Disease Associated Exons**

Undergraduate Student Project in Math & Science

Doherty Center for Aviation and Health Research

Jessica King, Stephanie Nguyen

Dr. Mallory Havens

Drosha, an RNA binding protein, was recently shown to have a non-canonical role in pre-mRNA alternative splicing. Aberrations in splicing cause human diseases and Drosha expression is often altered in diseases such as cancer. This non-canonical role of Drosha in pre-mRNA alternative splicing of disease associated exons was investigated.

**Measuring the Coefficient of Linear Thermal Expansion Using a Michelson Interferometer**

Undergraduate Student Project in Math & Science

Mauricio Herrera

Dr. Charles Crowder

This work will be detailing the research conducted this semester in which a Michelson interferometer was used to measure the coefficient of linear thermal expansion of various metals heated using nichrome wire.

**Observation of Nonlinear Trends of Water Droplets in a Bench-top System**

Undergraduate Student Project in Math & Science

Alexandria Lanning, Paul Alfaro

Dr. Joseph Kozminski

Using a bench-top system made of a syringe pump and drop counter, the time interval between water drops was examined and characterized to have a nonlinear behavior for a wide range of flow rates.

**Assessing the Photocatalytic Activity of Biomimetic Nanocomposites**

Undergraduate Student Project in Math & Science

Samuel Baker

Dr. Jason Keleher

This project assesses the photocatalytic activity of biomimetic nanocomposites.

**Probing the Effect of Liquid Crystal Structure on Domain Creation and Variation**

Undergraduate Student Project in Math & Science

David Santefort, Sean Smyth

Dr. Jason Keleher

This research focuses on the use of polarization microscopy as a means to further investigate the mechanism behind electrodynamic liquid crystals. Experiments show that increases in domain density directly correlate to an increase in the percent of light blocked, along with spacer thickness altering the formation of domains.

**Campus GPS**

Undergraduate Student Project in Math & Science

Robert Guzy

Dr. Zachary Binkley

This research analyzes student movement on campus and the accuracy of GPS systems. The aim of this research is to collect metrics such as distance, time, the amount of steps taken, and energy expended in order to get to buildings located on campus. The idea is to compare two different applications.

**Photochemical Synthesis and Characterization of Metal Functionalized Antimicrobial Nanoparticles**

Undergraduate Student Project in Math & Science

Dany Danhausen

Dr. Jason Keleher

Metal oxide core-shell nanoparticles (MNPs) have significantly advanced the development of surfaces that inhibit the transfer of bacterial infections in the biomedical field. This work focuses on studying the kinetics of the reduction process and the resulting surface concentration of the Ag-TiO2 through an acid digestion process, which can allow for further optimization of Ag surface concentration for antimicrobial applications.

**Incorporating Arduino Sensors and Liquid Crystal Technologies to Reduce the Impact of Aircraft Laser Attacks**

Undergraduate Student Project in Math & Science

Doherty Center for Aviation and Health Research

Garrett Fifer, Maurer Danny, Holly Woelfer

Prof. James Hofmann

Current market technologies are incapable of blocking laser light from entering the cockpit of aircraft, which can be distracting or harmful for pilots. This research aims to optimize the system by investigating the intensity reduction capabilities of stacked cell in an array as well as the performance enhancements achieved by solvent pH effects and incident light angle effects.
59 Synthesis and Development of Core-Shell Polymer/Metal Nanoparticles
Undergraduate Student Project in Math & Science
Arielle Floyd
Dr. Jason Keleher
Polymers are versatile and found in various materials, such as food packaging and hospital equipment, which are susceptible to bacteria and mold. Through the addition of metal nanoparticles (MNP), the bactericidal effect can be increased and used for the development of self-cleaning polymeric substrates. It was found that the addition of the co-monomer successfully modified the surface with hydrophilic functional groups to allow for the synthesis of polymer/metal nanoparticles with enhanced antimicrobial efficiency.

60 Implementation of Cost Effective Laboratory Experimentation for the High School Level and Higher Education
Undergraduate Student Project in Education
Lucas Kilmer
Dr. Joseph Kozminski
The purpose of this research is to produce cost effective physics laboratory experiments to be used by teachers in underfunded school systems.

65 The Effect of Common Filtration Media on Water Pollutants
Undergraduate Student Project in Math & Science
Fiona Byrne
Dr. Jason Keleher
The tap water from houses is contaminated, so house owners are buying water filters to capture the pollutants. For this study, the popular household water filters will be used in order to see if the contaminants are being captured in the filters by using UV-VIS spectroscopy.

68 Conductive UiO-66 MOF/Cellulose Composite Material for Photoelectrochemical Water Splitting
Undergraduate Student Project in Math & Science
Jordan Shanahan
Dr. Daniel Kissel
Current photoelectrochemical technology falls behind in efficiency, stability and cost effectiveness. Overall, this work provides a foundation for the design of low cost Zr-MOF PEC electrodes incorporating post synthetic modification.

71 Benefits of Algebraic Problem Solving in Secondary Education
Undergraduate Student Project in Education
Catherine Jasionowski
Dr. Erica Kwiatkowski-Egizio
This research is to give an overview of some of the benefits that comes along with teaching algebraic problem solving in a secondary education classroom.

74 Addressing Misconceptions of Wing Lift in the Aviation Curriculum
Undergraduate Student Project in Math & Science
Luke Terlecky
Dr. Joseph Kozminski
Pilots are required to receive instruction on the principles of aerodynamics, including the phenomenon of wing lift. However, the most common explanations for lift are erroneous or conceptually incomplete. Using written assessments, this study aims to determine the current understanding of lift among a small sample of pilots at Lewis University and measure improvement of their understanding after receiving a lesson which presents a physically accurate description of the lifting phenomenon.

