

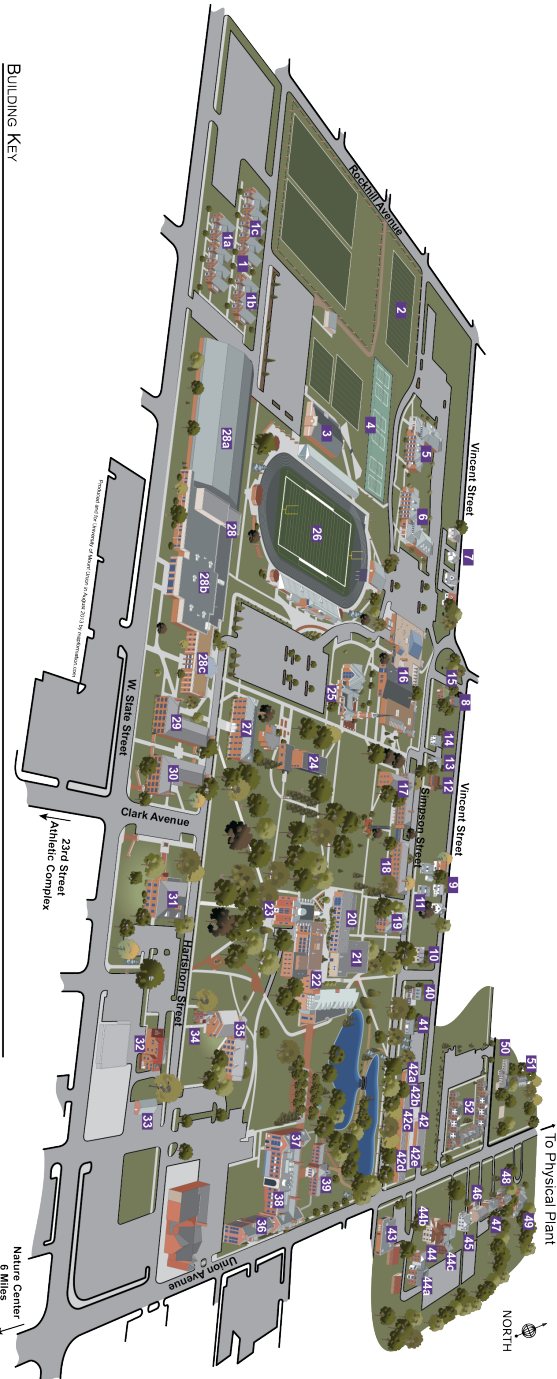
SCHOLAR Day

Student Celebration Honoring
Our Latest Academic Research

Tuesday, April 24, 2018

Schedule At A Glance

9 – 9:45 a.m.	Poster Session I and Continental Breakfast Giese Center for the Performing Arts
10 – 11 a.m.	Presentation Session I Engineering and Business Building, Kolenbrander-Harter Information Center and Tolerton and Hood Hall
11:30 a.m. – 12:30 p.m.	Senior Recognition and Honors Convocation Timken Gymnasium, McPherson Academic and Athletic Complex
12:30 – 1:30 p.m.	Participant Lunch Peterson Field House, McPherson Academic and Athletic Complex
1:30 – 2:30 p.m.	Presentation Session II Engineering and Business Building, Kolenbrander-Harter Information Center and Tolerton and Hood Hall
2:30 – 3:15 p.m.	Break and Refreshments Giese Center for the Performing Arts
2:30 – 3:15 p.m.	Poster Session II Giese Center for the Performing Arts
3:30 – 4:30 p.m.	Presentation Session III Engineering and Business Building, Kolenbrander-Harter Information Center and Tolerton and Hood Hall



- Building Key**
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|---------------------------------------|--|--|
| 1. Hartshorn Street Townhouses | 22. Kolenbrander-Harter Information Center (Library) | 38. Clarke Astronomical Observatory |
| 1a. Orwick Court | 23. Chapman Hall | 39. Gartner Welcome Center |
| 1b. Adams Court | 24. King Residence Hall | 40. Alpha Xi Delta Sorority House |
| 1c. Grove Court | 25. Dewald Chapel | 41. Alpha Delta Pi Sorority House |
| 2. Montgomery Field | 26. Mount Union Stadium | 42. Giese Center for the Performing Arts |
| 3. Gulling Training Center | 27. Miller Residence Hall | 42a. Brush Performance Hall |
| 4. Whitehill Tennis Courts | 28. McPherson Academic and Athletic Complex (The MAAC) | 42b. Gallaher Theatre |
| 5. Shields Residence Hall | 28a. Peterson Field House | 42c. Otto Art Gallery |
| 6. Bica-Ross Residence Hall | 28b. Timken Physical Education Building | 42d. Cope Music Hall |
| 7. 532 - 564 Vincent St. | 28c. McPherson Center for Health and Well-Being | 42e. Presser Recital Hall |
| 8. Weber House | 29. McCready Residence Hall | 43. William H. Ealis Art Center |
| 9. 330 - 254 Vincent St. | 30. Cunningham Residence Hall | 44. Brown Village |
| 10. 205 Simpson St. | 31. Beeghly Hall | 44a. Jae Manor |
| 11. Black Cultural Center | 32. van den Eynden Hall | 44b. Keller Manor |
| 12. Alpha Chi Omega Sorority House | 33. Structural and Geotechnical Engineering and Projects Lab (SAGEP Lab) | 44c. Clutter Manor |
| 13. 355 Simpson St. | 34. Keener House | 45. Perry F. King Guest House |
| 14. Campus Security | 35. Holles-Peterson Residence Hall | 46. Sigma Nu Fraternity House |
| 15. 431 Simpson St. | 36. Gallaher Hall | 47. Alpha Tau Omega Fraternity House |
| 16. Hoover-Price Campus Center | | 48. Delta Sigma Tau Sorority House |
| 17. McMaster Residence Hall | | 49. Fred J. Haupt President's House |
| 18. Ketcham Residence Hall | | 50. Sigma Alpha Epsilon Fraternity House |
| 19. Elliott Residence Hall | | 51. Phi Kappa Tau Fraternity House |
| 20. Engineering and Business Building | | 52. Union Avenue Townhouses |
| 21. Tolerton and Hood Hall | | |



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Formal Presentation Abstracts

Chandler Aldridge (History)

Dr. John Recchiuti

3:50 p.m., Engineering and Business Building 206

"Ask Not What Science Can Do for You, But What You Can Do for Science: Contributions Made to The Fields of Anthropology, Zoology, and Botany During the Lewis and Clark Expedition."

I will present highlights from my senior History thesis, which engaged a close reading of elements in the journals of some of the leading figures in the famed 1804-1806 Lewis and Clark expedition of the American West. I will present fascinating material I learned through a close reading and analysis of the journals regarding the expedition's contributions to early nineteenth-century science—particularly focusing on their discoveries and observations in anthropology, zoology, and botany. I will also describe important contributions Sacagawea, the celebrated Native American woman who accompanied and guided the expedition, made—allowing the audience to compare fact to legend. (She is truly an American icon in women's history.) I will offer an overview of Meriwether Lewis and William Clark's observations in regards to the expedition members' journal entries regarding what they ate—they ate (and enjoyed) beaver tails. I will also provide remarks on their reflections and observations regarding their trek through portions of what is today Yellowstone National Park; and their observations of Native American's cultural and dietary practices (they found that the Sioux would leave their elderly to die if they were too feeble to continue on with the tribe's nomadic journeys, for example). Through the information provided the audience will get a clear picture of what it was like for the men of the expedition and their discoveries along the way.



Angelica Bartholomew (Nursing)

Dr. Betty Allen

3:30 p.m., Tolerton and Hood 101

"The Psychological Impact of Epilepsy"

Epilepsy is often viewed as a seizure disorder with solely physical outcomes. Yet modern research and epilepsy organizations, such as Epilepsy Newfoundland and Labrador, the Epilepsy Society, and the Epilepsy Foundation, report a high incidence and commonality of psychological effects. With epilepsy being a disease of the brain, it is no wonder that there are psychological consequences. Mood instability and personality disorders are two of the many illnesses that this presentation will encompass. There will be explanation of some of the misconceptions of epilepsy and the discussion of potential behavior problems and mental health diagnoses associated with epilepsy.



