



NKU

CELEBRATION

OF STUDENT RESEARCH
AND CREATIVITY

SPRING 2017



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LETTER FROM THE PRESIDENT

To Our Celebration 2017 Participants and Guests:

Welcome to Northern Kentucky University's annual Celebration of Student Research and Creativity, and congratulations to the students and faculty members participating this year. To our guests and visitors, thank you for joining us and supporting our students and our University.

This is our 15th year celebrating outstanding undergraduate and graduate research and creativity on our campus, and we are proud that the event has grown to become one of our premier annual academic activities.

Student research and creative work are important because they contribute to our knowledge, and these projects enable our students to apply what they learn in the classroom. This transdisciplinary, active learning is a defining feature of our University as we continue to develop service-learning courses, internships, co-op experiences, and opportunities for student research.

The student work we celebrate this week was done under the direct guidance of faculty mentors. These working relationships develop students' critical thinking and analytic skills, as well as oral and written communication skills needed to present their work. They also nurture the deep intellectual bond between our faculty and students – a core value of an NKU education.

The work you will see this week exemplifies the quality of the undergraduate research being conducted at NKU. Our students are future leaders in the development of the intellectual infrastructure of the Commonwealth. Their talent gives me great faith in the future of our region, our state, and our country.

Again, congratulations to all whose work is showcased in this year's Celebration, and many thanks to all who have helped make this week very memorable.

Sincerely,

A handwritten signature in black ink, reading "G Mearns". The signature is fluid and cursive, with the first name "G" being a large, stylized letter.

Geoffrey S. Mearns
President



LETTER FROM THE PROVOST

Dear Celebration Participants,

It is my great pleasure to welcome you to the Northern Kentucky University 2017 Celebration of Student Research and Creativity!

This year's event continues the remarkable tradition of outstanding scholarly and creative work produced by NKU students under the guidance and mentoring of the faculty. The Celebration of Student Research and Creativity is a wonderful opportunity for our students to display their work through poster presentations, oral presentations, interactive demonstrations, performances, and exhibits of artistic work with the campus community. The continued growth in the number of participants each year is a true testament to the dedication of our students and faculty.

The Celebration of Student Research and Creativity provides evidence of the close connection between students and faculty that has become a hallmark of the NKU educational experience. These opportunities enhance student learning via intense engagement and discovery in a chosen academic field. The work is challenging. Research takes time and effort, but the rewards of this form of experiential learning can be tremendous.

On behalf of President Geoffrey S. Mearns, the deans of our colleges, the chairs of our academic departments, and the entire NKU community, I congratulate you all on the research and creativity showcased during this annual celebration.

Sincerely,

A handwritten signature in black ink that reads "Sue Ott Rowlands". The signature is fluid and cursive.

Sue Ott Rowlands
Provost and Executive Vice President for Academic Affairs

CELEBRATION OF STUDENT RESEARCH AND CREATIVITY



SCHEDULE OF EVENTS

THURSDAY, APRIL 6-FRIDAY, APRIL 14

BFA STUDIO SENIOR ART EXHIBITION

Main Gallery, 3rd Floor Gallery
9 a.m.-9 p.m.

MONDAY, APRIL 10

STRING AREA/CHAMBER MUSIC CONCERT

Greaves Concert Hall
7 p.m. (Free Admission)

TUESDAY, APRIL 11

ORAL PRESENTATIONS: ROUND 1

SU 106
9:00 am..... India Hackle (*Sociology, Anthropology & Philosophy*)
9:30 am..... Christina Spears (*Biological Sciences*)
10:00 am..... Harrison Fender (*History & Geography*)
10:30am..... Ceilidh Ahearn (*Chemistry*)
11:00 am..... Erica Adams (*Biological Sciences*)
11:30 am..... Brad Blankenship (*Political Science, Criminal Justice and Organizational Leadership*)
12:00 pm..... Lexie Lowe (*English*)
12:30 pm..... Alex Olivan (*Chemistry*)
1:30 pm..... Drew Timmons (*Sociology, Anthropology & Philosophy*)

POSTER AND INTERACTIVE PRESENTATION SESSION

SU Ballroom, SU 108, 109, 104
12:30-3 pm (1 pm, Welcome by Provost Ott Rowlands and President Mearns)

LOCH NORSE MAGAZINE OPEN MIC

SU 102; 2-4 p.m.

JAZZ ENSEMBLE

Greaves Concert Hall; 7 p.m. (Free Admission)

WEDNESDAY, APRIL 12

ORAL PRESENTATIONS: ROUND 2

SU 106
12:30 pm..... Chelsea Soward (*Chemistry*)
1:00 pm..... Mikael Soto (*Computer Science*)
1:30 pm..... Chad Dunbar (*History & Geography*)
2:00 pm..... Chad Dunbar (*History & Geography*)
2:30 pm..... David Rigel (*English*)
3:00 pm..... Sarah Krull (*Psychological Sciences*)
3:30 pm..... Rachel Prokopius (*English*)

FILM FESTIVAL: COLLEGE MOVIE FESTIVAL SUBMISSIONS

Griffin Hall Digitorium
4-6 p.m.

MONDAY, APRIL 17, TUESDAY, APRIL 18, and WEDNESDAY, APRIL 19

CONFERENCE OF HONORS (CAPSTONE PRESENTATIONS)

SU 105

THURSDAY, APRIL 20-SUNDAY, APRIL 30

THE YES FESTIVAL OF NEW PLAYS

Corbett and Strauss Theatres

ARTISTIC PRESENTATIONS

A-1 TO A-7: PRODUCERS KAIRI FREUDENBERG, MEGAN YANKOVSKY, SAMUEL STEPHENSON, DAVID CRAMER, BRYCE MILLS, NICK HIGGINSON, CLAY CROUCH, DAVID CAMPBELL

The College Movie Festival

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: The 12th annual College Movie Festival featured seven student films - six live action and one animation - created by NKU students. Students are responsible for all creative aspects of the film production process, from writing, producing, and directing to editing, effects, and sound design. In all, over forty NKU students collaborated on the CMF movies, and all seven films will screen at this event.

A-1: STEVE MAY, DIRECTOR/SOUND MIXER; JARED CLIFTON, DIRECTOR OF PHOTOGRAPHY; KAIRI FREUDENBERG, PRODUCER; HANNAH BREWER, SCRIPT SUPERVISOR/EDITOR; RICHIE MACKNIGHT, PRODUCTION ASSISTANT; CONNOR SHACKELFORD, PRODUCTION ASSISTANT; KERRY STEPHENS, PRODUCTION ASSISTANT; ANDREW WEIDNER, BEST BOY; BENJAMIN BARDGETT, ASSISTANT; KEVIN CONLEY, PRODUCTION ASSISTANT; KELSEY MCCAIN, CO-WRITER/LOCATION MANAGER; CAMDEN DRONENBURG, WARDROBE; PEYTON LARTER, CO-WRITER/SOUND MIXER/BOOM OP

NFS Master Exploders "Something Different"

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: Elise Williams, aspiring chef, must choose between family and change.

A-2: SAM STEPHENSON, PRODUCER/WRITER/DIRECTOR; FABIO SOUZA, DIRECTOR OF PHOTOGRAPHY; ABBY EVANS, MAKEUP AND WARDROBE/ASSISTANT CASTING DIRECTOR; JORDAN MCDANIEL, WRITER/SCRIPT SUPERVISOR/LOCATION COORDINATOR; LUKAS MEYERS, EDITOR/AUDIO MIXER/COLORIST; MYKAELA STACY, EDITOR/COLORIST/GAFFER; GRANT COTTINGHAM, WRITER/BEST BOY ELECTRIC; CHRIS J. ALBERS, COMPOSER

Norse Film Society "Stained"

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: Loyalty to one's family is everything, but at what cost?

A-3: ANDREW BUCHANAN, ANIMATOR/VOICE ACTOR; DONOVAN DIETRICH, ANIMATOR/VOICE ACTOR; SONJA FAUL, ANIMATOR/VISUAL EFFECTS; ANDREW ORNELAS, WRITER; BRICE MILLS, ANIMATOR/DIRECTOR; IAN PARL, AUDIO/VOICE ACTOR; DREW HENDRIX, AUDIO

NKUanimate "World's Best"

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: A young woman on her way to work finds herself abducted and offered a challenge for her life, but can she succeed?