77 Exploring the Binding Mechanism of Amino Acids with Fingerprint Nano-powders
Undergraduate Student Project in Math & Science
Ashley Barrera, Lena Safi
Dr. Jason Keleher
Research on determining the time needed for the amino acid adhering to a latent print surface, which can lead to a potential synthetic design of responsive fingerprint powders that will not only visualize the print but can also serve as a means to extract DNA without destroying the print.

80 Police Training Programs and Community-Police Relationships
Undergraduate Student Project in Social Sciences
Erin Scapardine
Dr. Andrea Krieg
This presentation explores the curriculum found in basic police training academies and how it can affect the community-police relationship. Previous research has found that there is a need for a redesigned training program that will address the importance of how to police in a culturally diverse community. Further, this presentation will address the effectiveness of current training policies and identify other procedures that may be outdated.

83 The Effects of Sleep Deprivation on College Students
Undergraduate Student Project in Education
Caley Oltman
Dr. Erica Kwiatkowski-Egizio
Analyzing the sleeping habits of college students has proven the damaging effects of sleep deprivation on the academic and social well-being of students. Experiencing an inadequate night of sleep suffers diminished quantity and quality as students attempt to complete coursework, participate in extracurricular activities, hold a job, and maintain a social life. Students prioritize other aspects of life over a proper night of sleep and the negative effects are evident across the study.
The Educational and Psychosocial Strategies Plan for Young People Near Landfills

Emily Guske, Jeremy Hutton, Lexi Laniewski, Samantha Parisi
Br. Jose Martin Montoya Dura

Children who live near landfills are at risk socially and environmentally. The Educational and Psychosocial Strategies Plan for Young People Near Landfills hopes to improve the living situation of these adolescents across the globe. Strategies concerning the recognition of toxic materials will be explored for both landfill scavengers and local residents. Overall, the plan aims to provide environmental education for children and young adults while bringing peace to developing areas.

The Truth About Protein Powders

Kayla Duerr

This project regards determining the actual concentration of protein in protein powders with the use of experimental methods such as Bovine Serum Albumin (BSA) and Coomassie staining and comparing to the nutrition label.

Integration of PID NOx Sensor for Air Analysis

Alexander Klouda

This research builds upon previous Lewis work that focuses on analyzing nitrogen oxides in the air. Two small photoionization sensors will be integrated with a circuit board to allow the real-time analysis of nitrogen oxides in the air.

Measurements of Spatial Acceptance and Angular Dependence of a Muon Telescope

Edward Wiss

This research is testing the coincidence counts of a muon telescope with respect to several variables: angular dependence and spatial acceptance. The experimental data will be compared to theoretical predictions and theoretical literature sources.

Avida-ED Evolution

Zachary Sherman

A study of the effect of altering an artificial population’s environment to view the evolutionary effects.

Isolation and Extraction of Antimicrobial Compounds from Soil Isolates

Alexis Borrelli, Ian Scholl, Sergio Gonzalez, Arely Flores, Edburg Glenn, Sarah Breitzke
Prof. Jeannette Pifer

The goal of the Small World Initiative is to discover microorganisms residing in soil with antimicrobial activity as potential new treatments. This research aims to extract and isolate the active compound producing the significant zones of inhibition against known relatives of antibiotic resistant ESKAPE pathogens. Perfecting this technique has led to discovery of extracts from multiple soil isolates capable of inhibiting the growth of known relatives of antibiotic resistant organisms.

Enhancing the Skateboarding Experience Through Wireless Arduino Technologies

Heather Ray
Prof. James Hofmann

The aim of this work is to develop a skateboard blinker system through the use of Arduino coding and wireless capabilities.

Adolescents and End-of-Life Decisions

Gretchen Mayhood, Melissa Pierson, Samantha Walden
Dr. John Jurowicz

Adolescents and young adults should be involved in their own end-of-life decisions, allowing these individuals to feel like they have some control over their life.
**Fast Track Program Effectiveness**
Graduate Student Project in Business
Chas Martinetz, Alyson Brady, Marie Connelly, Ernesto Puig
Dr. Randal DeMik

Lewis University offers a Fast Track program, which allows a student to take graduate courses in his/her senior year in place of eligible undergraduate classes (no more than nine credit hours). In doing so, the student is able to complete his/her master's degree in a shorter period of time and save money in the process. Despite the advantages offered to qualified students, the enrollment rate is low. The admission rate of the Aviation and Transportation Fast Track program may be improved by addressing weaknesses regarding the promotion of the program.

**Ethical Implications of Family Presence During Resuscitation**
Graduate Student Project in Nursing
Lorna Dudzik
Dr. Kathleen Blanchfield

This White Paper explores the ethical challenges and implications in the issue of family presence during in-hospital cardiopulmonary resuscitation.

**Redefining the Use of Antibiotics**
Graduate Student Project in Nursing
Natalie Jefferson
Dr. Kathleen Blanchfield

This White Paper addresses the ethical challenges in appropriate antibiotic prescribing and the growing concern of antibiotic resistance.

**Culture: An Important Concept in Nursing Practice**
Graduate Student Project in Nursing
Sandeep Atwal
Dr. Linda Ryan

This presentation will elaborate on the concept of culture and its meaning in nursing practice. Leininger's culture care diversity and universality theory denotes that in order to provide unified and holistic care in nursing, it is essential for nurses to incorporate the individual's cultural values and beliefs when caring for people. As nurses are a major part of the healthcare team, using Leininger's culture theory will make a significant improvement in patient care.

**Successful Interventions for Elementary-aged Students with Testing Anxiety**
Graduate Student Project in Education
Taylor Rosanova
Prof. Leonard Harsy

This presentation analyzes the effect that frequent high-stakes testing and classroom-based testing have on students' anxiety levels in elementary schools. It provides successful interventions for elementary-aged students who demonstrate anxiety with assessments.