Poster Presentations

Poster Session II | 2:30-3:15 p.m. | Giese Center for the Performing Arts

Madeleine Abrigg (Art)

Professor Margo Miller

Title: *Nature Center Botanical Sketches*

Theodore Bach (Exercise Science)

Dr. Ron Mendel

Title: *The Effect of Beta-Alanine Supplementation on 800m Running Performance in Collegiate Division III Track Athletes*

Brittany Baitt (Communication)

Dr. Andrea Ferraro

Title: *Millennials and the LASIK Eye Surgery Procedure*

Breanna Beltz (Physician Assistant Studies)

Professor Vanessa Worley

Title: *Your Health Depends On Ours: Implementing Effective Stress Management Strategies for Physician Assistant Students*

William Clay (Chemistry)

Dr. Robert Woodward

Title: *Synthesis of LpxC Substrate Analogs for Antibiotic Development*

Kelsey Colaric (Exercise Science)

Jake Taylor (Exercise Science)

Dr. Ron Mendel

Title: *A Comparison Between the Effects of Beta-Alanine and Creatine on Repeated Sprint Performance with Collegiate Male Wrestlers*

Hannah Edwards (Biology)

Dr. Lin Wu

Title: *Analysis of Indoor Air Particulates on The Campus of the University of Mount Union*

Macayla Gibbons (Psychology)

Destinee Green (Psychology)

Dr. Kristine Turko

Title: *The Effects of Aromatherapy and Music on Stress in College Students*

Joshua Leiter (Mathematics/Physics)

Dr. Michael Zwilling

Title: *3D Printing with Mathematica*

Isabella Pecchia (Biology)

Dr. Christopher Marks

Title: *Epigenetics of cold tolerance in the fruit fly Drosophila melanogaster*

Mikayla Scherry (Exercise Science)

Brenna Kelly (Exercise Science)

Dr. Ron Mendel

Title: *The effect of music on heart rate, blood pressure, rate of perceived exertion, and performance during aerobic exercise*

Cameron Senhauser (Mechanical Engineering)

Roman Selby (Mechanical Engineering)

Benjamin Kelley (Mechanical Engineering)

James Shaffer II (Mechanical Engineering)

Dr. Joshua Gargac

Title: *Baja SAE Senior Design Project*

Hadil Shakhta (Physician Assistant Studies)

Professor Vanessa Worley

Title: *Nurse Home Visiting Programs and Child Maltreatment*

Kelby Smith (Art)

Professor Margo Miller

Title: *VPA by Design: A Graphic Exploration of the Visual and Performing Arts*

Bridget Stauffer (Physician Assistant Studies)

Professor Vanessa Worley

Title: *The Mediterranean Diet: Can It Prevent Colorectal Cancer?*

Rebecca Taylor (Athletic Training)

Professor Sonia Wehrlin

Title: *Chronic exertional compartment syndrome*

Sarah Vapenik (Biology)

Dr. Lin Wu

Title: *The Effect of Freshwater Mussels on the Phytoplankton Community*

Jesse White (Exercise Science)

Barry Myers (Exercise Science)

Dr. Lonnie Lowery

Title: *Via® Instant Coffee Prior to Ballistic Exercise Increases Serum Epinephrine*

Poster Presentations

Poster Session I | 9:45 a.m. | Giese Center for the Performing Arts

Amy Seymore (Physician Assistant Studies)

Professor Vanessa Worley

Title: The Use of Clonidine as an Adjunct Therapy to Opioid Replacement for Postnatal Pharmacologic Treatment of Neonatal Abstinence Syndrome

Olivia Shaw (Psychology)

Kayla Johnston (Psychology)

Jenna Liles (Psychology)

Dr. Tamara Daily

Title: Effect of Gender and Intuitive Eating on Body Image, Self-Esteem and Self-Compassion.

Leanna Sullivan (Physician Assistant Studies)

Professor Vanessa Worley

Title: Multiple Sclerosis: Can Reflexology Be the Solution Patients Seek?

Kaitlyn Vance (Nursing)

Professor Betty Allen

Title: Does Influenza Increase the Risk for Cardiovascular Disease in Children?

Julia Watko (Art)

Professor Margo Miller

Title: Improving Local Marketing Through Small Businesses

Formal Presentation Abstracts

Colleen Bentler (Psychology)

Zach Metz (Psychology)

Nick Thomas (Neuroscience)

Dr. Kristine Turko

1:50 p.m., Tolerton and Hood 101

"The Cost of Connection:

Effects of Mobile Phones on Social Anxiety"

How much is your cell phone really costing you? Our study

aims to find out by monitoring the difference in stress level of college students with or without a cell phone during a conversation with a stranger. Stress response will be monitored through heart rate and galvanic skin response using epidermal electrodes. It is predicted that participants in the phone-present group will exhibit lower levels of social anxiety, supporting previous research suggesting cell phones alleviate social anxiety.



Brianna Boehlke (History)

Dr. Theresa Davis

10 a.m., Tolerton and Hood 101

"The History of Agricultural Economies of the Brumbaugh Nature Center"

From patriotic war veterans to farmers, throughout the generations the Huston family of Washington Township, Ohio has led interesting lives. The family contributed both economically and socially to the community of Washington Township. Though the members of the Huston household led fairly quiet lives, the family had a significant impact upon its surrounding community. The history and economies of the family enriched the community of Washington Township and provided employment to the town. The Huston farm was a crucial pillar of the local economy. Through the familial history, frontier beginnings, economic fluctuations, agricultural practices and profits, and traditions of the household, the Huston family history, albeit initially appearing simple, was a complex and important component of Washington Township.



Brianna Boehlke (History)

Dr. Jennifer Martin

1:50 p.m., Engineering and Business Building 203

"A Feminist Approach to Service Learning Pedagogy"

The combination of service learning and feminism pedagogies is often a successful technique in mobilizing activism. Topics can be covered within the walls of a classroom, but it is often experiences that truly change individuals. It is one thing to learn about the injustices of the world, but a completely different thing to step up and fight against them. Service learning projects create an environment of confidence and empowerment. This is apparent in the study, *Girls Talk Back: Changing School Culture through Feminist and Service Learning Pedagogies*, by Jane A. Beese and Jennifer L. Martin, and throughout the Gender Studies class at the University of Mount Union, taught by Martin. Through further research and analysis of the class at Mount Union, it is apparent that the combination of service learning and feminism in the classroom creates a truly meaningful course.



Formal Presentation Abstracts

Rachel Brumenschenkel (Marketing/Management)

Mike Sovak (Marketing)

Jordan Carr (Marketing/Management/English)

Hannah Richard (Marketing)

Emily Bryan (Marketing/Management)

Brad Hagerich (Marketing)

Professor Joel Evans

1:30 p.m., Tolerton and Hood 101

"A Deeper Understanding of Honors Program Satisfaction: Why Do Students Stay or Leave the Program?"

What do students find valuable in the University Honors Program? To gain insights on this question, a group of eight students conducted marketing research for the Honors Program at the University of Mount Union during November and December 2017. The two research problems examined are (1) Honors Program satisfaction levels among Honors students and (2) why students stay or leave the Honors Program. The primary data collection process includes a focus group and a census questionnaire sent to all members of the Honors Program. Key findings include that there is a moderate, positive correlation between the understanding of Honors Program requirements and the level of satisfaction of the program. The current level of overall satisfaction of the Honors Program among Honors students is relatively neutral. The purpose of the marketing research is to provide the directors of the Honors Program at Mount Union insights on what student's value in the program and ways to improve retention and participation in the program.