A-4: NICKOLAS HIGGINSON, JAKE HATCH, SAM ROSENTEIL, JEFF WILLIAMS

She Wears the Pants

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

A-5: DANIEL POWELL, CLAY CROUCH, KYLE ROOT, CLAY BROIN, CHRIS FENTON-WELLS, PEYTON VOLINE, CAMERON VARNER

Wah Wah

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

A-6: MEGAN YANKOVSKY, PRODUCER/WRITER; AUSTIN ELDER, PRODUCTION AUDIO; CLAY WILSON, PRODUCTION ASSISTANT; DOMINIQUE RAUCH, PRODUCTION ASSISTANT; JORDAN THOMAS, CAMERA OPERATOR; LESS SAYLOR, DIRECTOR/CAMERA OPERATOR/CO-PRODUCER; SETH COOPER, DIRECTOR OF PHOTOGRAPHY/CAMERA OP/CO-PRODUCER/FINAL CUT EDITOR; TRAVIS HARDESTY, ROUGH CUT EDITOR

Banana Birds "The Runaway"

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: When Parker runs away from home to live in the local park, he befriends Ellis, a sweet old man who tries to covertly persuade the young boy to return home.

A-7: DAVID CRAMER, WRITER/PRODUCER; KATHERINE VIETH, CO-DIRECTOR; DAKOTA DEWBERRY, CO-DIRECTOR/CAMERA; JAMES MORELOCK, CAMERA/EDITOR; RYLIE PENN, AUDIO/PA

Broken Antenna "Five Stars"

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: When Ellis' new restaurant is reviewed by a renowned food critic, he learns that the cost of success might be too high.



INTERACTIVE PRESENTATIONS

I-1: DIEGO MARTINEZ DEL CAMPO, RHEANNA MOREHART, NATE DENICOLA, TYLER STONE

Increasing On-Campus Student Attendance: Facilitating the Development of NKU Men's Basketball Game Culture for On-Campus Students

FACULTY SPONSOR(S): JENNIFER GARDNER, BUSINESS INFORMATICS, MARKETING, SPORTS BUSINESS & CONSTRUCTION MANAGEMENT; JOE COBBS, MARKETING, SPORTS BUSINESS & CONSTRUCTION MANAGEMENT

Abstract: As NKU transitions into the Horizon League Conference, new expectations have been set. We look to promote student involvement, attendance, and game culture for NKU Men's Basketball games. With the support of the NKU Athletic Department, our Sports Marketing class conducted research with 500 NKU students on MBB game and culture. The results were analyzed, and groups competed to create an approach to increase student attendance with a budget of \$1000. Our approach: to facilitate the development of NKU game culture for on-campus students by eliminating barriers that are under our control and negatively affect attendance.

I-2: MEGAN BEDEL, JORDAN CRANDALL, AUSTIN HARDESTY

St. Elizabeth and Boone County Schools Interactive Website: Teaching Children About Living a Healthy Lifestyle

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: We designed a website where children can create safe profiles and follow a map while watching videos, taking quizzes, and playing games tailored to learning about health in a fun and educational way. The website tracks body mass index, and teachers can monitor students' progress. This gives children a chance to better manage diet and exercise in an interactive game-based environment. St. Elizabeth wanted to make eating healthy and exercising a fun and educational experience while tracking how much weight a child gains or loses over time at Boone County Schools. The website accomplishes this goal.

I-3: ERIC BOYCHAN

Children's Hospital Behavioral Research Tool to Perform Behavioral Observations and Store the Results in a Database for Analysis

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: The Children's Hospital Behavioral Observation mobile application can perform multiple types of behavioral observations and record the results. Usually, researchers conduct observations with a stopwatch and record their findings on paper; the Behavioral Observation mobile application allows researchers to perform and record observations from the application, storing the results in a database for analysis with statistical software. The purpose of the database is to store the observation data to allow maximum usability that complements the mobile application. Cincinnati Children's Hospital uses the application to improve the efficiency and accuracy of the observations.

I-4: CHRISTINE ROWLAND

Personalized Information Organizer

FACULTY SPONSOR(S): SOOKYUNG CHO, COMMUNICATION

Abstract: Scheduling and organization programs are incredibly helpful, but can be overbearing. Multiple programs may also need to be open at the same time. Due to this, I decided to research and design my own information organizer. Having studied my own habits as a student, I aim to create a

program which allows you to jot down events and ideas, do calculations, and check on social media. It will combine many functionalities into one simple location. The project is currently being programmed in Visual Studio 2015 using Visual Basic. This prototype demonstrates how students can keep their life efficiently organized.

I-5: MATT SEXTON, ABBY ANSTEAD, ALEC REYNOLDS, EMILY SHERRY, COLE GRECCO, DEREK DALEY, MACKENZIE MANLEY, NICOLE BROWNING

Covering Campus News: Fast and Slow

FACULTY SPONSOR(S): MICHELE DAY, COMMUNICATION

Abstract: The multimedia team of *The Northerner*, NKU's student-run news organization, integrated social media, video, photography, and narrative storytelling to report breaking news and in-depth analysis of the most important issues on campus this year. Project highlights range from coverage of the impact of President Geoffrey Mearns' departure and the posting of a racially insensitive flier on campus to profiles on undocumented students and their harrowing stories of escape to the United States to the history of the campus radio station WNKU.

I-6: HANNAH HAGEDORN, DEREK DALEY, ALEC REYNOLDS, FABIO SOUZA

Teach Me How to Hobby: Take a Look Behind the Books as Six Students Showcase Their Passions

FACULTY SPONSOR(S): MICHELE DAY, COMMUNICATION

Abstract: This semester-long multimedia journalism project highlights the hobbies of six Northern Kentucky University students ranging from the daring infatuation of circus-level acrobatics to the perseverance of capturing the perfect photo. This project, published in *The Northerner*, the student-run news organization at NKU, tells these inspiring stories of students pursuing their passions through text, video, photos and interactive graphics.

I-7: JAMES ALPHONSE, KRISCHA BARANGAN, DAVID BERGMAN, OREN CLORE, PATRICK DORR, TIMOTHY ELLIS, CONNOR GEROME, JOHN GROATHOUSE, CODY HERALD, JACOB HUIET, MATTHEW LEMBERG, NICOLE MADDIN, RHETT MCCARTY, KAYLA MCGILL, CONNER MCKEE, GEOFFREY SAYLOR, HOLLYN SCANLON, AARON THATCHER, BRANDE TOMCZYK, ANGELA VOLSTAD

Introducing Social Robotics

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: The new, transdisciplinary course on Social Robotics introduces theories and technologies to build robots that are human-like, sociable, and intuitive to interact with. The course discovers the intersection between communication and computer science, by focusing on how robots can express and perceive emotion, engage in high-level dialogues, and exhibit distinctive personality. In this course, we designed and implemented innovative robot applications in various social contexts. We are presenting our social robot interaction prototypes using a humanoid robot, NAO Evolution V5.

I-8: WILLIAM BUNCH

Humanism: The First of Many

FACULTY SPONSOR(S): RONNIE CHAMBERLAIN, THEATRE & DANCE

Abstract: For the Fall 2016 semester, I was assigned a costume design prompt. The overall goal was to create a "Tribe," a group of people who have a message that they, as a group, could communicate to the world. For my tribe, I wanted to show the negative effects that humans have on the environment through a series of costumes. The First of Many is about Oil and Plastic solution. For this concept, I have created my version of Humanism.

Humanism / (h)yo om niz m/ noun: an outlook or system of thought attaching prime importance to humans rather than to environmental stabilization.

ORAL PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE FIRST FACULTY SPONSOR.

O-1: INDIA HACKLE

I Love You With All My Weight Choreopoem

FACULTY SPONSOR(S): JOAN FERRANTE, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY; TRACEY BONNER, THEATRE & DANCE

Abstract: W.E.B. DuBois wrote about the color line—a 400-year old line constructed to separate and divide peoples considered white and nonwhite. The line is such that the closer someone is in shading to the white side of the color line, the higher that person's value and status. A choreopoem offers one venue for sharing how the color line is enacted on a personal level. It features one woman's agonizings and failed efforts to conceive a child whose skin shade is positioned "just right" on the color line.

O-2: CHRISTINA SPEARS

Discovery of Novel Antimicrobials from Endophytes

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: Plants from the Northern Kentucky/Cincinnati area were collected and their endophytic organisms were co-cultured with *Escherichia coli*, *Staphylococcus aureus*, and *Candida albicans* to test their antimicrobial activity. Liquid cultures of active isolates were extracted using organic solvents. Crude extracts were tested for activity with disk or well diffusion assays. Nine plants (*Asimina triloba*, *Asarum*, *Lonicera maackii*, *Asclepias syriaca*, *Lindera benzoin*, *Lonicera japonica*, *Pyrus calleryana*, *Alliaria petiolata*, *Fallopia japonica*) yielded eighty-five endophytes. Seven isolates produced antimicrobial compounds. Further research involves identifying the active compound via column chromatography and TLC.