**Certified Athletic Trainers Perceptions of Interprofessional Practice in the Secondary School Setting**
Faculty Project in Nursing
Cathy Bohlin

School nurses (RNs) and certified athletic trainers (ATs) are school-based health care providers with the potential to form an interprofessional team and improve the health status of secondary school students. The purpose of this study was to investigate ATs perception of collaborative care with RNs in secondary schools. This study revealed ATs have a positive perception of IPP with RNs in secondary schools. ATs and RNs should use this positive relationship to develop collaborative initiatives to evaluate and improve patient care and the health status of adolescents.

**Using Simulated Learning to Teach the Abstract Concepts of Diversity, Spirituality, and End-of-Life Care**
Graduate Student Project in Nursing
Katherine Mueller, Ana Flores, Meghan Matlin
Dr. Gwen Svoboda

This scholarly project involves creating and implementing a simulation module for Sophomore BSN students enrolled in Professional Development I. The simulation covers the abstract concepts of spirituality, diversity, and end-of-life care, all of which play a role in holistic nursing. These topics are traditionally covered in a lecture setting, and the project aims to create a hands-on learning experience for students to learn these concepts in a safe environment.

**Coping Strategies in Response to Student Stress**
Graduate Student Project in Education
Hannah Fishbeck
Prof. Leonard Harsy

With student stress on the rise, the purpose of this research was to identify effective coping strategies that reduce symptomology, promote a higher stress-tolerance, and could be taught as an intervention strategy for school counselors.

**Effective Bullying Interventions in Elementary Schools**
Graduate Student Project in Education
Elizabeth Eulitz
Prof. Leonard Harsy

This study focused on bullying in elementary schools across the United States. Effective bullying interventions and coping strategies were taught to students with disabilities in grades K-8.
**28. Gender and Criminal Justice Majors: An Application of the Myers-Briggs Type Indicator**

*Graduate Student Project in Social Sciences*

**Allison Trendle**

Dr. Andrea Krieg

The Myers-Briggs Type Indicator (MBTI) is often used as a career test to help individuals determine potential fields of careers, which can be applied to areas of study in college. Previous findings suggest that there is a correlation between gender and MBTI scores because of a difference in career goals between females and males. This study aims to examine any possible correlation between MBTI scores and gender in undergraduate criminal justice majors.

---

**30. Skills for Success in School and Beyond: Improving Students Executive Functioning with the Use of Freshman Transition Groups**

*Graduate Student Project in Social Sciences*

**Kristen Sisto**

Prof. Leonard Harsy

High school might come as a complete shock for incoming ninth grade students. The aim of this work is to show how using academic groups can help freshman students transition into high school by engaging them in lessons that help improve their grades, build executive functioning skills, and develop a more positive attitude toward school.

---

**33. The A is for ART! STEM to STEAM: How Science Shapes Art**

*Graduate Student Project in Education*

**Samuel Boctor, Michael Zwartz, Karen Linnerud**

Dr. Lauren Rentfro

The true connections between art and science, application of science concepts to the creation of artwork and vice versa, are explored with middle level and high school students.

---

**36. Full STEAM Ahead... Engineering Activities to Engage All Students**

*Graduate Student Project in Education*

**Anastasia Perry, Jessica Thielen, Margaret Marlin, Kristel Garcia**

Dr. Lauren Rentfro

This research provides teachers with low cost activities that utilize NGSS Engineering Design to develop engineering skills, problem-solving, and collaboration across all of STEAM. The activities are tested in the local school’s classrooms and revised based on teacher’s and students’ feedback.

---


*Graduate Student Project in Education*

**Ryan Donato, Candice Fillicetti, Maham Bhatti, Melissa Brosius, Seth Contreras**

Dr. Lauren Rentfro

People encounter media reports involving scientific findings or claims daily. Critical literacy skills can be applied to become more savvy media consumers of these reports.

---

**42. Noise Reduction in Aviation Headsets**

*Graduate Student Project in Math & Science*

**Rachel Walsh, Justin Keuch, George Boykin III**

Dr. Erik Baker

This project will determine which type of aviation headset will reduce the most noise.

---

**45. Ethical Issues in Counseling LGBT+ Minors**

*Graduate Student Project in Social Sciences*

**James Doane, Megan Zimmerman, Alyson Singer**

Dr. John Jurowicz

This research focuses on ethical issues that may arise for counselors working with minors who are a part of the LGBT+ community. It explores the specific problems these clients may face, the resources counselors have available to them, and the way in which counselors can go about resolving these ethical quandaries.

---

**48. The Ethics of Online Counseling**

*Graduate Student Project in Social Sciences*

**Yadira Cisneros, Rachel Brouwer, Laressa McCloyn**

Dr. John Jurowicz

Online counseling is an electronic version of counseling and has been shown through research to be effective. However, there are ethical issues that arise, one being confidentiality. These ethical issues are imperative to recognize in order to perform at professional standards.

---

**51. Ethical Ambiguities Regarding Client-Therapist Counselor Relationships**

*Graduate Student Project in Social Sciences*

**Constantine Sparagis, Sarah Gruber**

Dr. John Jurowicz

This research will review literature and critique current ethical guidelines regarding dual relationships between therapist and client, including intimate relationships and contact. This research will propose a universal standard for mental health professionals code of conduct across similar organizations in the field.

---

**54. Reframing the Limits of Confidentiality When Counseling Minors**

*Graduate Student Project in Social Sciences*

**Jeff Weiss, Heather Bauer**

Dr. John Jurowicz

Confidentiality in counseling is a serious issue and this research will explore its limitations when working with minor clients and their engagement within the counseling session.