Rachel Brumenschenkel (Marketing/Management)

Dr. Andrea Ferraro

3:30 p.m., Engineering and Business Building 203

"It's Time to Listen. It's Time to Hire: A Public Relations Program to Increase the Successful Employment of Adults with Autism"

According to the Autism Society, 35 percent of adults with autism between the ages of 19 and 23 have not had a job or received a college education after high school. This research project attempts to answer why employable individuals with autism have trouble finding employment and how a public relations program can help. Primary and secondary research was conducted to determine the program stakeholders (employers), the concerns of employers and which media and persuasive elements can reach employers with salient information. A public relations program was created to target employers in the distribution industry. Informational and attitudinal objectives, strategies, tactics and evaluation methods were established, based on the research. By utilizing salient information, group influence and by leveraging partnerships, the program effectively addresses the employers' concerns, which are how employees with autism affect business, the availability of support services and safety. The program was created for Autism Speaks to use to educate employers and provide resources for hiring employable individuals with autism so that businesses are encouraged to hire more employees on the autism spectrum.



Poster Presentations

Poster Session I | 9-9:45 a.m. | Giese Center for the Performing Arts

Celia Barrett (Exercise Science)
Mathew Fitchet (Exercise Science)
 Dr. Ron Mendel
Title: The Effects of Water Immersion Therapy on Recovery and Performance

Francesca Carra (Physician Assistant Studies)
 Professor Vanessa Worley
Title: Identifying and Addressing Risk Factors for Dangerous Hypoglycemia in Children with Type 1 Diabetes Mellitus

Kristin Fouts (Physical Therapy)
 Dr. Megan Salvatore
Title: Relationship between falls and turn duration in the older adult population

Nicole Franchino (Art)
 Professor Margo Miller
Title: Amateur Teams, Professional Designs

Tyler Galosi (Exercise Science)
Chandler Samargia (Exercise Science)
 Dr. Ron Mendel
Title: The Functional Movement Screen as a Valid Injury Prediction Tool for Division III Lacrosse Athletes

Joshua Kempf (Civil Engineering)
Robert Steffen (Civil Engineering)
Andrew Rieman (Civil Engineering)
Brett Radabaugh (Civil Engineering)
 Dr. Yan Liu
Title: Bridge Replacement and Design

Kristin Kenny (Physician Assistant Studies)
 Professor Vanessa Worley
Title: Exercise to Improve the Metabolic Symptoms of Polycystic Ovarian Syndrome: A Systematic Review

Anelise Kollias (Physician Assistant Studies)
 Professor Vanessa Worley
Title: Let's Talk About Vaccines: Improving Conversations Between Clinicians and Parents Who Are Hesitant About Vaccinations

Mark Mishak (Physician Assistant Studies)
 Professor Vanessa Worley
Title: What Type of Nipple Areolar Reconstruction Results in the Highest Patient Satisfaction for Breast Cancer Survivors?

Elsie Nickoli (Public Health)
 Dr. Beth Canfield Simbro
Title: The Physical and Psychological Effects of Opiate Drug Abuse for Pregnant Women and Newborn Babies in Stark County

Rebecca Parada (Biology)
Isabella Pecchia (Biology)
 Dr. Christopher Marks
Title: Epigenetics of Cold Tolerance in Fruit Flies (Drosophila melanogaster): Effect of Maternal Cold Exposure

Cole Parrish (Exercise Science)
 Dr. Ron Mendel
Title: Effects of Vitamin D on Testosterone Levels in College Aged, Male Athletes

Kelsey Phillips (Psychology)
Anastasia Smiley (Psychology)
Carolyn Matthews (Psychology)
 Dr. Kristine Turko
Title: The Effects of Mimicry on Compatibility

Valerie Russell (Exercise Science)
Natasha Green (Exercise Science)
Alyssa Braun (Exercise Science)
Brianna Gassman (Exercise Science)
 Dr. Nathan Saunders
Title: Slow Motion Video VS. Cell Phone Application for the Assessment of a ¼ Mile Walk Test

Formal Presentation Abstracts

Kristin Werstler (Writing/English)

Dr. Frank Tascone

10:20 a.m., Tolerton and Hood 201

"The Poetry Podcast: Exploring the Performance Art of Poetry"

The tradition of oral poetic performance dates back thousands of years. Entire cultures used poetry as a means to document their traditions, to tell their stories. Now, in the modern world of podcasts and audio editing, poets can take their oral performances to a whole new level. Writers can share videos and recordings of their performances across social media, which then garner millions of views. After experiencing this revival of spoken word poetry, I wanted to explore the genre more. Combining the oral tradition of poetry with modern audio editing techniques, I created The Poetry Podcast. I used an iCE microphone to record myself performing original poems. Then using Audacity, an audio editing software, I layered in meaningful sound effects and music to create an immersive experience for listeners. My goal is to present a new medium of spoken word poetry. One that stimulates all the senses and tells a story beyond the page.



Kristin Werstler (English/Writing)

Dr. David Thiele

2:10 p.m., Engineering and Business Building 203

"Reclaiming Her Narrative: A Postcolonial Reading of Persepolis by Marjane Satrapi"

After the 1979 Islamic Revolution in Iran, the lives of Iranian woman were drastically restricted. Women were forced to wear a veil, and faced up to 60 lashes and 70 days' imprisonment for disobedience. Women's voices, it seemed, were extinguished entirely. However, once Iranian women escaped the oppressive Islamic Regime, their voices found homes in Western bookstores across the world. Memoirs detailing the lives of Iranian women exploded on the western book market, and provided insight to a world different from our own. Marjane Satrapi, author of the memoir Persepolis, grew up during the Islamic Revolution and Iran-Iraq war, and depicts an inner struggle between her western and eastern identity. In order to further understand Satrapi's symbolic juxtaposition of her identities, I will use a literary postcolonial lense to examine how western imperialism on an eastern country results in a national and individual hybrid identity. Further, I will use close textual analysis to explore how Satrapi ultimately reclaimed her identity, and used her hybridness as a tool to convey her Iranian story to her western readers.



Joseph Winiecki (Physics)

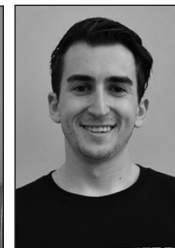
Nick Thomas (Neuroscience)

Dr. Steve Cederbloom

1:50 p.m., Tolerton and Hood 201

"Modeling the Characteristics of the Binary Star System XY Leo"

We look up at the sky on a beautiful, clear night and what do we see? Thousands of stars that each look like they have their own individual space in the cosmos. However, looks can be deceiving. Some of them that we see are actually two stars that orbit and eclipse each other in what is called an eclipsing binary star system. They emit light similar to other individual stars, but since they regularly eclipse each other, the light we observe can change in a periodical fashion. This alteration can be modeled using a light data acquisition technique called photometry. The characteristics of the binary can be compared to other nearby star systems of known magnitudes to develop a model of the dynamics of the star system. In this experiment, a program called iTelescope is used to set observing plans for a selected set of available telescopes worldwide to obtain images of various exposure times to analyze and attempt to understand the binary star system XY Leo. Further research can then expand to more binary systems.



Formal Presentation Abstracts

McKenzie Caldwell (Writing/French)

Dr. Rodney Dick

10 a.m., Engineering and Business Building 203

"The Girl on the Swing"

While there have been many analyses of Pride and Prejudice and its adaptations, there's never quite been an analysis that looks in-depth at the symptoms of mental illness within the text and consequent adaptations. My project analyzes Joe Wright's Pride and Prejudice (2005), comparing scenes to antidepressant commercials of the early 2000s. I also look at the way the text affected these scenes, especially how it affected Keira Knightley's portrayal of Elizabeth Bennet.



Natalie Cerciello (Biology)

Erica Mascio (Biology)

Dr. Spiro Mavroidis

10 a.m., Engineering and Business Building 206

"Climate Change and Butterflies: Are Important Pollinators at Risk?"

The last 150 years have seen the extinction of five species of butterflies, and many species face extinction by 2050. Environmental temperature is crucial in determining the rate of a butterfly's life cycle, and climate change has the potential to increase their rate of development with detrimental effects. The purpose of this study was to determine how rearing temperature affects the development of the Painted Lady Butterfly, *Vanessa cardui*. This species is widespread in Ohio as well as most of the United States, serving as a vital pollinator and indicator of healthy ecosystems.