O-3: HARRISON FENDER

British and Germans in East Africa: The Cause and Effects of Two Empires on One Region

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY; SHARON VANCE-ELIANY, HISTORY & GEOGRAPHY

Abstract: In the late 19th Century, Germany and Great Britain established colonies in East Africa. Germany was new to colonialism and had little experience compared to the British. They both would discover that East Africa was a diverse region with many different people and cultures. Both set about developing the region and the people therein struggled to find the best ways to adapt to the Europeans. This study asks whether the Germans emulated the British or established their own method of rule. It also compares the British and German colonial policies and their effects on the local population.

O-4: CEILIDH AHEARN

Fluorescence Lifetimes of Fluoxetine

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Fluoxetine, like other drugs that have been found at elevated concentrations in surface waters, have harmful effects on aquatic wildlife. While studies have been done on fluoxetine's photochemistry as a method of wastewater treatment, its basic photophysics, particularly its fluorescence, are largely unknown, despite the use of fluorescence to detect the presence of fluoxetine in surface waters. The fluorescence lifetimes of fluoxetine were studied in a variety of solvents of varying polarity and pH. The lifetime was insensitive solvent polarity but strongly affected by pH.

O-5: ERICA ADAMS

Antibiotic Drug Potential of Microorganisms that Inhabit Native Kentucky Insects

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: As the number of infections caused by drug-resistant bacteria increases, the demand for new substances capable of antimicrobial activity also becomes greater. The objective of this project is to identify novel antimicrobial compounds produced by bacteria in the microbiome of insects native to Kentucky. These isolates were screened for antimicrobial activity using a co-culture assay with target pathogens known to cause disease. We conclude that antimicrobial-producing microbes are found in the microbiome of insects in Northern Kentucky. Currently, efforts are underway to identify these microbial isolates and to extract and elucidate the structure of the antimicrobial compounds they produce.

O-6: LEXIE LOWE

Purging the Deutschland: A Study on the Cultural Eugenics of Degenerate Art

FACULTY SPONSOR(S): NANCY KERSELL, ENGLISH, HONORS

Abstract: *Purging the Deutschland: A Study on the Cultural Eugenics of Degenerate Art* is an attempt to chronologically analyze the political implications of art and aesthetic ideologies during the rise of the Third Reich in Germany. Under the supervision of my advisor, I am creating a 25-30-page catalog of the years leading up to and following the 1937 Degenerate Art Exhibit—*Entartete Kunst*—that debuted in Munich; the book will feature specific artwork deemed "degenerate" by the Nazi party. Ultimately, degenerate art epitomizes what can happen when governmental mandates censor and attempt to create a "purified" bias in the visual narrative.

O-7: ALEX OLIVAN

Photodegradation of Progesterone

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Progesterone is one among a number of endocrine affecting compounds that have been found in elevated concentrations in waste and surface waters over the last decades, where they can have adverse effects on aquatic wildlife. The primary method of loss in the environment has been proposed to be photodegradation, however the rates and products in water and other solvents are largely unknown. Progesterone solutions at different concentrations and in different solvents were photolyzed and the degradation was followed by absorbance. The rate of photolysis decreased markedly as the polarity of the solvent decreased, and was faster at high pH.

O-8: DREW TIMMONS

Newgrange: A Rapprochement of Architecture, Religion, and Myth

FACULTY SPONSOR(S): MICHAEL SIMONTON, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The author examines a possible connection between the ancient mound at Newgrange, Ireland and fertility. He will look at Celtic tradition and religion and explore how that religion changed over time. He then will look into the archaeological evidence from Newgrange as a possible representation of the reproductive organs of the Earth goddess.

O-9: EMANUEL PICAZO, REID WASSMER

Using Dance to Mourn the Creation of Racial Categories in the United States

FACULTY SPONSOR(S): JOAN FERRANTE, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY; TRACEY BONNER, THEATRE & DANCE

Abstract: The U.S. has divided his residents into racial categories (e.g., Black, White, Native American) since Jamestown (1607). Sociologists and other scientists have shown that racial

categories are not natural divisions of humanity, even though we have learned to see them as such. Categories were built on dynamics of separation/loss that came at profound cost to family members/structures. Dance is one way to convey the meaning and effects of this complex history. The presentation discusses and demonstrates innovative movement ideas, supported by original music composition, to convey not only the dynamics of separation and loss but also the wrenching emotion too.

O-10: CHELSEA SOWARD

Pi-Cofacial Oxacalixarenes

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: Known for more than a century, calixarenes are still studied to expand upon their numerous applications, including encapsulation, nuclear waste remediation and solid-state hydrogen storage. Recently, considerable effort has been focused on heterocalixarenes, where the carbon bridges are replaced with heteroatoms including sulfur, nitrogen, or oxygen. Several examples of the m,m,m,m-thia-, oxa-, aza- and oxazacalix[4]arenes have been reported. Our interest focuses on preparing a new group of o,m,o,m-heterocalix[4]arenes. These compounds are believed to adopt a conformation with opposing cofacial arenes suitable for studying pi-pi interactions. This presentation will describe our current status in the preparation and study of these compounds.

O-11: MIKAEL SOTO

Cincinnati In Focus

FACULTY SPONSOR(S): TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: The city across the Ohio River from us may not appear impressive, but Cincinnati contains many places full of culture and history, waiting to be found in the hills that surround the city. Explore the icons, attractions, and neighborhoods of what was known as the Queen City of the West with the help of modern technology in your pocket. Learn how your smart phone can help guide you; all that will remain is for you to take a step over that river.

O-12: CHAD DUNBAR

The Socio-Historical Significance of Ancient China's Chu-Han Contention Period and its Context in Slavery Abolition

FACULTY SPONSOR(S): BURKE MILLER, HISTORY & GEOGRAPHY

Abstract: Perhaps known today as much for his Terracotta Warriors or the Great Wall as anything else, Qin Shi Huang became the first emperor of a unified China and rethought the institution of slavery. More than a benevolent leader, he was a tyrant who used slavery as a means for subjugating the feudal aristocratic warlords who threatened his rule. When his son, Qin Er Shi, enlisted the aid of pro-slavery aristocrats and assassinated his father, the resulting four-year civil war ultimately ended slavery and began the golden age of Chinese civilization, the Han dynasty.

O-13: CHAD DUNBAR

The Role of Pseudoscientific Racism and its Various Ideologies in Justifying and Perpetuating Imperialism and Colonialism in Africa and North America

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: An oral presentation about the socio-historical and economic role of pseudoscientific racism in establishing and perpetuating ideological support for Western imperialism and colonialism in both Africa and the New World. The features, chronology, and context of influential ideologies will be examined, along with their influence on the thinking of proponents and beneficiaries of imperialism and colonialism, as well as demonstrating a chain of continuity among these ideologies. Furthermore, the use of pseudoscientific racism in the continued exploitation of indigenous people in Africa will be compared and contrasted with that used against the indigenous

people of the New World.

O-14: DAVID RIGEL

The Silent Scuffle for a Sanctuary City's Second Class

FACULTY SPONSOR(S): CHRISTOPHER WILKEY, ENGLISH

Abstract: A storytelling endeavor told through a cohesive marriage between foresight and insight, aimed to resonate through braiding ingenuity with practicality and creativity, and to negate the stigmas surrounding immigrants by illuminating common misconceptions. This initiative involves research from Steely Library to discover the history of Cincinnati immigration. Featured in the research are immigration activist and groups who have held an important part in Cincinnati's history. Lastly, following up this endeavor, I will provide information on how one can support this initiative and connect lawmakers.

O-15: SARAH KRULL

The Friend of My Friend: A Variation on the Extended Contact Hypothesis

FACULTY SPONSOR(S): ANGELA LIPSITZ, PSYCHOLOGICAL SCIENCE

Abstract: Extended-Contact Hypothesis proposes that outgroup prejudice can be reduced by knowing an ingroup member with an outgroup friend. This study tested how a form of the extended-contact hypothesis would affect perceptions of Middle-Eastern individuals in the U.S. Participants read about a student, Mohammed, eating with another student, Abdullah or Mark, and rated their impressions of Mohammed. Although extended contact did not affect perceptions of Mohammed's traits, the extended-contact group thought Mohammed would like interacting with them more. Women rated Mohammed higher on several traits, and self-identified Christians were likelier to see Mohammed as anti-American and involved in an extremist group.

O-16: RACHEL PROKOPIUS

Moby Dick and His Thirteen Ceramic Siblings: My Journey of Building Herman Melville's Cetology Whales Out of Clay.