---

**57. Flight Attendant Turbulence Injury Mitigation at Part 121 Airlines**

*Graduate Student Project in Math & Science*

**Robert Gaines, Lisa Pelate**

Dr. Erik Baker

The increasing demand for safe air travel justifies the need for more effective measures to prevent in-flight injuries due to turbulence. Due to the nature of their job, flight attendants are the least likely people on the aircraft to be seated and belted in.
**Children of Alcoholics**  
Graduate Student Project in Social Sciences  
Christopher Neylon, Aya Hassan, Nicole Carpenter, Chris Eskridge  
Dr. Katherine Helm  
This topic is about the effects on the development of children who grow up with alcoholic parents.

**LGBT and Intimate Partner Violence**  
Graduate Student Project in Social Sciences  
Megan Klee, Michele Dominguez, Kellie Marcus, Alice Pierce  
Dr. Kimberly Duris  
Studies examining Intimate Partner Violence in the LGBT community will be analyzed through a literature review. The goal of this project is to consolidate different findings, provide clarity on Intimate Partner Violence, and the experiences of those within the LGBT community. The researchers hypothesize that in the LGBT community Intimate Partner Violence will be statistically observable in most subsets. This work will raise awareness about Intimate Partner Violence and prepare clinicians for work with this population.

**Synthetic Design of a Regenerative Electrode to Enhance Surface Interactions for Microbial Fuel Cell Applications**  
Graduate Student Project in Math & Science  
Joseph Lambert  
Dr. Jason Keleher  
The interaction between biofilm growth and the anode surface is of critical importance to the power capabilities of the cell. Common designs utilize carbon cloth anodes which have been proven to limit bacterial surface adhesion and impact the microbe performance life cycle. In an effort to enhance biofilm growth and bacterial adhesion to the anode, this work focused on the synthetic design of a low-cost conductive polymer coated, cellulose-based, nanocomposite imbedded with conductive nanoparticles.

**Using Photophysical Probes to Explore Heavy Metal Binding to Supramolecular Nanocomposite Materials for Water Remediation**  
Graduate Student Project in Math & Science  
Katelyn Lanasky, Halynn Drozd, Rose McDonough  
Dr. Jason Keleher  
This study is a study of the antimicrobial effects of silver nanoparticles on a single cell basis using a modified optical tweezer technique.

**The Growth Mindset**  
Graduate Student Project in Education  
Sera Bocian-Laskowski  
Prof. Leonard Harsy  
This presentation will review peer-reviewed research on the topic of fixed and growth mindsets. A growth mindset, the belief that intelligence and talents are not fixed and can be developed, is imperative for today’s learners because achievement is influenced by a student’s beliefs about their ability to learn and process new information.

**Probing the Antimicrobial Properties of Ag/TiO2 Nanoparticles Using Epi-fluorescent Optical Tweezers**  
Graduate Student Project in Math & Science  
Thomas Beckmann  
Dr. Jason Keleher  
This is a study of the antimicrobial effects of silver nanoparticles on a single cell basis using a modified optical tweezer technique.

**Exploring Fluorescence Resonance Energy Transfer of Au-Nanoparticles as a Potential Pesticide Probe**  
Graduate Student Project in Math & Science  
Michelle Zaleski  
Dr. Jason Keleher  
Pesticides are toxins used in agricultural production to prevent or control weeds, insects, fungi, and pests in order to reduce crop yield. However, there are serious concerns about health risks from pesticide residues in food and drinking water. This work focuses on the development of a fluorescent label for the detection of pesticides in the environment based on the mechanism of fluorescence resonance energy transfer (FRET) between gold nanoparticles (AuNPs) and Rhodamine B (RhB) as a model. When applied to field testing of pesticides, a different, biodegradable, fluorescent analog will be used as the energy donor and the recovered fluorescence can be imaged in order to obtain a density map of pesticide concentration for a given area of interest.
84  Probing the Interactions between CeO2 Nanoparticles and Novel Cleaning Solutions to Enhance Post-CMP Cleaning of Semiconductor Wafers
Graduate Student Project in Math & Science
Tala Zubi, Carolyn Graverson
Dr. Jason Keleher
Removing unwanted topography and achieving exceptional planarity for the fabrication of integrated circuits (IC) in the sub-micron regime utilizes shallow trench isolation (STI) to separate active circuits with a dielectric material, tetraethyl orthosilicate (TEOS). The goal of this work is to incorporate polyelectrolyte and surfactant-based cleaning solutions to serve as an alternative to traditional cleaning methods to remove ceria-based slurries.

93  The Efficacy of Emotion Focused Therapy in the Treatment of Anxiety
Graduate Student Project in Social Sciences
Megan Klee, Michele Dominguez, Kellie Marcus, Elena Ramos
Prof. Martha Jarmuz
This literature review will utilize studies to analyze the efficacy of Emotion Focused Therapy on individuals with Anxiety Disorders. It is hypothesized by the researchers that these studies will find Emotion Focused Therapy to have significant effects in the treatment of anxiety disorders. The research provided would be helpful to those who have not had success with other popular treatment methods.

96  Stabilization of Pigment Dispersions for Automotive Paint Applications
Graduate Student Project in Math & Science
James O’Malley
Dr. John Parker
The solvent borne dispersion of Red 179 pigment requires the use of dispersant additives. The dispersant anchors onto the pigment surface to reduce flocculation and create a stable dispersion with low viscosity, high tint strength, and high chromaticity. Dispersants with different functionality were evaluated via adsorption isotherms, rheological behavior, and colorimetric properties. Milling parameters such as bead type, bead loading, and flow rates were also studied via two different milling processes (discrete passes vs. recycle).