Leah Conaway (Psychology)

Danielle Trippett (Psychology)

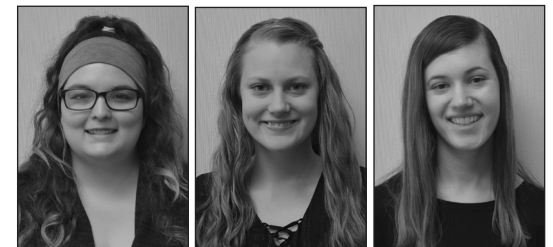
Danielle Sloan (Psychology)

Dr. Tamara Daily

10 a.m., Tolerton and Hood 201

"The Effects of Communication Media, Time Spent on Communication Media, Gender, and Online Behaviors on Jealousy and Satisfaction in Romantic Relationships"

Communication media plays a huge role in today's society. Clearly, social media and texting have changed the way we communicate and interact with each other. The purpose of our study is to explore how communication media affects romantic relationships. Specifically, we are interested in how time spent on communication media, type of communication media, gender, and online behaviors affect jealousy and overall satisfaction in romantic relationships. Roughly, 51 participants completed a questionnaire assessing use of communication medias, jealousy, and relationship satisfaction. We predicted that females would report more jealousy than males, and that individuals who primarily used Facebook over other communication medias would report more jealousy. Although our hypotheses were not confirmed, which could be due to a lack of participants and an uneven distribution of male and female participants, we were able to find several significant correlations based upon other factors in the study. Our results and findings, as well as future research will be discussed.



Formal Presentation Abstracts

Rebecca Cooper (Mathematics)

Dr. Gerald Wuchter

2:10 p.m., Tolerton and Hood 100

"Market Trends in Campus Coffee Consumption"

My research project is the culmination of four years of cross-departmental studies, which represents the quintessential liberal arts experience. In this project, I take a hands-on approach to studying the connections between mathematics and marketing, utilizing my mathematics background to predict brand loyalty and future market shares of coffee on our campus. This presentation brings mathematics out of theory and into practical application. Markov Chains are mathematical modelling tools that determine the probability of achieving a future state based on our current situation. Through the use of Markov Chains, we are able to answer questions such as: Can small coffee shops around our campus compete with established international brands? How many coffee shops can the Mount Union community sustain? What will the market share of these shops be in 5 years? 10 years? 20?



Emily Define (Psychology)

Mirhanda Henneman (Psychology)

Brianna Schultz (Psychology)

Dr. Tamara Daily

4:10 p.m., Tolerton and Hood 201

"The Effect of Interaction with Therapy Dogs on Stress, Anxiety, and Test Performance in Undergraduate Nursing Students"

In the proposed study, we will study the effect of interacting with therapy dogs on stress and anxiety in undergraduate nursing students. The participant pool will consist of undergraduate nursing students at the University of Mount Union recruited in the spring of 2018. Participants will report to an assigned classroom where they will complete two inventories measuring stress and anxiety levels. After completing these measures, one group will listen to meditative music and the second group will interact with the therapy dogs for 1 hour. After the intervention is completed, all participants will then take the stress and anxiety inventories again. It is hypothesized that the participants who interact with therapy dogs will have greater reductions in stress and anxiety than those who listened to music.



Victoria Ginty (Japanese/Music)

Dr. Hamako Furuhashi-Turner

1:30 p.m., Engineering and Business Building 203

"The Shinto Religion and Its Influence in Hayao Miyazaki's Films."

Multimedia can help us understand diverse cultures, such as the Japanese religion, Shinto. Shinto is the indigenous religion in Japan, and can be seen throughout Hayao Miyazaki's films. I will be discussing the history of the development of Shinto and its beliefs incorporated into Miyazaki's films. I will be analyzing three films of Hayao Miyazaki that contain Shinto themes. These films are "Spirited Away", "Princess Mononoke", and "My Neighbor Totoro". This analysis will provide significant aspects of diverse culture through media.



Formal Presentation Abstracts

Brian Walker (Mechanical Engineering)

Adam Sopchak (Mechanical Engineering)

Tristan Begue (Mechanical Engineering)

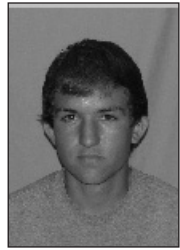
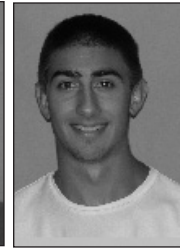
John Dietrich (Mechanical Engineering)

Dr. Joshua Gargac

10:40 a.m., Engineering and Business Building 206

"Hops Harvester"

The craft brewing industry has increased the demand for hops, motivating smaller farms to enter the hops-growing market. However, these hop yards cannot afford hops-harvesting equipment, harvesting by hand instead. Therefore, a harvester was designed to increase the harvesting rate for small farms. The harvester is electrically powered and hops are separated from the bines by a set of spinning fingers before falling onto a separating conveyor. Our client will use this device during the fall harvest.



Meghan Wells (Physician Assistant Studies)

Professor Vanessa Worley

10:40 a.m., Tolerton and Hood 100

"Oral Antiretroviral Pre-Exposure Prophylaxis (PrEP): How to PrEPare Clinicians to Maximize Effectiveness in Lowering HIV Incidence"

A person traveling to South Africa receives an antimalarial medication. A nurse receives an influenza vaccination. What do these two scenarios have in common? The answer is simple: people deemed to be at-risk for exposure to illness receive something that lowers the risk of them contracting the illness. What if there was something to lower the risk of contracting human immunodeficiency virus (HIV)? In 2012, the US Food and Drug Administration approved a treatment termed pre-exposure prophylaxis (PrEP), a pill for once daily use in those who are at-risk for contracting HIV. It is 75-92% effective. Unfortunately, despite its introduction, rates of HIV infection remain steady at 45,000 new diagnoses annually. This begs the question: what is hindering the success of PrEP? This systematic review investigates best practices for clinicians to implement in order to maximize effectiveness of PrEP. Key insights include improved guidelines from the Centers for Disease Control and Prevention regarding PrEP, augmentation of clinician self-study, improved patient selection/education and implementation of population-specific applications of PrEP.



Formal Presentation Abstracts

Heather Tomlinson (Psychology)

Seav Mey Y (Psychology)

Monique Vinson (Psychology)

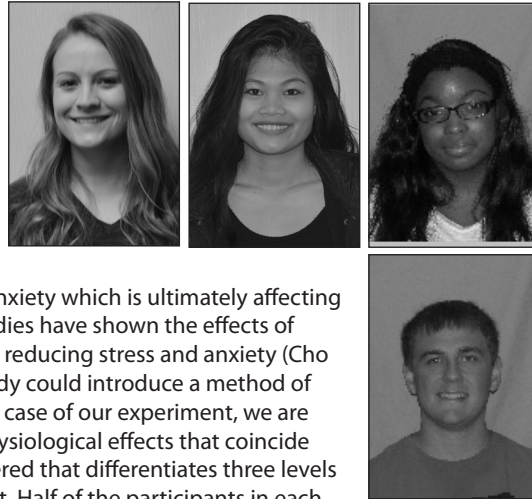
Kyle Mathis (Psychology)

Dr. Kristine Turko

2:10 p.m., Tolerton and Hood 201

"The Effects of Chewing Gum on Test Anxiety"

Many college students are affected by anxiety (Lotz & Spardfelt, 2017). More specifically students are affected by test anxiety which is ultimately affecting their academic performance (Lotz & Spardfelt, 2017). Several studies have shown the effects of distractions, such as chewing gum and breathing techniques, on reducing stress and anxiety (Cho et. al, 2016; Coneely & Hughes, 2010). The implications of the study could introduce a method of reducing physiological markers of test anxiety (heart rate). In the case of our experiment, we are looking at self-report measures of anxiety and also looking at physiological effects that coincide with anxiety. Currently, an anxiety assessment is being administered that differentiates three levels of anxiety: low, medium, and high. This assessment is the pre-test. Half of the participants in each anxiety group is assigned to a control condition, while the other half is assigned to the experimental condition. The experimental group is instructed to chew gum throughout the exam. The control group does not chew gum during the exam. Post-test that measure heart rate of each individual are administered and an anxiety questionnaire is completed by each participant. We expect to find that when participants are chewing gum it will reduce their test anxiety and heart rate.