FACULTY SPONSOR(S): ROBERT WALLACE, ENGLISH, HONORS

Abstract: In its most basic form, I created Herman Melville's Cetology whales using everyday materials to illustrate the incredible effect a talented writer's words can have on the imagination. Melville believed there to be fourteen different species of whales, which he separated into three size categories. Each whale was comprised of made-up size dimensions, clay, paint, glue and love. Special features were made of unorthodox mediums such as paintbrush bristles and honey. After almost a semester of work in a college dorm room, Melville's fourteen Cetology whales were born from a mixture of clay, eloquent words, and the all-powerful imagination.



POSTER PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE FIRST FACULTY SPONSOR

P-1: RICHARD KALLMEYER

Creative Collaboration Between NKU Rad Science Program, BIOSE and Indiana Academy for Science, Mathematics, and Humanities at Ball State University

FACULTY SPONSOR(S): DIANE GRONEFELD, ALLIED HEALTH

Abstract: Collaborating with faculty from Ball State University and Biology Integration and Outreach for Science Education (BIOSE), radiographs of animal skulls were taken in the NKU radiography lab. The purpose of producing radiographic images was to correlate them with corresponding skull measurements to predict animal body size and to compare the calculated size to the known body size for accuracy. The project involved radiographing skulls of herbivores as well as carnivores, including an African lion, impala, spotted hyena, waterbuck, African leopard, Thompson's gazelle, springbok, and oribi. Digital images were produced by adjusting radiographic factors from those used for demonstrating human anatomy.

P-2: ALYSSA FRANK

A Before-After Control-Impact (BACI) Analysis of Lobsters and Conch Populations in Marine Reserves of Belize

FACULTY SPONSOR(S): CHARLES ACOSTA, BIOLOGICAL SCIENCES

Abstract: Caribbean lobsters and conchs are economically valuable species that are overfished in many areas. Marine reserves are considered important for preventing overfishing and promoting conservation and sustainability. We conducted a BACI study for a 15-year period in two large marine reserves in Belize. Results were mixed. In one reserve, lobsters and conchs were more abundant and larger on average after 15

years of protection. However, in another reserve, abundance was significantly lower after the same time period. This may be due to several factors associated with ineffective reserve design, primarily size and shape.

P-3: ANNA SNOWBALL

Estimating Abundance and Distribution of Caribbean Holothurians by Mark-Recapture Experiments

FACULTY SPONSOR(S): CHARLES ACOSTA, BIOLOGICAL SCIENCES

Abstract: The demand for holothurians ("sea cucumbers") is rising in Southeast Asia as populations are depleted on Indo-Pacific coral reefs. Several Caribbean countries recently opened harvesting of sea cucumbers with little to no monitoring or assessment. We conducted mark-recapture experiments in two marine reserves in coastal Belize. We used the Cormack-Jolly-Seber model for open populations to estimate abundance, survival, and immigration/emigration rates from 1 ha plots. Due to the relative low densities of sea cucumbers, it is unlikely that a sustainable fishery can be maintained for any length of time.

P-4: Bryana Braxton, Kaitlyn Bowen

The Long-Term effects of Early Life PCB Exposure on the Heart

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES

Abstract: Polychlorinated biphenyls are persistent organic pollutants that have been linked to multiple adverse health effects include cardiovascular disease and diabetes. Our lab has identified two genes that increase susceptibility to developmental PCB neurotoxicity. The goal of this project is to determine if early life PCB exposure also causes adverse effects on heart health. Preserved hearts from aged mice were embedded in paraffin, cut into 4µm sections on a microtome, and stained with hematoxylin and eosin. PCB-treated mice from three different genotypes will be compared with corn oil-treated control animals to look for signs of cardiovascular disease.



P-5: JUNESEA LANADA, JAMIE WEIMER, LISA MASSIE, KATELYN DUNN, BREANN COLTER***The Effect of Excess Taurine Consumption on Learning and Memory in C57BL6/J Mice***

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES; CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE

Abstract: Everyday millions of teenagers consume energy drinks, and the amino acid taurine is found in high concentration in many of the most popular energy drinks. Our previous studies in mice revealed that high-dose taurine consumption during adolescence leads to impairments in learning and memory in young adulthood. We have followed up that initial study by looking at different doses of taurine. We are using three different tests of learning and memory. Here, we present results from novel object recognition, which tests non-spatial learning and memory, and the Morris water maze, which tests spatial learning and memory.

P-6: KAITLYN BOWEN, BRYANA BRAXTON***The Long-Term Effects of Early Life PCB Exposure on the Liver***

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES

Abstract: Polychlorinated biphenyls (PCBs) were widely used as coolants and lubricants in electrical equipment and bioaccumulate and biomagnify in the environment. PCBs have been linked to developmental disorders and cognitive deficits in children exposed during pregnancy and breast-feeding. Our previous studies in mice identified two genes associated with increased susceptibility to developmental PCB neurotoxicity. PCBs also have adverse effects on metabolism. This study was conducted to determine if aged animals suffered liver damage. Livers from 13-month-old mice were embedded in paraffin, sectioned, and stained hematoxylin and eosin. We will also assess glycogen levels using a Periodic acid-Schiff (PAS) stain.

P-7: KATELYN DUNN, JAMIE WEIMER, LISA MASSIE, JUNESEA LANADA***The Effects of Taurine on Social Behavior and Memory***

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES; CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE

Abstract: The amino acid taurine is a common ingredient in energy drinks. Our previous studies and those of others indicate that high-dose taurine is neurotoxic and negatively affects learning and memory. To test the effects of different concentrations of taurine, we provided mice with 0, 0.06% or 0.12% taurine in drinking water from weaning through behavioral testing. This period is roughly equivalent to adolescence and young adulthood. We used a three-chambered test apparatus to determine if mice would spend more time with a stranger mouse (sociability) and remember that mouse when presented with a new stranger (social recognition memory).

P-8: JOSEPH BROERING***Analysis of the Differences in Digestive Enzymatic Activities and Nutrients Among the Ontogenetic Stages of Rana Sylvaticus Tadpoles***

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: There has been little data gathered on the digestive process of tadpoles, particularly throughout their ontogenetic phases. This project analyzes the enzymatic activity and nutrient content in the frog tadpole (*Rana sylvatica*) gastrointestinal tract partitioned into five divisions at four feeding developmental stages. The contents of the tadpole's esophagus, stomach, upper small intestine, lower small intestine, and colon are evaluated for %C and %N and other macronutrients, along with the enzymatic activities of amylase, pepsin, trypsin, and lipase. The contents of tadpole gall bladders are also tested for bile concentration.

P-9: RACHEL PROKOPIUS***Determining Macroinvertebrate Size/Mass Ratios with Digital Imaging***

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: Macroinvertebrates are an important food source for many aquatic and semi-aquatic organisms. Typical measurements of length to infer mass are often inaccurate based on the variation in macroinvertebrate body shape. We are using a novel digital imagery technique to determine more accurate measures of macroinvertebrate body surface area, followed by mass measures ($\pm 0.01\text{mg}$) both wet and dried to a constant mass to determine an image to mass ratio. Isopods were the first imaged and measured macroinvertebrates, and we are currently measuring scuds, stone fly larvae, and mayfly larvae. Future goals include determination of taxon-based caloric content using bomb calorimetry.

P-10: VALERIE RICE, ADAM O'BRIEN***Sound Analysis of the Breeding Phenology in Anurans in Wetlands with and without Invasive Plant Species.***

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: To understand the impacts of exotic invasive plants on habitat use by breeding frogs, the calling activity is monitored in open and closed canopies and ponds with and without invasives at NKU Research and Education Field Station (REFS). Automated sound recorders were used to record sound clips throughout the day and across the activity period of all amphibians (February 2015 through June 2017). Recordings are evaluated with software used to create digital audio spectrograms. These allow frog species identification based on their calls. In this way, we can construct a breeding phenology of different anuran species from these wetland habitats.

P-11: LAUREN MCMILLEN***2016 E.coli Levels at AJ Jolly Lake***

FACULTY SPONSOR(S): KRISTINE HOPFENSCHER, BIOLOGICAL SCIENCES

Abstract: AJ Jolly Park is looking to expand its recreational activities. We obtained *E. coli* levels in AJ Jolly Lake to determine if they were at acceptable levels for swimming. Samples were collected May through October and measured for coliform counts using three different methods. We found *E. coli* levels were under the acceptable limit for swimming, except in the month of August. We also found that the Coliscan Easygel method overestimated *E. coli* counts compared to the MI Agar method. We conclude that the lake is not consistently safe for swimming but is safe to be open for boating.