99  Comparison of Recidivism Rates Between Prisoners in a Public Prison and Prisoners in a Private Prison
Alumni Project in Social Sciences
Antonio Tessari
Dr. Andrea Krieg
This study aimed to compare the recidivism rates of prisoners who participated in an educational program in a public prison and prisoners who participated in an educational program in a private prison. The overall goal is to determine the effectiveness of public prisons vs. private prisons.

102  Analysis of the Mission Effectiveness for UAVs vs. Manned Aircraft Utilized for Scientific Research
Graduate Student Project in Math & Science
Jeff Wright
Prof. Michael Canada
This research is an analysis of the mission effectiveness for UAVs vs. Manned Aircraft utilized in scientific research.

104  Adlerian Therapy as Effective Behavioral Management for Children
Undergraduate Student Project in Social Sciences
Natalie Palm
Prof. Lindsay Fredrick
Adlerian Therapy views each misbehavior of a child as having a goal. Each misbehavior should be met with appropriate consequences, both natural and logical. Because children are responsible for their actions and thus held accountable for them, adults, typically parents and counselors, should guide children to find alternative, healthy behaviors that still meet the child’s needs. Adlerian Therapy also focuses on the family constellation, birth order, and the family atmosphere as potential causes of behavior.

105  Analyzation of the Aggregation of the Amyloid Beta 42 Peptide
Graduate Student Project in Math & Science
Amber Tabaka, Karlie Cummins
Dr. Daniel Kissel
This project is a study of redox activity and particle size in relation to Amyloid Beta 42 and copper interactions relevant for the treatment of Alzheimer’s patients.
Evaluating the Impact of SSR on Student Motivation and Achievement

Graduate Student Project in Education

Ashley Castillo Bahena, Dominique Dusek
Dr. Christopher Palmi

Many schools have adopted Sustained Silent Reading (SSR) programs in an effort to combat a troubling trend in student reading performance and motivation to read. This reading-focused program provides students in-class opportunities to practice and cultivate reading skills through self-selected texts and regularly scheduled time to read. We examine the efficacy of SSR programs and identify characteristics by this and other successful voluntary reading models to synthesize best practices to improve reading achievement and motivation.

Synthesis and Characterization of a Wave-Shifting Plastic Scintillator

Graduate Student Project in Math & Science

Christian Loza
Dr. Joseph Kozminski

Scintillators, which are commonly used in medical imaging and particle detection, are materials that are able to absorb ionizing radiation and, depending on the media, emit photons at a lower energy.

The Use of Online Homework in Undergraduate Physics Courses at Lewis University: Does it Impact Student Success?

Graduate Student Project in Math & Science

Mary Boland
Dr. Joseph Kozminski

The study shows that the use of online homework in physics undergraduate courses has clear advantages for learning. Prompt feedback, increasing time-on-task, and the use of multi-media sources help students measure their progress in the course and improve their problem solving skills. The digital recording of time spent by students on homework can help instructors measure the effort students put into their homework.

Adlerian-Based Counseling Approaches in Treatment of Adolescents with Low Self-Esteem

Graduate Student Project in Social Sciences

Erin Burns, Jennifer Dimer, Katherine Oko, Evelyn Ramirez
Prof. Martha Jarmuz

Adlerian therapists argue that having a positive self image is crucial in the foundation of good mental health. Many mental health professionals have looked into the effectiveness in using Adlerian-based treatments with individuals suffering from low self-esteem. This compilation of literature examines using such methods in treating low self-esteem in adolescents.

The Use of Interpersonal Therapy to Help Transgender Clients Experiencing Suicidal Ideations

Graduate Student Project in Math & Science

Despina Stathopoulos, Kiersten Tinkoff, Nicole Deischer
Dr. Katherine Helm

This project studies the use of interpersonal therapy to help transgender clients experiencing suicidal ideations.

Safety Management System: A Culture of Safety at Lewis University’s Aviation Department

Graduate Student Project in Math & Science

Lee Tzu-Chan, Robert Hoogstra III
Prof. Megan Zahos

This study is about the safety management system trends at Lewis University’s Aviation Department.

Integrating Birth Order, Personality, and Application of Adlerian Therapy to Treatment Planning of School-Aged Children and Adolescents

Graduate Student Project in Social Sciences

Heather Bauer, Mark Reidel, Sarah Gruber, David Laurich
Prof. Martha Jarmuz

This project is an integration of Adlerian therapeutic ideas that can be applied to children and adolescents within the home and school system in regards to personality, birth order, behavior, social media, and consequences.
BUSINESS PLANS

(See Presenters Index on Page 31)

Business Phone Application
Undergraduate Student Project
Sara Alashqar
Kristin Burton
This phone application assists business owners, corporations, and entrepreneurs to break international cultural barriers, with the purpose of ensuring goal attainment for startups and international expansion.

UpliFt
Undergraduate Student Project
Cache Binion
Kristin Burton
UpliFt is a real estate company that is designed to bring a new twist to the real estate structure. My company is designed to target poor neighborhoods with high populated areas of abandoned homes and apartment complexes. Our company will be successful in this market because it is the first real estate company of its kind to rehabilitate property and turn it over to the public by creating recreational centers, half-way homes and juvenile centers and low-income housing apartments. Our goal at UpliFt is to rebuild neighborhoods and community structure through property.

Large Unmanned Cargo Airline
Graduate Student Project
Mark Patrick Collins
Dr. Erik Baker
Since an unmanned cargo airline has never been done before, this company aims to be the first to operate large unmanned cargo aircraft (LUCA) in the National Airspace System (NAS). The company plans to form partnerships with government and industry to attain airworthiness approval in the form of an operating certificate much like large aircraft operators have today to operate in the NAS. The company plans to develop new profitable niche markets for long haul LUCA point to point services while factoring in long term sustainability of the aircraft, the sound it makes, and the fuels it uses.