Shannon Vecchio (Exercise Science)

Colleen Bentler (Exercise Science)

Cyrena Cooper (Exercise Science)

Dr. Ronald Mendel

10:20 a.m., Tolerton and Hood 100

"The Effects of a Two-Week Stimulant Intake on Metabolic Rate"

Metabolic rate indicates the rate at which our body utilizes energy. Previous conflicting research argues the effectiveness of metabolic stimulants, such as caffeine or green tea, and whether together these stimulants create a long term effect. One particularly interesting debate surrounding this topic is a deficit in metabolic rate, where stimulating an increase in metabolism results in a following homeostatic decrease upon stimulus removal. Our research investigates both of these topics.



Formal Presentation Abstracts

Ashley Haas (Writing)

Professor Frank Tascone

10:40 a.m., Engineering and Business Building 203

"Lyme on My Mind"

In May of 2016, my fiancé's struggle with Chronic Lyme Disease began with a string of emergency room visits, however, at the time we were just as unaware of what to call this disease as his doctors. Lyme Disease is typically considered a tick-borne illness, but research shows it can also be transferred from other insects and even from person to person. My research has led me to many different controversies, conspiracy theories, and explanations, but most importantly inspiring people who have suffered and overcome the many obstacles of Lyme to become their own advocates in a fight against a disease that is not completely understood by even Lyme Disease specialists. The purpose of my research was to share their stories, to emphasize the importance of Lyme Disease awareness, and to show that Lyme Disease does exist in Ohio. After being asked by many people, including doctors, if Lyme Disease exists in Ohio, I knew that these stories needed to be shared. The idea that the Ohio-Pennsylvania border, or any state line for that matter, could prevent a disease from spreading is a naïve view. I have disputed this idea by sharing stories of Ohioans I've interviewed who have been diagnosed with Chronic Lyme Disease. Through these stories I was also able to delve into the controversies that surround Lyme Disease such as the role of the CDC, or Center for Disease Control, and the Plum Island Conspiracy Theory.



Christopher Harris (Educational Leadership)

Dr. Melissa Askren-Edgehouse

3:30 p.m., Tolerton and Hood 201

"Teacher Retention in an Urban Midwestern School District"

Research and studies that have been conducted in the last two decades show that there is a clear and definitive link between that of teacher retention and student achievement (Hirsch, Emerick, Church, & Fuller 2006). An urban school district in the Midwest has had a significant increase in teachers who transfer out to different school districts within their first 3 years of teaching, and has had a difficult time sustaining highly qualified teachers within the district. In this research project, I examined ten schools within the large urban school district aforementioned. The respondents were a diverse group that came from different grades levels, content areas, and had different time periods in the teaching field. Research was conducted through voluntarily completing a confidential survey, which was then analyzed and results were provided to the school district leadership for further analyzation and recommendation. I identified several Ohio Standards for the Teaching Profession that are directly related to my research, including: • Standard 1: Students – Teachers understand student learning and development and respect the diversity of the students they teach. • Standard 6: Collaboration and Communication – Teachers collaborate and communicate with students, parents, other educators, administrators, and the community to support student learning. • Standard 7: Professional Responsibility and Growth – Teachers assume responsibility for professional growth, performance and involvement as individuals and as members of a learning community.



Formal Presentation Abstracts

Kristina Hass (Early Childhood Education/Music)

Dr. Ernest Pratt

1:50 p.m., Engineering and Business Building 206

"Affirmative Action: Encouraging Diversity in America"

This presentation seeks to educate the audience on affirmative action, or "positive discrimination." It will explain the origins of the concept, its evolution over time and its use today. Affirmative action can be described as having both advantages and disadvantages, which will also be addressed. After researching the history, goals, and results of affirmative action, it was concluded that this topic can have both positive and negative outcomes depending on the individual's perspective.



Kristina Hass (Music /Early Childhood Education)

Dr. Maira Liliestedt

10:20 a.m., Kolenbrander-Harter Information Center 013

"Music in Movies: Harry Potter and the Prisoner of Azkaban"

This presentation discusses the music of a scene in the third Harry Potter movie and delves into the historical functions for various instruments to explain their use in the scene. The musical choices made by the movie's composer assist in projecting certain emotions to the audience, promoting connections to character experiences, and linking separate scenes in the movie. After researching the original uses of the instruments used in the scene, it was found that similar purposes exist today.



Joseph Householder (Economics)

Dr. Michael R. Myler

4:10 p.m., Tolerton and Hood 101

"The North American Optimum Currency Area"

Since 1904, Panama has used the US dollar as legal currency along with its own currency, the balboa. The US dollar is the only paper money in circulation. Ecuador has adopted the US dollar as its official currency. Seventeen members of the European Union adopted the euro as their official currency on January 1, 1999. The euro is used daily by 338 million people. Another 175 million people use a currency that is pegged to the euro. If a currency is pegged to another, the two of them are essentially the same currency. We use the term "currency area" to refer to two or more countries using the same currency. The question in economics is whether it is desirable for countries to form a currency area. Robert Mundell (1961) presented a list of criteria for a currency area to be successful. An area that satisfies these criteria is labeled an optimum currency area. The purpose of this paper is to examine whether Canada, Mexico, and the United States would form an optimum currency area. I consider the stage of economic development, the importance of trade between the three countries, and the correlation of their business cycles. The variables I considered were GDP, GDP growth rates, inflation rate, unemployment rates, GDP per capita, bilateral trade, and bilateral trade as a percent of GDP. The optimality of a potential currency was tested using correlation matrices created in EViews. The results suggest that a currency area between Canada and the United States would satisfy the criteria for being optimal. The evidence provides support for adding Mexico to the area, but this evidence is not quite as strong.



Formal Presentation Abstracts

Joshua Thorne (Sociology)

Dr. Lori Kumler

10:20 a.m., Tolerton and Hood 101

"Location, Location, Location? The Geography of Nature and Green Spaces in predominantly low-income and minority neighborhoods of Alliance"

Previous research recognizes the disparities that low-income and communities of color face in terms of access to nature and green spaces (Jennings et al. 2012). Topics in environmental justice would suggest that communities of color and low-income neighborhoods have unequal access to positive environmental externalities. In this study, disparities of green space access and park use were measured in Alliance, Ohio by self-reported questionnaires and proximity of outdoor recreational spaces. Surveys of residents from Census Tract 7104 and 7107 were analyzed to measure mental and physical health, and overall perceived access to nature. Proximity was measured by calculating the distance between the center of each census tract to major parks in the City of Alliance. The two census tracts were selected based on their differing socioeconomic profiles and racial composition. Information beneficial to the Huston-Brumbaugh Nature Center showed that there were major differences in familiarity to the center among the two census tracts.



Nicholas Tkacik (Mechanical Engineering)

Cole Harvey (Mechanical Engineering)

Marcus Kinnard (Mechanical Engineering)

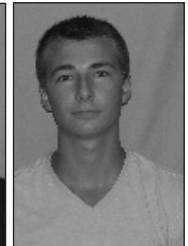
Jacob Michaud (Mechanical Engineering)

Dr. Joshua Gargac

2:10 p.m., Engineering and Business Building 206

"MK Morse Dynamometer"

A significant factor in increasing the lifespan of a hole saw involves reducing the forces acting on each cutting tooth. These forces can be measured by a special device called a dynamometer. Following the engineering design process, a dynamometer was developed to measure the resultant forces during the testing of drill-press-mounted hole saws while cutting stainless steel. This dynamometer will be used by MK Morse to evaluate new saw geometries aimed at improving overall tool effectiveness.



Formal Presentation Abstracts

Komla Tessou (Psychology)
Morgan Hambrick (Psychology)
Martin Zapata (Psychology)
Dr. Kristine Turko



3:50 p.m., Tolerton and Hood 201

"The Effects of Competition and Sport Type on Athletic Performance in NCAA Division III Athletes"

The relationship between anxiety and performance has been a highly researched topic in recent years (Wilson, 2017). Anxiety affects memory, concentration, performance and the physiological responses of an individual, and can negatively affect academic performance. Sports anxiety can cause athletes to either perform poorly or can enhance athletic performance. A specific variable of interest related to anxiety is the type of sport in which an athlete competes (team sport or individual sport). Our research investigates the relationship between sport type and performance anxiety.