P-12: DANIEL POWERS, RACHEL CICCIO***Immune Modulatory Effect of Cat's Claw Extract***

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Previous results from our lab have shown altered expression of inflammatory cytokines from innate and adaptive immune cells treated with Cat's Claw (*Uncaria tomentosa*) extract. This study looked at the effect of Cat's Claw on the expression of immune receptors involved in the inflammatory response. Specifically, we examined the effect of Cat's Claw extract on the expression of Toll-like Receptors (TLRs) and other markers on human monocytes and macrophages, and also determined how this related to subsequent inflammatory responses to microbial components. These studies will provide a better understanding of the ability of Cat's Claw to modulate the immune response.

P-13: MOLLY BRUBAKER, BRENNEN KUHN***Does Vacancy in Shrinking Cities Mask Environmental Justice Outcomes?***

FACULTY SPONSOR(S): KIRSTEN SCHWARZ, BIOLOGICAL SCIENCES

Abstract: Equitable access to green space is an environmental justice concern in cities. However, not all "green" is considered an amenity. For example, in cities with declining populations

- shrinking cities - increased vacancy may drive increases in volunteer vegetation which is often considered a disamenity. We examined the relationship between vegetation abundance and social variables in Toledo, OH using data representing before and after major population declines. The presence of street trees, which are managed differently than private vegetation, was central to the analysis. Findings suggest that vegetation abundance, as an indicator of environmental amenities, is problematic in shrinking cities.

P-14: SAMUEL AMMERMAN

Impact of Mutations in the TOR Pathway on Genomic Instability in *Saccharomyces cerevisiae*

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: This research project is focused on investigating genes of interest within the TOR (Target of Rapamycin) pathway for impact on chromosome loss. The TOR pathway is a central regulator of cellular growth and is highly conserved from yeast to humans. This project focuses on 8 genes of interest that are involved in a subunit of the TOR pathway termed the EGO complex. These genes include EGO1, EGO3, GTR1, GTR2, TCO89, CDC60, VAM6, and LTV1. Strains of yeast with deletions of the 8 genes of interest are being created and assayed for chromosome stability.

P-15: KELLYN HOFFERT, ELIZABETH CHEYENNE HENSLEY

Testing for Gene Mutation Impact on Loss of Heterozygosity In a Yeast System

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: Loss of heterozygosity (LOH) is frequently observed in cancers. Using a yeast model system, we are seeking to discover gene mutations that increase LOH events at the mating (MAT) locus. Strains from the *Saccharomyces cerevisiae* deletion collection (SCDC) will be grown under nonselective conditions to allow LOH events to occur. These events will be identified by the ability of the SCDC strains to mate with engineered haploid strains. The entire collection will be tested twice, and genes that contain mutations that result in high numbers of LOH events will be further researched for their homolog's potential contribution to cancer incidence.

P-16: EMILY FOX

Potential Environmental Causes of Kidney Disease of Unknown Etiology in Northern Belize

FACULTY SPONSOR(S): DAVID THOMPSON, BIOLOGICAL SCIENCES; DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Farmers in Central America are suffering from chronic kidney disease of unknown etiology (CKDu), potentially caused by a variety of factors including waterborne metals and the herbicide glyphosate. Ethnographic data and water samples were collected in villages in Northern Belize during June 2016. Interviews were conducted to reveal local knowledge and instances of kidney disease and herbicide use among informants, and these data were qualitatively analyzed to reveal common themes. Water samples were processed and analyzed for heavy metal and glyphosate content. This research seeks to discern environmental causes of CKDu through the implementation of biological and anthropological research methods.

P-17: DEAN DANOS, CALEB SCHNEIDER

Examining the Effects of Short-term Atrazine Exposure on a Non-target Species, the Rainbow Darter (*Etheostoma caeruleum*)

FACULTY SPONSOR(S): DAVID THOMPSON, BIOLOGICAL SCIENCES

Abstract: The herbicide atrazine has been shown to have adverse effects on non-target species, including feminization in males. Rainbow darters (*Etheostoma caeruleum*) are a pollutant sensitive species of freshwater fish commonly found in the Kentucky and Ohio River watersheds, where atrazine use is common. Following

seven day exposures to 0, 0.1, 3, and 10 ppb atrazine, potential endocrine disruption in rainbow darters was examined via analysis of: gonadosomatic index (GSI) and hepatosomatic index (HSI); gonadal concentrations of estradiol (E2) and testosterone (T); hepatic gene expression of vitellogenin (VTG); and gonadal gene expression of aromatase (CYP19a). Results indicate statistical comparisons to controls.

P-18: HARSH PATEL, KATELYN HELTON

Examining Potential Genetic Factors Associated with Chronic Kidney Disease of Unknown Etiology in Rural Farmers of Sri Lanka

FACULTY SPONSOR(S): DAVID THOMPSON, BIOLOGICAL SCIENCES

Abstract: Farmers in rural Sri Lanka are suffering from chronic kidney disease of unknown etiology (CKDu) thought to be caused by various factors including waterborne metals, herbicides, and genetic mutations. To discern any potential for genetic mutation to be implicated in CKDu, DNA was extracted from saliva samples collected in four Sri Lankan villages. The DNA was evaluated for quality via gel electrophoresis and PCR. The samples were then subjected to microarray analysis using the Illumina Infinium Multi-Ethnic EUR/EAS/SAS BeadChip, which contains nearly 1.5 million human single nucleotide polymorphisms (SNPs). DNA sequence comparisons were then made between healthy and CKDu individuals.

P-19: BEN ANDERSON, ALLISON ZEMBRODT

Exploratory Analyses and Predictive Modeling of Library Item and Patron Data: Generating Insights for Campbell County Public Library

FACULTY SPONSOR(S): JOE RUBLESKE, BUSINESS INFORMATICS

Abstract: The rapid advance of information systems capabilities is enabling organizations to better ingest, clean, and organize large amounts of data from a variety of internal and external sources. Getting value from these data hinges on the generation of analytic insights, though. Operational data from public libraries offer the potential for such insights, but budgetary constraints have limited what they can do. For the final project of DSC-311 (Data Analytics), we present the results of an analysis of 2.95 million transactions made by patrons of the Campbell County Public Library. Insights are drawn from both descriptive statistics and predictive models.

P-20: PARKER KAIN, CHRISTIAN MERSCH

Exploratory Analyses and Predictive Modeling of Library Item and Patron Data: Generating Insights for Campbell County Public Library

FACULTY SPONSOR(S): JOE RUBLESKE, BUSINESS INFORMATICS

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P-21: KIMBERLY SPARKS, COREY GROTHAUS

Exploratory Analyses and Predictive Modeling of Library Item and Patron Data: Generating Insights for Campbell County Public Library

FACULTY SPONSOR(S): JOE RUBLESKE, BUSINESS INFORMATICS

Abstract: The rapid advance of information systems capabilities is enabling organizations to better ingest, clean, and organize large amounts of data from a variety of internal and external sources. Getting value from these data hinges on the generation of analytic insights, though. Operational data from public libraries offer the potential for such insights, but budgetary

constraints have limited what they can do. For the final project of DSC-311 (Data Analytics), we present the results of an analysis of 2.95 million transactions made by patrons of the Campbell County Public Library. Insights are drawn from both descriptive statistics and predictive models.

P-22: JOEY MILAZZO

Promotional and Marketing W. Ron Adams Videos for the City of Erlanger Honoring a Business Owner

FACULTY SPONSOR(S): JILL HENRY, CENTER FOR APPLIED INFORMATICS

Abstract: Edited and produced two professional promotional and marketing videos featuring an Erlanger successful business owner, W. Ron Adams. Mr. Adams is an Erlanger bankruptcy attorney practicing for 28 consistent years and a paraplegic. The City of Erlanger honored Mr. Adams with a key to the city and required a professional video to use in declaring April 26, 2016 W. Ron Adams Day. The second video included filming Mr. Adams and his family at a Florence Freedom game documenting Mr. Adams throwing out the first pitch. Several productions and presentations used both videos.

P-23: CORBIN ARRASMITH

Quantifying Diffusion of a Model Analyte Set via Capillary Electrophoresis

FACULTY SPONSOR(S): CHARLISA DANIELS, CHEMISTRY

Abstract: The goal of this project was to determine the relationships between the temperature, analyte, and concentration of the analyte within a capillary. This was investigated using Capillary Electrophoresis (CE). An alkyl series (toluene through 1-phenyl octane), and thioiurea were used to analyze the kinetics in an open capillary at room temperature and an adjusted temperature of 25°C, and mobile phase concentration of 75% acetonitrile:25% Tris base. Also, different porogens were added to a 50/50 polymeric ratio of GMA: EDMA. The purpose of this was to see how different porogens affected the pore sizes of the polymer.