Nonprofit Consulting Firm
Undergraduate Student Project
Alison Green
Dr. James Oakley
Social Engagement Consulting is dedicated to growing community and solving social issues. This is achieved by furthering the business development and skills of nonprofit organizations through the help of their community network. Social Engagement Consulting connects members of the community with the resources they need to learn and grow.

Tranquil Escape
Graduate Student Project
Joyce Keyes
Kristin Burton
Tranquil Escape Spa offers customers the opportunity to come, relax, and experience a massage or facial treatment. The spa will also offer state-of-the-art hair removal, a personalized manicure and pedicure and much more. Tranquil Escape Spa offers all natural products including rubs, scrubs, and oils making each spa visit unique. One of our Tranquility Specialists will sit with you in our peaceful wellness room and customize the perfect treatment plan for the many luxurious services we offer. We take great pride in all we do, but our one true specialty is you.

Analytics4Athletes
Undergraduate Student Project
Phillip Leibham
Dr. Zachary Binkley
Analytics4Athletes is a company that personalizes detailed analytics to players, teams, and trainers. We come to the clients and ask them what information they value, and we bring them back an analysis they cannot find anywhere else. Our focus is on producing scouting reports and player development plans for high school and collegiate basketball players and teams.

eDrugLog
Graduate Student Project
Jennifer McBride
Dr. James Oakley
eDrugLog is an application that is intended to prevent the misuse of opioids and other DEA regulated drugs. Currently, DEA regulated substance records are kept in pen and paper logs. eDruglog is the first application of its kind to electronically record and safeguard the use of DEA regulated substances.

Temecula Estates
Undergraduate Student Project
Lauren Mulcahy, Jake Wayner
Kristin Burton
Temecula Estate’s vision is to become the ideal tourist destination known for its wine, hospitality, and scenic event space. Our facility is designed to show the natural beauty of Temecula Valley with the addition of our vineyard and small orchard. Temecula Estates is truly the most pristine Wine Country destination, where our impeccable hospitality and service awaits.

Small Giants Trading App
Undergraduate Student Project
Sabrina Scott
Fred Dewald
This is a phone app that allows traders to invest in companies that have a net worth less than $100 million.

Flyers Eats
Undergraduate Student Project
Cherilynn Shaw
Dr. George Klemic
This is a company that allows Lewis students and faculty to order (Sodexo) food from any location on the main campus and have it delivered to them promptly. This service may also be ordered and picked up, ready to go by those on the go. Sodexo has 5 diverse dining options to satisfy all.
HOP (Smartphone App)
Undergraduate Student Project
Emma Stark, Melissa Merritthew
Fred Dewald
HOP is an app that allows users to easily plan a night out without the hassle and wasted time spent searching for the best spots. Individuals will be able to set custom filters for desired locations, times, price range, and party size all in one place. Select from a variety of categories to best fit the type of night one is looking for, i.e. karaoke, dance, sports bar, live music, etc. Once chosen, users will be guided from bar to bar via GPS for safe and easy travel. HOP, the way bar hopping should be.

Business Plan for Occupational Therapy Practice
Undergraduate Student Project
Rocio Torres
Dr. Zachary Binkley
This occupational therapist pediatric clinic will assist and collaborate with the child’s family, other therapists and members of the team to provide treatment.

Nexo Products Inc.
Undergraduate Student Project
Alejandra Vargas
Dr. Jeffrey Trask
This company is designed to promote and sell high quality fruit from the Pacific coast of Mexico to the international markets. Our company also provides an opportunity to sustain and create economic opportunity for farmers in the region.

UAS Drone Program Consulting Service
Undergraduate Student Project
Sharon White
Kenneth Canada
I am providing a consulting service for the commercial use of Unmanned Aircraft Systems (drones). I will create for the client a business model for the safe deployment of the UAS within their specified discipline. This service does not end there. I will provide access to our supportive services in market leading drone manufacturers, including state-of-the-art software, safety management system, hardware procurement, support drone training and other services (such as insurance.) We will begin with an audit internal that will allow the agency to validate any assumptions about the viability of their unmanned drone project before committing further investment.
BUSINESS PLANS INDEX

A
Alashqar, Sara - 28

B
Binion, Cache - 28

C
Collins, Mark Patrick - 28

G
Green, Alison - 28

K
Keyes, Joyce - 28

L
Leibham, Phillip - 28

M
McBride, Jennifer - 28
Merrithew, Melissa - 29
Mulcahy, Lauren - 28

S
Scott, Sabrina - 28
Shaw, Cherilynn - 28
Stark, Emma - 29

T
Torres, Rocio - 29

V
Vargas, Alejandra - 29

W
Wayner, Jake - 28
White, Sharon - 29
PRESENTERS INDEX

A
Abu-Shanab, Zackary - 13
Agustin, Kamille - 8
Alfaro, Paul - 20
Alzona, Alexis - 19
Anoubani, Maram - 13
Atwal, Sandeep - 23

B
Baker, Erik - 11
Baker, Samuel - 20
Barrera, Ashley - 21
Bauer, Heather - 24, 27
Bedwell, Tanner - 16
Bertrand, Mikayla - 17
Bett, Sarah - 17
Bhatti, Maham - 24
Bieker, Abigail - 17
Blackerby, Sara - 16
Blaylock, Delaney - 13
Bocian-Laskowski, Sera - 25
Boctor, Samuel - 24
Boetscher, Steve - 25
Bohlin, Cathy - 23
Boland, Mary - 27
Borrelli, Alexis - 22
Boykin III, George - 24
Brady, Alyson - 23
Bragg, Gail - 7, 16
Breitzke, Sarah - 22
Broius, Melissa - 24
Brouwer, Rachel - 24
Buckley, Matthew - 8
Burns, Austin - 19
Burns, Erin - 27
Byrne, Fiona - 21