Samantha Thompson (Physician Assistant Studies)
Professor Vanessa Worley

4:10 p.m., Engineering and Business Building 203

"Are Healthcare Workers' Mobile Devices Sources of Hospital-Acquired Infections and Are Cleaning Protocols Needed to Reduce Risks?"

Today mobile phones are with people practically everywhere they go. We wash our hands to reduce the spread of infection, but does anyone ever wash their phone? In the course of caring for hospitalized patients, healthcare workers and their phones are exposed to numerous dangerous, even deadly, organisms. According to the CDC, on any given day, 1 in 25 hospital patients acquire a healthcare-associated infection. Could some of these infections be coming from the mobile devices of hospital staff? A systematic review of literature was conducted to address this question and to provide potential solutions to be implemented in healthcare facilities. The review concluded that healthcare workers' mobile devices house numerous pathogens known to cause harm, including methicillin-resistant Staphylococcus aureus (MRSA) and Clostridium difficile. Come learn whose phones are most concerning and learn how to effectively remove microorganisms from mobile devices without voiding warranties or causing damage to the device.



Formal Presentation Abstracts

Hope Kadlecek (Psychology)
Keenan Young (Psychology)
Carolyn Balzano (Psychology)
Dr. Tamara Daily



3:30 p.m., Tolerton and Hood 100

"Effect of Embedded Humor on Recall and Recognition of Educational Material"

We examined whether humor embedded in educational material aids students' retention of information. We compared three groups exposed to different combinations of historical information and humorous content (humorous history lesson, non-humorous history lesson, and humorous video plus non-humorous history lesson). We hypothesized that participants in the embedded humor group will outperform other groups, and that the no-humor control group will have the lowest recall and recognition score.

Daniel Kirk (Political Science/Peacebuilding and Social Justice)
Dr. Nicole Johnson

10:20 a.m., Engineering and Business Building 206

"Voter Suppression: Past, Present, and Future"

Voting is considered a basic civil right in America. This presentation explains how this civil right has been violated through voter suppression. In the recent presidential election, voter suppression was viewed as a problem that disadvantaged Democrats. But is voter suppression a single-party issue? To answer this question, I present documented cases of suppression in U.S. history and recent examples to show that both major parties have suppressed voters. I then discuss several ways to combat this problem moving forward, so that all Americans feel that their voice is heard and counted. Voting in a democratic country is a basic civil right, instituted as part of the notion of equality in the United States. This presentation argues that voter suppression is a serious threat to democracy and that as concerned citizens, we can change voting for the better moving forward.



Formal Presentation Abstracts

Jessica Kulas (Psychology)

Lily Cola (Psychology)

Anthony Bucci (Psychology)

Allison Chelski (Psychology)

Dr. Tamara Daily

1:30 p.m., Engineering and Business Building 206

"Effect of gratitude journaling on perceived stress, school stress, and overall happiness"

The purpose of this study is to determine whether daily prompted gratitude journaling has a positive effect on happiness, perceived stress, and college student stress. In order to do this, students will complete questionnaires assessing baseline levels of general perceived stress, stress related to college life, and happiness. After completing baseline measures, participants will be sent a gratitude-based prompt to respond to each day for two weeks. After the two-week gratitude intervention is complete, participants will complete the same three questionnaires again. The change in the dependent variables from pre- to post-intervention will be used to test the effectiveness of daily gratitude journaling. We expect to find that participating in the intervention will have positive effects on stress and happiness.



Stacy Laskowski (Mathematics)

Dr. Gerald Wuchter

3:50 p.m., Engineering and Business Building 203

"WINDians?"

Will the 2018 Cleveland Indians win the World Series? The purpose of this research is to use various baseball statistics available at the beginning of each baseball season to create a model that predicts the number of wins that a Major League Baseball team will have during their upcoming season. These statistics are based off Billy Beane's formula which gives a total of the teams runs and the Pythagorean formula which estimates a team's expected winning percentage. This presentation will explore these two formulas along with other mathematical calculations to predict how well the 2018 Cleveland Indians will do.



Josh Leiter (Physics/Mathematics)

Dr. Steve Cederbloom

10:40 a.m., Tolerton and Hood 201

"Visualizing Gravity"

What is the Nature of Spacetime? We began looking at the universe through the lens of a 4D cosmic doughnut; could our universe be shaped like a doughnut? By utilizing Einstein's Theory of General Relativity, we were able to investigate the metric of doughnut allowing us to visualize the effects of the complex geometry. We also investigated equations elaborating on the history of such a universe.



Formal Presentation Abstracts

Erin Tamulonis (Chemistry)

Dr. Keith Miller

3:50 p.m., Tolerton and Hood 100

"KATP channels regulate ductus arteriosus tone by acting as biomechanical sensors"

The ductus arteriosus (DA) is a vascular shunt that connects the pulmonary and systematic circulations during fetal life. Lack of DA closure after birth is a significant cardiovascular disorder affecting 1 out of every 500-2000 term infants and 30-40% of the most critically ill neonates. The current treatment options for a patent ductus arteriosus (PDA) are not only limited, but are also associated with several side effects. Therefore, there is a need to explore new treatment options for PDA. The DA experiences a unique pattern of hemodynamic forces and to this point, biomechanical factors have not been studied in the context of regulating DA patency or closure. Ion channels are part of the "druggable genome" and act as mechanosensors in the vasculature. ATP-sensitive K⁺ (KATP) channels are promising drug targets as they are enriched in the DA and act to regulate DA patency. We hypothesize that KATP channels regulate DA tone by acting as biomechanical sensors. We will test this using human DA smooth muscle cells cultured under various flow conditions. An Ibidi pump system will expose the DA cells to various rates of laminar flow and the expression of several genes including KATP channel genes will be examined using quantitative Real Time RT-PCR. In addition, changes in cell proliferation and cell morphology will be evaluated in static and flow cultures. Overall, the results of this study will give us insight into the role that biomechanical forces play in regulating DA tone and will offer data to support whether KATP channels are a viable drug targets for future treatment of PDA.



Kayla Taylor (Physician Assistant Studies)

Professor Vanessa Worley

1:50 p.m., Kolenbrander-Harter Information Center 013

"Ultraviolet Dosimeters: An Appropriate Way to Decrease the Risk of Skin Cancer?"

Have you ever wondered if sunscreen is really protecting you from the sun? What if you knew exactly when you reached unsafe ultraviolet (UV) levels? Every year 3.5 million people in the U.S. are diagnosed with skin cancer - the most preventable cancer. Currently, sunscreen is the most commonly used prevention method, but its efficacy is being debated, so new prevention methods need to be investigated. UV dosimeters, often a patch that goes on the skin to measure UV levels, can be connected to a smartphone, giving you real-time data on your individual UV exposure. An application shows how much time you can safely be in the sun and helps you make smarter decisions about your skin. This research was conducted using a systematic review of peer-reviewed articles published within the last 10 years. Findings show great promise for these devices though more research is needed to determine if they will ultimately lower the risk of skin cancer. With the proper education, individuals could begin using them, and may benefit from and enjoy receiving the important information they can provide.



Formal Presentation Abstracts

Katherine Seidel (Educational Leadership)

Dr. Melissa Askren-Edgehouse

1:30 p.m., Kolenbrander-Harter Information Center 013

"The Recruiting Process and Factors Impacting College Choice of Potential Student Athletes"

I conducted a research study, which explored student athlete recruitment and the various factors that influence college choice. The purpose behind my study was to explore a topic that would help both the women's lacrosse program and the University of Mount Union. Recruitment is a vital component for any college or university as winning teams can provide an effective means of advertising and funding. Winning teams have a substantial impact because athletic record is identified with the prestige of the institution and to ensure the cycle of championship caliber teams coaches must recruit the most athletically talented and academically student-athletes possible. I conducted interviews with coaches from various sports and surveyed first year athletes as to their rationale for attending Mount Union. I believed it would be helpful to interview various coaches to gain insight into general recruiting practices and potentially improve our recruiting efforts as an athletic department. Upon interviewing the first-year athletes I gained greater insight into the needs and wants of potential Student Athletes. After collecting my survey data, I researched more about college choice among potential student athletes. I discovered that societal factors, institutional factors, and personal demographics have the most meaningful impact on college choice. As recruiters and coaches, it is important for us understand these factors and make these factors attractive for prospective student athletes. Based on my survey responses it appears that overall environment of the institution and coaching staff style and personality were the biggest deciding factors.