P-24: EMMA GORDON, ALLISON GAST

The Measurement of Chloride and Bicarbonate Using Pulsed Chronopotentiometry for the Calculation of the Anion Gap

FACULTY SPONSOR(S): KEBEDE GEMENE, CHEMISTRY

Abstract: Chloride and bicarbonate are known to be the major physiological anions in the human blood plasma. The detection of these ions together and/or separately in blood plasma is of interest in biomedical and clinical applications. More importantly the measurement of anion gap, the difference between the total measured cations and measured anions in the plasma, is very important for the diagnosis of many diseases. Currently, potentiometric ion-selective electrodes are being utilized for the detection of major cations. Here we develop a method for fast and direct determination of anion gap by simultaneous measurement of total measurable cations and anions.

P-25: EMMA GORDON, ZACHARY LAWSON

Chronopotentiometry with Ion-Selective Electrodes for Simultaneous Measurement of Extracellular and Intracellular Potassium Concentrations

FACULTY SPONSOR(S): KEBEDE GEMENE, CHEMISTRY

Abstract: The concentrations of both extracellular and intracellular potassium have vital roles in the nervous, respiratory and cardiovascular systems. Thus, knowing the exact level of both intracellular and extracellular potassium is of high importance in medical applications. The techniques that are currently used for measurement of potassium in blood, classical potentiometry and flame photometry, have limitations for simultaneous measurements of extracellular and intracellular potassium. The objective of this research is to develop pulsed chronopotentiometry with potassium selective electrode as an efficient method for simultaneous determination of intra-cellular

and extracellular potassium concentrations in whole blood without significant interference of other ions.

P-26: JAMISON BURCHETT, JUSTEN MAMARIL, THOMAS VORNHEDER, MAGGIE THOMAS, JULIA ZIEBRO

Using RNA Interference for the Identification of the acp3U Enzyme in Higher Eukaryotes

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: Cellular enzymes form dozens of post-transcriptional tRNA modifications to increase tRNA stability and function. The enzyme responsible for the 3-(3-amino-3-carboxypropyl) uridine (acp³U) modification found in animals is unknown. To identify the acp³U enzyme in animals, candidate fruit fly genes that are also found in humans, but not in yeast, are being silenced by double stranded RNA (dsRNA) treatment. RNA from these cells is then analyzed by primer extension to a specific tRNA to determine if acp³U is present after dsRNA treatment. Because acp³U blocks primer extension, knockdown of the responsible gene will result in loss of the primer extension block.

P-27: MICHAEL GUY, MAGGIE THOMAS, THOMAS VORNHEDER, JAMISON BURCHETT

Identification of the Enzyme Responsible for the acp3U tRNA Modification in Bacteria

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

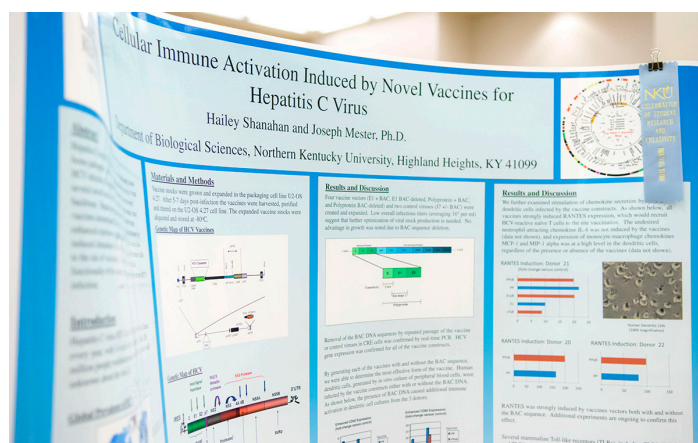
Abstract: tRNAs are cellular molecules needed to translate mRNA into proteins. tRNAs must receive chemical modifications for proper function, and modification defects are associated with diseases such as cancer. The 3-(3-amino-3-carboxypropyl) uridine (acp³U) modification is formed on some bacterial, plant, and animal tRNAs by an unknown enzyme. To identify this enzyme, primer extension of tRNA from E. coli strains lacking genes encoding predicted methyltransferases with no known function are being tested for the presence of acp³U, which causes a primer extension block. In a complementary approach to identify the enzyme, acp³U formation activity is being purified from E. coli.

P-28: JULIA ZIEBRO, DAISY DIVITA

Determination of Function of Cm32 and Gm34 tRNA Modifications in Budding Yeast

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: tRNAs transport amino acids to the ribosome for protein synthesis, and post-transcriptional modification of tRNA is abundant and critical for proper function. Methylation of the 2'-hydroxyl group of nucleotides C (Cm) and G (Gm) on tRNA^{Phe} is conserved in eukaryotes, including humans. In yeast, these modifications are formed by the Trm7-Trm732 and Trm7-Trm734 protein pairs, respectively. Interestingly, yeast lacking Trm7 are sick, whereas those lacking only Trm732 or Trm734 are



not. To determine the individual roles of Cm^r and Gm^r on tRNAPhe, we are knocking out selected genes in trm732 and trm734 deletion strains and then testing cell growth.

P-29: JENNIFER BROOKS, SHELBY RUSSELL

Isolation and Identification of Suppressors of the Slow Growth Phenotype of trm734 Deletion Strains in Fission Yeast

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: Transfer RNA (tRNA) is required to produce proteins by transporting amino acids to the ribosome. For function, tRNAs are chemically modified by enzymes such as the Trm7-Trm734 methyltransferase, mutations in which cause intellectual disability. This research uses fission yeast to understand the role of 2'-O-methylation of guanine 34 (Gm³⁴) on tRNA. We have isolated suppressors of the slow growing yeast trm734+ deletion strain, which grow well due to a compensating mutation elsewhere in the genome. We find that one of these suppressing mutations occurs in frs2+, a gene encoding the tRNAPhe synthetase, suggesting that Gm³⁴ is involved in tRNA charging.

P-30: THOMAS VORNHEDER, MAGGIE THOMAS

The Study of tRNA Modifications in Fission Yeast

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: Transfer RNAs (tRNAs) require different chemical modifications to function properly. Defects in modifications are associated with disease. For example, upregulation of DUS2, a dihydrouridine modification enzyme, is linked to lung cancer. To help understand why aberrant modifications cause disease, knockouts of tRNA modification genes have been created in Schizosaccharomyces pombe and growth has been tested with different translational inhibitors and temperatures. In another approach, a system is being set up to read through a stop codon in a reporter gene to quantitatively study the effect of tRNA modifications on a mutated tRNA that can read through the stop codon.

P-31: JUSTEN MAMARIL, THOMAS VORNHEDER

Development of a Sensitive Assay to Detect 2'-O-methylation in tRNA

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: tRNAs carry specific amino acids to the ribosome for protein synthesis. tRNAs undergo post-transcriptional modifications, and defects in modifications can cause disease. To detect tRNA modifications that could impact health, we are developing a primer extension assay to identify 2'-O-methylations. One approach uses primer extension after partial base hydrolysis of RNA. Once the assay is developed, we will identify new tRNA-specific methyltransferases using bioinformatics and knockdown of candidate genes. Our research progress includes reverse transcription of tRNAs from yeast, bacteria, fruit flies, and humans, as well as knock down of a tRNA modification in fly cells by double-stranded RNA treatment.

P-32: DAISY DIVITA, JULIA ZIEBRO

Identification of a motif required for Trm732 function in eukaryotes

FACULTY SPONSOR(S): MICHAEL GUY, CHEMISTRY

Abstract: Post-transcriptional chemical modifications are required for proper function of tRNA. Modification of the 2' hydroxyl group of nucleotide C³⁴ with a methyl group on tRNAPhe requires the yeast methyltransferase Trm7 and its binding partner Trm732. The function of Trm732 in the methyltransferase reaction is unknown. We have identified a conserved motif in Trm732 that is important for function. The human homolog of Trm732, THADA, also interacts with Trm7 to methylate the C³⁴ residue on tRNAPhe, and THADA mutations are linked to type 2 diabetes. Our current research focuses on the Trm7-Trm732 interaction, and THADA mutations associated with type 2 diabetes.

P-33: DONNA ODHIAMBO

A Computational Study of Fluoxetine's Absorption and Emission Spectra

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Fluoxetine, an incredibly popular antidepressant, belongs to the SSRI class of drugs and is considered to be one of the most important drugs in biomedicine. With its increasing global usage, fluoxetine is also of growing concern in aquatic toxicology and environmental biology. To understand fluoxetine and the potential risks it poses, the Hare group utilized computational chemistry methods. The excited states of several enantiomeric conformers of fluoxetine were calculated to see if a relationship could be established between energy, configuration, and excited states as well as to predict the predominant form fluoxetine takes when released into the natural environment.