C
Cadena Noguez, Betsaira - 13
Callahan, Kristin - 12
Carlson, Christy - 15
Carpenter, Nicole - 25
Carson, Kayla - 13
Castillo Bahena, Ashley - 27
Chambers, Kayla - 6, 13
Chirikos, Erin - 15
Cisneros, Yadira - 24
Collins, Mark - 11
Connelly, Marie - 23
Contreras, Seth - 24
Cowan, Zakia - 13
Creasey, Matt - 6
Cummins, Karlie - 26

D
Damocles, Patricia - 13, 15
Danhausen, Dany - 20
Danny, Maurer - 20
Davila, Erica - 12
Decharinte, Jake - 13
Deisher, Nicole - 27
Del Pilar, Angelica - 7
Dellinger, Keller - 9, 19
Dimer, Jennifer - 27
Distor, Annadrea - 17
Doane, James - 24
Dominguez, Michele - 25, 26
Donato, Ryan - 24
Drozd, Halyynn - 25
Dudzik, Lorna - 23
Duerr, Kayla - 22
Dundek, Tyler - 18
Dunne, Alana - 25

E
Eickmann, Rebeckah - 10
Elmer, Jordan - 13
Eskridge, Chris - 25
Espinosa, Emily - 16
Eulitz, Elizabeth - 23

F
Fifer, Garrett - 20
Filewicz, Jaclyn - 6
Fillicetti, Candice - 24
Fishbeck, Hannah - 23
Flores, Ana - 23
Flores, Arely - 22
Floyd, Arielle - 21
Fortes, Justin - 12
Fofo, Lance - 13
Freeman, Michael - 19

G
Gaines, Robert - 24
Gallagher, Sean - 13
Garcia, Edgar - 13
Garcia, Kristel - 24
Gennett, Samantha - 13
Gieseler, Mandy - 13
Glenn, Edburg - 22
Glynn, Jennifer - 13
Gonzalez, Sergio - 10, 22
Graverson, Carolyn - 26
Graves, Megan - 10
Gray, Clarydyan - 11
Gray, Lauren - 15
Grimaldi, Katherine - 10
Gromski, Michael - 18
Gruber, Sarah - 24, 27
Gulledge, Greg - 10
Guske, Emily - 18, 22
Guzy, Robert - 20

Grimaldi, Katherine - 10
Gromski, Michael - 18
Gruber, Sarah - 24, 27
Gulledge, Greg - 10
Guske, Emily - 18, 22
Guzy, Robert - 20

H
Haro, Alejandra - 12
Hassan, Aya - 25
Hejja, Dina - 17
Herbert, Eric - 7
Herrera, Mauricio - 20
Hill, Madison - 17
Hiller, Stephen - 18
Hoffmeister, Jason - 12
Hoogstra III, Robert - 27
Hutton, Jeremy - 18, 22

J
Jasionowski, Catherine - 21
Jefferson, Natalie - 23
Johnson, Kyondra - 13
Joutras, Brandon - 17

K
Kaskowski, Sabrina - 18
Kenny, Patrick - 18
Keuch, Justin - 24
Khan, Hafsa - 20
Kilmer, Lucas - 21
King, Jessica - 20
Klamerus, Lauren - 15
Klee, Megan - 25, 26
Klouda, Alexander - 9, 22
Klozik, Zachary - 13
Kman, Kaitlyn - 18
Kornacker, Deborah - 11
Koronkiewicz, Marissa - 19
Kostecka, William - 18
Kozminski, Joseph - 27
Krull, Caitlin - 15

L
Lach, Amanda - 8
LaFayette, Ashley - 13
Lakumb, Casey - 11, 15
Lambert, Joseph - 25
Lanasky, Katelyn - 25
Lane, Michael - 10
Lange, Heather R. - 16
Lanievski, Lexi - 18, 22
Lanning, Alexandria - 20
Large, Alyssa - 18
Laurich, David - 27
Lenz, Thomas - 9
Lincoln, Joshua - 17
Linhart, Abigail - 16
Linnerud, Karen - 24
Lockhart, Alexandra - 17
Loeza, Magaly - 8
Loza, Christian - 27

M
Majchrowicz-Wolny, Katarzyna - 13
Maki, Emma - 15
Malinowski, Nicholas - 12
Marcus, Kellie - 25, 26
Marlin, Margaret - 24
Martinetz, Chas - 23
Mathis, Megan - 15
Matlin, Meghan - 23
Maupin, Carley - 19
Mayhood, Gretchen - 22, 26
McCloyn, Laressa - 24
McDonough, Rose - 25
McGuire, Joe - 18
Memon, Arsalan - 10
Merheb, Simon - 19
Meza, Omar - 12
Mikos, Allie - 20
Miskowiec, Ryan - 7
Mistry, Neera - 17
Moreno, Pablo - 13
Moses, Edwin - 9

Mueller, Catherine - 23
Murphy, Ashleigh - 9
Mustafa, Jamil - 10

N
Nelson, Sarah - 17
Neylon, Christopher - 25
Nguyen, Stephanie - 8, 20

O
O’Malley, James - 26
Oko, Katherine - 27
Olsen, David - 13
Olson, Nichole - 19
Oltman, Caley - 21
Oviedo, Edgar - 11

P
Pace, Alec - 13
Page, Lesley - 10
Palm, Natalie - 8, 19, 26
Panayiotides, Constantinos - 9, 16
Parisi, Samantha - 22
Pearson, Audrey - 7, 13, 19
Pelate, Lisa - 24
Perry, Anastasia - 24
Pierce, Alice - 25
Pierson, Melissa - 22, 26
Porter, Mercedes - 19
Powell, Carrera - 13
Przekwas, Elizabeth - 17
Puig, Ernesto - 23