Brianna Slemons (Athletic Training)

Dr. Morgan Cooper Bagley

10 a.m., Tolerton and Hood 100

"Achilles Tendon Ruptures— Why they should concern you"

What is an Achilles tendon rupture and how could it affect you? An Achilles tendon rupture is a complete tear of the tendon located at the back of the heel. The Achilles tendon is a connection of two calf muscles into the calcaneus (heel bone). According to the National Center for Biotechnology Information, a ratio of 2:1 males and 19:1 females will tear their Achilles between thirty and forty years old. 76% of Achilles tears occur in recreational athletes while 20% account for the competitive athletes. So what does this actually mean? This means that the weekend warrior activities are more likely to cause someone to tear their Achilles as compared to a professional athlete. Knowing the signs and symptoms of potential Achilles tendon injury could potentially help someone from rupturing his or her Achilles.



Formal Presentation Abstracts

Gaston Marian (French/Computer Science)

Dr. Bertrand Landry

4:10 p.m., Engineering and Business Building 206

"The Struggles of a Changing World: From French Farmers to Rural Americans"

News reports talk of suicide of many French farmers as well as America's opioid epidemic disproportionately affecting rural communities. Making use of news published in France as well as in America, along with academic articles, this study draws a comparison between the two tragedies. The two suffering groups are both experiencing a change to their way of life due to the shifting nature of society at large, they lose purpose and economic viability. Complex problems have no simple solutions.



LeeAnn Maruna (Exercise Science)

Dr. Ron Mendel

1:30 p.m., Tolerton and Hood 201

"Does Monster (16oz-original) produce pre-mature atrial contractions (PACs) at rest within 3 hours after consumption? Does the drink increase cognitive function and alertness?"

Energy drinks containing high amounts of caffeine are being consumed worldwide now more than ever. Larsen et al. (2016) and Conen et al. (2012) examined cardiovascular variables and found that caffeine and energy drinks increased blood pressure, heart rate, and more. Methods: Thirty healthy individuals age 18 to 26 years old maintained their daily intake routine and were connected to a 3-lead ECG for three hours to test for pre-mature atrial contractions after drinking an energy drink in 15 minutes. Participants stated how alert and focused they felt based on a Likert scale, performed a modified Stroop word-color test, and had their blood pressure taken every hour post consumption in addition to before starting. Purpose: The purpose of this study is to determine how often pre-mature atrial contractions (PAC) occur and how much cognitive markers improve after drinking a 16-oz can of an energy drink. Results: Data collection was not complete at the time of abstract submission. Discussion: Data analysis will take place upon completion of study.



Tyler Neff (Mechanical Engineering)

Kyle Hicken (Mechanical Engineering)

Nick Latchford (Mechanical Engineering)

Megan Loetz (Mechanical Engineering)

Ryan Studer (Mechanical Engineering)

Dr. Joshua Gargac

1:30 p.m., Tolerton and Hood 100

"Robotic Football Quarterback"

The Intercollegiate Robotic Football Competition consists of 8-on-8 games and a skills combine. This year, a quarterback robot (QB) was designed to pass a football over 18 feet to a receiving robot. The robot uses an infrared tracking system to locate the receiver robot, and two spinning-wheels accurately throw the ball to the receiver. These robots compete in the speed, agility, and strength tests, and the QB accuracy events at the skills combine on April 21st, 2018 at Ohio Northern University.



Formal Presentation Abstracts

Kristopher Nottingham (Asian Studies)

Dr. Liangwu Yin

2:10 p.m., Kolenbrander-Harter Information Center 013

"Treatment of Koreans Under Imperial Japan"

The mistreatment of ethnic Koreans under the Empire of Japan during the rise in ultra-nationalism and militarism in Japan, primarily during the 1920s and 1930s, is the focus behind this research project. The purpose of such a project is to discover the link between militarism and racism in pre-World War II Japan, as well as attempting to find whether Koreans could ever have hoped to be equal to the Japanese during this time. Many issues which occurred during this period remain unresolved even to this day, making the study of such a topic important to reconciliation between South Korea and Japan.



Megan Okuda (Physician Assistant Studies)

Professor Vanessa Worley

10:20 a.m., Engineering and Business Building 203

"Sparking Hope for People with Parkinson's Disease: A Comparison of Subthalamic Nucleus and Globus Pallidus Interna Deep Brain Stimulation Treatments"

Electrical stimulation of the brain with an implanted device... What initially sounds like something from a horror film, is actually an effective treatment for a debilitating neuromuscular disorder called Parkinson's disease. In this condition, dopamine receptors in the central nervous system malfunction, resulting in problems with motor function, cognition, behavior, and more. Deep brain stimulation (DBS) involves sending electrical currents through the brain to correct these deficits. DBS is implanted in one of two locations: the subthalamic nucleus (STN) or the globus pallidus interna (GPI). This research attempts to answer the question: Which target location results in the best outcomes for patients? Through a systematic review, the effects of STN and GPI DBS units are analyzed. The results show specific patient factors should be considered when making this decision. Come hear the 'shocking' truth about a revolutionary treatment that gives hope and improves quality of life for so many.



Layn Palmer (Writing)

Professor Frank Tascone

4:10 p.m., Tolerton and Hood 100

"Roads Less Traveled: Poetry Inspired by Alliance, Ohio"

Writers have traveled around the world to find inspiration, but there is interesting material all around us no matter where we are. My research involved writing poetry inspired by Alliance and other nearby towns. By "walking the ground" and exploring the city I live in, I was able to write poetry that was unique in subject matter and relevant to a broader subset of American life that is largely overlooked. During my presentation, members of the Mount Union and Alliance communities might find something new to appreciate about their city.



Formal Presentation Abstracts

Nick Schlabach (Nursing)

Professor Monica Andreski

10 a.m., Kolenbrander-Harter Information Center 013

"Preventing Pediatric Falls of the Hospitalized Child: A Quality Improvement Project"

This is a student-directed quality improvement (QI) project, completed within a metropolitan children's hospital in the acute care setting. The initial objective was the identification an area of performance deficiency. Subsequent objectives included pinpointing the root cause(s) of the performance deficiency and implementing interventions to resolve the performance deficiency. After reviewing falls data reports, it was identified that increasing compliance with the hospital's falls prevention bundle did not correlate with a decrease in patient falls. A fall occurring while hospitalized can lead to significant injury, increased length of stay, and specifically in the pediatric population, lower levels of trust in health care providers during future encounters. A comprehensive literature review was completed that encompassed: current best pediatric falls risk assessments, factors influencing pediatric falls in the inpatient setting, current best measures to prevent falls in the pediatric population as well as appropriate education for health care providers, patients and families. Implementation methods will address: what is changing, why change is being made, how the change will affect the staff's work, and ultimately how the change will positively affect the patients. The incidence of falls for the 12-month period after interventions will be compared to previous data recording the incidence of falls. A positive outcome for this QI project is defined as a reduction in the total number of patient falls in the post-implementation period. This QI project reinforces and promotes the fact that quality and safety should be the at the forefront of our healthcare practices.



Abbey Schlantz (English/Writing)

Dr. David Thiele

1:50 p.m., Tolerton and Hood 100

"Old Lacerations That We Love: Navigating Identity in Native American Poetry."

Although Native American literature spans several centuries, only recently has it been studied in academia. My senior research project examines the works of four Native American poets to examine the intersection of colonization and Native identity. During this presentation, I focus specifically on analyzing Linda Hogan's poem "Partings," discussing identity in regards to motherhood, while providing insights into Native American poetry and other contemporary issues.