P-34: CORY BLACK, CEILIDH AHEARN, LARS (ALEX) OLIVAN, ALEXANDRA NUNEZ

Estrogen Photodegradation Depends on Solvent and Photolysis Wavelength

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Hormones pose a threat to wildlife when they enter the water supply. Estrogens in particular have been shown to cause adverse effects at low concentrations. There is much variation in reported products, rates, and which wavelengths are most effective in photolysis of the estrogens. Here, estrone and 17 β -estradiol were photolyzed in various solvents and with several wavelengths, and analysis was performed using gas chromatography-mass spectrometry. Appreciable degradation was observed for both molecules. A dominant photoproduct was observed for estrone, which was produced faster in hydrogen-bond-donating solvents and with lower wavelengths. These results may be helpful for waste water remediation.



P-35: STEFAN PAULA, HANNAH ISTRE, SANDRA ONATE, BEN HEPPLER
Synthesis and Optimization of Caffeic Acid Phenethyl Ester Derivatives through Microwave Irradiation

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: This project was centered around optimizing the microwave conditions of caffeic acid phenethyl ester (CAPE) derivative synthesis and using these conditions to synthesize new CAPE derivatives. These compounds can be used as Xanthine Oxidase inhibitors that will also radically scavenge for reactive oxidative species in the body. The synthesis was accomplished through two steps: the formation of a malonic acid monoester from Meldrum's acid, and the condensation of malonic acid monoester to form the CAPE derivative. The reaction took place through microwave irradiation, was purified through medium pressure liquid chromatography (MPLC), and then identified through nuclear magnetic resonance (NMR).

P-36: MATT NEISER, ALEXANDER ROSEN
HDAC8 Inhibitors

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: The purpose of this experiment was to test the binding of various santacruzamate derivatives to the enzyme HDAC8. HDAC8 is a class I histone deacetylase. It has different binding of metals, subcellular location and negative regulation of cyclic activity compared to other members in this family. Because of these differences, HDAC8 provides a new approach for selective cancer drug discovery. Docking studies were performed testing the affinity of santacruzamate and its derivatives on HDAC8. There were three possible structures that could enhance their binding with HDAC8: linear groups, Zn²⁺ chelating and a capping group.

P-37: STEFAN PAULA, SANDRA ONATE, HANNAH ISTRE, BEN HEPPLER
Microwave-Assisted Synthesis of Caffeic Acid Phenethyl Ester (CAPE) Derivatives

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: The synthesis of CAPE derivatives was carried out in two steps: the first step is the formation of malonic acid monoester and the second step is its condensation with aldehydes. The CAPE derivatives are expected to have dual function: as an antioxidant to attack reactive oxidative species and as an inhibitor to target xanthine oxidase which is the overproduction of uric acid causing gout. The Anton Paar Multiwave PRO instrument was used to expedite the reaction. The medium pressure liquid chromatography and the Nuclear Magnetic Resonance instrument were used to purify and verify the structure of the compound.

P-38: BENJAMIN CECIL, RICHARD MCLANE, MAXWELL BOYLE, LEON LE COZANNET LAIDIN

The Synthesis of Analogues of a Naturally Occurring Diarylheptanoid

FACULTY SPONSOR(S): AMBER ONORATO, CHEMISTRY

Abstract: Diarylheptanoids are a class of compounds that have gained interest due to their anti-oxidative and anti-inflammatory properties. This research proposes the synthesis of a series of novel diarylheptanoids for future therapeutic evaluation against inflammation. A multistep synthesis was performed to produce the natural product and several analogues. The derivatives alter the position and presence of functional groups, which will be used to create a structure-activity relationship in order to determine the most potent molecule. The molecules are currently being tested for their anti-inflammatory effects. The biological data acquired will then be used to guide the synthesis of future analogues.

P-39: RICHARD MCLANE, LUCAS EDELEN, STEFAN REID, REAGEN POWERS
Progress Towards the Total Synthesis of Microcyclamides MZ568 and MZ602

FACULTY SPONSOR(S): AMBER ONORATO, CHEMISTRY

Abstract: Recently, there has been a decline in discovery and production of antifungal drugs. As current medications are met with increased drug resistance, there is a need for new antifungal compounds. The purpose of this research is to synthesize two microcyclamides. With structural similarity to existing antifungals, it is thought that these cyclic peptides will exhibit similar bioactivity. Two separate synthetic routes are used to make the key intermediate with different protecting groups prior to solid phase synthesis to create the linear forms of the peptides. The linear peptides will then be cyclized, purified, and tested for their antifungal properties.

P-40: JASON LOXTERKAMP
s-Triazine Containing Heterocalixarenes Synthesis

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: Heterocalixarenes are a macrocycles composed of 1,3-phenylene groups bridged heteroatoms such as oxygen or nitrogen. The cup-shaped geometry of calixarenes affects the way they interact with other molecules and allows their periphery to be probed when functionalized. While several heterocycles have been incorporated into calixarenes, only limited examples of s-triazine exist. 1,3,5-Tricholortriazine is an extremely versatile electrophile that allows easy entry into s-triazine containing calixarenes. In addition it possesses an additional reactive site allowing for modifications around the calixarene periphery. Discussed is our effort to synthesize new s-triazine calixarenes through a catechol-triazine-catechol trimer intermediate.

P-41: JOHN JOHNSON, CHELSEA SOWARD, BETHANY PERTZSCH, JOHN HAMMER, DAIANA DIAC, REYES CASTELLON, BRIAN BUTLER, ELISHA OKYERE

Phenylethynyl Oxacalixarenes

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: Calixarenes are cyclic molecules where benzene rings are bridged by methylene groups that form a conformation resembling a chalice. These molecules have many uses including supramolecular assembly and solid-state hydrogen storage. The focus of the Russell Research Group is to synthesize oxacalixarenes where the methylene groups are replaced by oxygen atoms. Unlike calixarenes, oxacalixarenes fold into structures where two transannular rings are face to face, allowing for examination of the intramolecular interactions between the substituents on the rings. This poster will detail the synthesis of a series of substituted benzene derivatives and their incorporation into oxacalixarenes.

P-42: ADAM COX, GALABA NAUMOVA-LETIA, AUGUSTIN MOT
Expression and Purification of Truncated Plant Hemoglobin of Arabidopsis Thaliana and Ferryl Generation of Bovine Hemoglobin

FACULTY SPONSOR(S): RADU SILAGHI-DUMITRESCU, CHEMISTRY

Abstract: Three classes of plant hemoglobins (Hbs) exist in Arabidopsis thaliana: AtHb1 (symbiotic, sHb), AtHb2 (non-symbiotic, nsHb), and AtHb3 (truncated, trHb). The sHbs have high oxygen affinity, with implied function in NO scavenging; nsHbs have lower oxygen affinity and are less efficient in NO scavenging; the trHbs may act as terminal oxidases, oxygen sensors and scavengers of O and NO active species. H₂O₂ was reacted with bovine Hb as a control, since the activity is similar to that of the plant Hb. Under hypoxic conditions, H₂O₂ catalyzes the reaction in which ferryl (Fe (IV)) heme forms from ferric (Fe (III)) oxidation.

P-43: SABRINA HARRAL***Gender Differences in Body Image Issues***

FACULTY SPONSOR(S): JACQUELINE EMERINE, COMMUNICATION

Abstract: The subject to be explored in this capstone project is gender differences in body image. The objective is to create a functional public relations awareness campaign to raise awareness on this issue around campus. The methodology will follow a traditional layout for a PR campaign. Research will be gathered on the importance of the issue at a university level through one-on-one interviews with male and female NKU students. The project's main objectives are to create a functional awareness campaign, cultivate images to display around campus, and raise awareness on this issue.

P-44: NICK BLIVEN, ALEX GILB***Evaluation of an Anti-Vaping Campaign Targeted Towards At-Risk Middle School Youth***

FACULTY SPONSOR(S): MONICA GALLEGOS, COMMUNICATION

Abstract: A CMST 394 course designed and implemented a campaign to raise awareness of the issues associated with vaporizers last semester. The campaign was funded by a \$10,000 grant from Procter & Gamble. The target audience was at-risk middle-school students at Boys & Girls Clubs in Kentucky and Greater Cincinnati. Through social media, posters, billboard ads, and tangible items, the goal was to influence perceptions related to vaping. Members of the campaign team collected pre- and post-test survey data to evaluate campaign effectiveness. Focus groups were also conducted to determine what participants learned from the campaign.