Q
Quaynor, Laura - 12

R
Ramirez, Evelyn - 27
Ramirez, Fidel - 9
Ramos, Elena - 26
Ratajczyk, Matthew - 9
Ray, Heather - 22
S
Safi, Lena - 21
Salinas, Maria - 16
Sanchez, Erik - 17
Santefort, David - 20
Santillo, Samuel - 9
Saucedo, Cynthia - 16
Scapardine, Erin - 21
Scholl, Ian - 6, 22
Schultz, Hannah - 19
Scott, Bree - 13
Seliga, Madeline - 18
Senese, Elizabeth - 18
Shanahan, Jordan - 21
Shatat, Mohammad - 7, 18
Sheppard, Jessica - 13
Sherman, Zachary - 22
Sherry, Daisy - 12
Singer, Alyson - 24
Sinn, Hollie - 18
Sipiora, Conrad - 13
Sisk, Bryan - 13
Sisto, Kristen - 24
Sivy, Adrian - 17
Slark, David - 26
Smith, Ryan - 9
Smyth, Sean - 20
Soto, Nicolas - 15
Sparagis, Constantine - 24
Sparkman, Bailey - 18
Stathopoulos, Despina - 27
Stefanon, Caroline J. - 16
Stratton, Quinn - 9, 19
Sullivan, Kyle - 9
Sulver, Michael - 19
Svihla, Samantha - 11, 15
T
Tabaka, Amber - 26
Tabert, Jessica - 16
Tarter, David - 12
Terleckyj, Luke - 21
Tessari, Antonio - 26
Thielen, Jessica - 24
Timmons, Jacob - 7
Tinkoff, Kiersten - 27
Trask, Jeffery - 12
Trendle, Allison - 7, 8, 19, 24
Trujillo, Ana - 9
Tzu-Chan, Lee - 27
V
Vega, Israel - 13
Velazquez, Ruth - 8
Velez, Ashley - 8
Volk, Jacob - 10
W
Wainscott, Andrew - 13
Walden, Samantha - 22
Walsh, Rachel - 24
Waters, Jackson - 9, 19
Weiss, Jeff - 24
Werth, Lauren - 16
Williams, Denise - 9
Williams, Devon - 13
Wiss, Edward - 22
Woelfer, Holly - 20
Wortman-Otto, Katherine - 16
Wright, Jeff - 26
Wurst, Skyler - 6
Y
Yuede, Nicole - 25
Z
Zaleski, Michelle - 25
Zimmerman, Megan - 24
Zubi, Tala - 26
Zwart, Michael - 20, 24
RELATED EVENTS

President’s Tenth Annual Art Exhibition

Reception and Awards Ceremony: Thursday, April 26, 7-9 PM
On View: April 5-26, 2018

On View for Celebration of Scholarship: April 19, Noon-5:30 PM

Brent and Jean Wadsworth Family Gallery, Oremus Fine Arts Center

Featuring highlights of Lewis University student and alumni artwork. This important juried exhibition is hosted by the Department of Art and Design and President Dr. David Livingston.

Philip Lynch Theatre Production of “13, the Musical” Directed by Keith White

Performances: April 20-22 & April 26-29, 2018

Geek. Poser. Jock. Beauty Queen. Wannabe. These are labels that can last a lifetime. With an unforgettable rock score from Tony Award-winning composer, Jason Robert Brown, (Parade, The Last Five Years, Bridges of Madison County) 13 is a musical about fitting in – and standing out! Evan Goldman is plucked from his fast-paced, preteen New York City life and plopped into a sleepy Indiana town following his parent’s divorce. Surrounded by an array of unsophisticated middle school students, he needs to establish his place in the popularity pecking order. Can he situate himself on a comfortable link of the food chain... or will he dangle at the end with the outcasts?
COORDINATING COMMITTEE

Celebration of Scholarship 2018

Chair
Dr. Sarah Powers

Co-Chair
Dr. Erica Kwiatkowski-Egizio

Coordinating Sub-Committee

Dr. Dennis Cremin
Co-Chair, Abstracts

Syl Goyette
Member, Abstracts, Judging/Awards

Dr. James Rago
Co-Chair, Concurrent Sessions

Dr. Betsy Wilber
Co-Chair, Concurrent Sessions

Dr. Ryan Hooper
Co-Chair, Posters

Dr. Lauren Rentfro
Co-Chair, Posters

Kristin Callahan
Chair, Creative Works

Natalie Swain
Member, Creative Works

Jo Slowik
Member, Creative Works

Dr. Susan Cahill
Chair, Judging/Awards

Dr. Andrea Krieg
Member, Judging/Awards

Kristin Burton
Chair, Business Plans

Lisa Heizer
Chair, Special Events

Dr. Mona LaMontagne
Chair, Marketing and Communications

Dr. Shan Lin
Member-At-Large

Dr. Nan Yancey
Former Dean, Office of Graduate Studies

Dr. Anne Rapp
Interim Dean, School of Graduate, Professional, and Continuing Education
Co-sponsored by
Culture of Inquiry Coordinating Committee
School of Graduate, Professional and Continuing Education
Colonel Stephen W. and Lyla Doherty Center for Aviation and Health Research
Lowell Stahl Center for Entrepreneurship and Real Estate Studies
History Center: Urban, Cultural and Catholic History of the Upper Midwest
Center for Ministry and Spirituality
University Faculty Development Committee
Scholars Academy

Special Thanks to
Philip Lynch Theatre
Lewis University Library
Follett’s Bookstore