Abbey Schlantz (Writing/English)

Professor Frank Tascone

3:30 p.m., Engineering and Business Building 206

"The Lives of Heroes"

We've all heard heroic war stories, but what about stories of daily life at war? My senior writing project shows what life was like for soldiers during World War II. I interviewed four veterans and used my grandpa's journal to create an hour-long podcast showing the grittier sides of the war. With less than 600,000 WWII veterans still alive today, the podcast captures important firsthand accounts of one of the most impactful wars in American history. In this presentation I share some clips from the podcast and talk about the writing experience.



Formal Presentation Abstracts

Kacie Prologo (Writing)

Dr. Gwen Schwartz

3:50 p.m., Tolerton and Hood 101

"Buried!"

Everyone dies. This is one of the unfortunate laws of humanity, though very few people are comfortable talking about regardless of death's immediate consequences and far-reaching influence. As a research project and subsequent book, *Buried!* compares the traditional trappings of funeral services to the up-and-coming phenomenon of green – or natural – burial which does not include the chemical process of bodily preservation – embalming – and is usually much cheaper than its classic counterpart. By conducting a series interviews with traditional and green burial specialists around Ohio, *Buried!* uses personal stories to draw back the curtain, exposing the complicated nature of death, the rising cost of grief, and the long term environmental impact of interring the dead.



Royal Rose (Political Science)

Dr. Lori Kumler and Dr. Francis Schortgen

10:40 a.m., Tolerton and Hood 101

"Media Representation and Young Adults: Does it Really "Get Better" for LGBT+ People?"

"It gets better." Countless young LGBT+ (lesbian, gay, bisexual, transgender, and others) people have heard the phrase in response to intolerance, bullying, and even violence. LGBT+ teens have been assured that eventually they will be able to live their truth openly, if only they hold on a little longer - but is it true that "it gets better?" By conducting interviews with members of PRIDE, an on-campus LGBT+ organization, I investigated whether it truly "got better" for LGBT+ young adults and how media played a role in either improving or complicating their lives. Using media as a proxy, I also designed a survey for the student body at large, allowing me to compare the responses of the PRIDE members to non-PRIDE members, both LGBT+ and not. While other LGBT+ media research has followed similar methods, I aimed to include a wider array of media categories - television, film, print, news, and social/online media - by allowing respondents to provide their own unique example of LGBT+ media they have consumed.



Formal Presentation Abstracts

Parker Peterson (Public Relations/French)

Dr. Andrea Ferraro

2:10 p.m., Tolerton and Hood 101

"Around the World in 8 Months: A Comprehensive Public Relations Campaign for the Integration of International Students on Mount Union's Campus"

This project discusses a potential public relations campaign developed to help increase international student inclusion on the University of Mount Union's campus. Primary research conducted found that a majority of Mount Union's domestic student population is aware that there are international students on Mount Union's campus. This primary research included conducting an interview with the head of the Center for Global Education and distributing a campus-wide survey. However, the subsequent interaction with international students is rather shallow and many international students reported that they do not feel fully integrated into Mount Union's student community. This means that multiple output objectives, strategies and tactics should be employed in order to help reach the behavioral impact objective that would be set in place. Group influence, audience participation, opinion leadership and mass media endorsements would be utilized in order to help increase international student inclusion within the domestic student target audience. To change this behavior within the domestic student target audience, many different tactics would be utilized. These tactics would fall under the overlying theme of "Around the World in 8 Months". The time line of this campaign would include a single academic year, with an estimated budget of approximately \$750. Evaluation methods would include exit interviews for international students similar to the exit interviews given to graduating seniors, as well as surveys given to domestic students throughout the year to gain feedback concerning events.



Brooke Powell (English)

Dr. David Thiele

10:40 a.m., Kolenbrander-Harter Information Center 013

"A Truth Universally Acknowledged: The Marriage Market in Jane Austen's Novels and Film Adaptations"

During the Regency era, a time in which women were largely viewed as inferior to men, Jane Austen took a firm stance against the social practices which subjugated women like herself—particularly the institution of marriage. Though her works contain complex social critiques, Hollywood's film adaptations tend to focus on the novels' romantic plots instead. In closely examining *Pride and Prejudice*, Joe Wright's film adaptation (*Pride & Prejudice*), and scholarly research, I analyze how Austen's original message has been altered to appeal to today's audience and to modern ideas of feminism.



SCHOLAR Day Activities

April 24, 2018

9-9:45 a.m.	Poster Session I , Giese Center for the Performing Arts (Participants listed in program. Breakfast foods will be served.)						
10-11 a.m. Presentation Session I	Start	T&H 201	T&H 100	T&H 101	EBB 203	EBB 206	KHIC 013
	10 a.m.	Psychology Leah Conaway, Danielle Trippett, Danielle Sloan	Athletic Training Brianna Slemmons	History Brianna Boehlke	English McKenzie Caldwell	Biology Natalie Cerciello, Erica Mascio	Nursing Nick Schlabach
	10:20 a.m.	Kristin Werstler Writing	Exercise Science Shannon Vecchio, Colleen Bentler, Cyrena Cooper	Sociology Joshua Thorne	Physician Assistant Studies Megan Okuda	Peacebuilding and Social Justice/ Political Science Daniel Kirk	Music Kristina Hass
	10:40 a.m.	Physics Josh Leiter	Physician Assistant Studies Meghan Wells	Political Science Royal Rose	Writing Ashley Haas	Mechanical Engineering Brian Walker, Adam Sopchak, Tristan Begue, John Dietrich	English Brooke Powell
11:30 a.m.-12:30 p.m.	Senior Recognition and Honors Convocation,						
12:30-1:30 p.m.	Picnic Lunch for Participants and Guests, Peterson Field House, McPherson Academic and Athletic Complex						
1:30-2:30 p.m. Presentation Session II	Start	T&H 201	T&H 100	T&H 101	EBB 203	EBB 206	KHIC 013
	1:30 p.m.	Exercise Science LeeAnn Maruna	Mechanical Engineering Tyler Neff, Kyle Hicken, Nick Latchford, Megan Loetz, Ryan Studer	Marketing/Management Rachel Brumenschenkel, Mike Sovak, Jordan Carr, Hannah Richard, Emily Bryan, Brad Hagerich	Japanese Victoria Ginty	Psychology Jessica Kulas, Lily Cola, Anthony Bucci, Allison Chelski	Educational Leadership Katherine Seidel
	1:50 p.m.	Physics Joseph Winiecki, Nick Thomas	English/Writing Abbey Schlanz	Psychology Colleen Bentler, Zach Metz, Nick Thomas	History Brianna Boehlke	Education Kristin Hass	Physician Assistant Studies Kayla Taylor
	2:10 p.m.	Psychology Heather Tomlinson, Seav Mey Y, Monique Vinson, Kyle Mathis	Mathematics Rebecca Cooper	Public Relations/French Parker Peterson	English Kristin Werstler	Mechanical Engineering Nicholas Tkacik, Cole Harvey, Marcus Kinnard, Jacob Michaud	Asian Studies Kristopher Nottingham
2:30-3:15 p.m.	Poster Session II , Giese Center for the Performing Arts. Participants listed in program. Snacks provided.						
3:30-4:30 p.m. Presentation Session III	Start	T&H 201	T&H 100	T&H 101	EBB 203	EBB 206	
	3:30 p.m.	Educational Leadership Christopher Harris	Psychology Hope Kadlecek, Keenan Young, Carolyn Balzano	Nursing Angelica Bartholomew	Marketing/Management Rachel Brumenschenkel	Writing/English Abbey Schlanz	
	3:50 p.m.	Psychology Komla Tessou, Morgan Hambrick Martin Zapata	Chemistry Erin Tamulonis	Writing Kacie Prologo	Mathematics Stacy Laskowski	History Chandler Aldridge	
	4:10 p.m.	Psychology Emily Define, Mirhandanda Henneman, Briana Schultz	Writing Layn Palmer	Economics Joseph Householder	Physician Assistant Studies Samantha Thompson	French/Computer Science Gaston Marian	