P-45: CHELSEA DEVERS***The Insta-Selfie: Studying Instagram's Effects on Self-Esteem***

FACULTY SPONSOR(S): STEPHANIE KLATZKE, COMMUNICATION

Abstract: Instagram, one of the newer social networking platforms, brings in an estimated 100 million unique visitors each month. Unlike Facebook, where status updates are typical, Instagram is known for its sole purpose of photo sharing. Due to Instagram's rapid growth and popularity, it is important to understand how it is used. The goal of this study is to examine how selfies, hashtag use, and self-esteem are related. To understand these relationships, I use symbolic self-awareness, looking glass, and attribution theories. Results from a survey of college-student Instagram users will be presented.

P-46: KELSEY ANDERSON***The Pokemonization of American Popular Culture***

FACULTY SPONSOR(S): YASUE KUWAHARA, COMMUNICATION

Abstract: In the mid to late 1990s, the Pokemon fad took the United States by storm. Feelings of contention from World War II, however, still remained among Americans and consequently led to some changes to the Pokemon franchise, including omitting blatantly Japanese material from the TV show, games, and other products. This project will study: 1) the mythology inspiring the pocket monsters we've all come to know and love; 2) how that mythology was "Americanized" for the audience in the United States, including the changes made to the franchise; and 3) an exploration of what further American changes would look like.

P-47: MACI ALF, ADREAN JORDAN, LINDSAY RAMSTETTER***Public Recognition in Relation to Increased Donor Capacity***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: This study aims to answer questions of how organizations can more effectively communicate with community members to encourage them to donate to the cause. We hypothesize that the more emotionally tied a person is to a charity, the more motivated and likely they are to make a

donation. We use surveys to ask participants what charities they give to and what their motivation for donating is. We aim to explore the trends between motivation and selecting an organization in hopes of coming to a conclusion that allows nonprofit organizations to better communicate and connect with community members.

P-48: LAUREN MOHR, ALICIA FRAVEL, HELINA OLADAPO***STD Stigma and its Effect on Students Seeking Medical Advice Online***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: In today's world, seeking medical advice on the web is a common practice. Whether it be due to the rising costs of healthcare, confidentiality, or convenience, many people are going to the web for advice. This study will determine if college students seek medical advice online versus their primary health physician to self-diagnose symptoms they believe may indicate a sexually transmitted disease. The proposed method for this study is to survey college students between the ages of 18-25 on the likelihood they feel they would search the internet before going to the doctor with hypothetical STD symptoms.

P-49: DAVEDA ASBERRY, ROXANNE MILLMAN, JARROD WESLEY***Cute is a Four-Legged Word: Exploring Neoteny on the Public Perception of Dogs***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: Due to years of selective breeding, the majority of dogs people see on a daily basis demonstrate a number of neoteny or puppy-like features such as large eyes, fuzzy coats, and floppy ears. These features play a substantial role in whether people perceive a dog as "cute" or not as well as the likelihood of that dog being adopted/purchased. Focusing on the concepts of neoteny and canine cuteness as central points of this study, we will look at how those concepts influence both each other and the public's perception of dogs as well as any implications they may have.

P-50: ANNE M. THOMPSON, ZOË J. WELCH, CARLOS MATTHEWS***The Relationship between Active Empathic Listening and Ethnocultural Empathy on College Campuses***

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: Universities in the United States are experiencing an increase in multicultural student enrollment, but continue to struggle in retaining students of multiple racial and ethnic backgrounds. The purpose of this study is to explore the relationship between active empathic listening and ethnocultural empathy of college students at a south-central University in the U.S. Assessing active empathic listening skills and ethnocultural empathy of college students acknowledges the importance of cultural communication skill building on college campuses, further developing a more inclusive and academically successful environment for all students.

P-51: MEGAN KAISER, ANDREW KRONER***Sentiment Analysis and the Tone of New Administrations***

FACULTY SPONSOR(S): ALINA CAMPAN, COMPUTER SCIENCE

Abstract: Sentiment analysis is a popular way to algorithmically measure the mood of an individual or group. There has been much talk that the tone of our political discourse has recently shifted. Can this shift be measured using sentiment analysis tools? We plan to investigate several sentiment analysis tool-kits and compare their results using the inaugural addresses of past and current Presidential administrations as input. While investigating these tools, we plan to analyze our findings to see if similarities and differences can be identified in the tone that is set in the opening days of a new administration.

P-52: AUBREY FRANZEN***Classifying Student Learning Errors Using Artificial Intelligence***

FACULTY SPONSOR(S): RICHARD FOX, COMPUTER SCIENCE, HONORS

Abstract: With ever-increasing class sizes and other duties, university faculty may struggle to provide timely and useful feedback for students so that they can learn about and correct errors in what they have learned. This research explores the creation of a software tool to develop and deploy Artificial Intelligence tutorial systems that, when used by students, can provide them immediate feedback on learning errors. Hierarchical Classification is used to generate tutorial systems specialized in some content area. Based on student answers, the tutorial system is able to categorize types of errors that the student has in the topic.

P-53: THOMAS BRADFORD, CONSTANTINO EDU MILAM, GUILLERMO RAMOS, JASON KELLY***Analysis of Session Initiation Protocol/Voice over IP in a Virtual Machine and on the Cloud Pertaining to Availability, Performance, and Security***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE; TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: Voice over Internet Protocol (VOIP) has become an effective way of communicating in the age of the Internet. Leveraging cloud computing with VOIP may be a cost effective method of connecting multiple sites together. This project will explore availability, performance and security in the cloud using an open source software (sipXcom) to judge the effectiveness of the approach of the implementation.

P-54: BRADFORD THOMAS***Building Private Cloud with OpenStack***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: Cloud computing has become an effective way of managing IT technical resources. The cloud infrastructure has allowed IT departments to make effective decisions based on budgets whether to have equipment in-house or in the cloud. Cloud computing may be private or public. The public cloud

allows a department to move infrastructure to the Internet while the private cloud still has physical resource in-house but are used to host many parts of the infrastructure. The cloud provides departments with virtual machine, storage, scalability, and high availability.

P-55: GUILLERMO RAMOS***HTTP/2 Protocol***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: Today the public moves on the web from a mobile device as much as from a traditional computer, maybe more. HTTP/1.1 is no longer enough to handle the transfer volumes on the web today. In my research, I tested the improvement of HTTP/2 and compare it with HTTP/1.1 with different scenarios. The scenarios included binary frames, server push, content priority, header compression, and multiplexed streams. The experiments show that HTTP/2 can improve web performance.

P-56: TIMOTHY WRIGHT***Cloud Computing***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: The rise in use of cloud computing has changed the way applications are designed, implemented, and deployed. With the dynamic provisioning of resources and services, products can be created and launched faster than ever, while maintaining the ability to react to changing requirements. Cloud computing providers include a wide range of services and programming interfaces to enable this flexibility. This poster will explore the provisioning of resources and services for, and creation of, an n-tier website using Amazon Web Services, a leading cloud computing provider.

P-57: ZIYIN ZHANG***Development of a New Proxy Cache Placement/Replacement Algorithm Based on Web Mining***

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: Studies have shown that proxy server cache is one of



the most effective approaches to reducing the access latency due to the rapid growth of the World Wide Web. We have developed a new algorithm for proxy cache placement/replacement based on web mining to further improve the website performance. The new algorithm exploits the k-means clustering and association rules to discover most frequently accessed web objects to be cached. It also takes the cached web object size and cache size into consideration. The simulation result shows that the algorithm can increase the cache hit ratio and improve the website performance.

P-58: ROB SCHIRMANN, YUE QIU, QIUFAN CHEN, ANUDEEP ASHOK NIZAMPURAM

Web Security and the Internet of Things: A Look at Increasingly Popular Home Automation Products and Their Vulnerabilities

FACULTY SPONSOR(S): YI HU, COMPUTER SCIENCE

Abstract: Home automation is achieved by leveraging the Internet of Things (IoT), connecting modern refrigerators, televisions, thermostats, and many more home devices over the internet. While this technology brings great convenience to our lifestyle, it also brings high risk regarding security. No longer do criminals need to physically be at your home to steal that which is important to you; they can now do it from anywhere in the world. We will take a look at current security practices in the world of IoT, the impact of their weaknesses, and what can be done to protect your devices and digital information.

P-59: RYAN GEHRING, MATT GRUBBS, RYNE HECK, OREN SHMOEL

Alternative Methods of Authentication: A Study of their Usability, Deployability and Security

FACULTY SPONSOR(S): RASIB KHAN, COMPUTER SCIENCE; TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: As data breaches have become a regular occurrence, researchers and industry professionals are looking for ways to prevent the most common forms of failure in current security models. In studies of recent data breaches, the most common method of unauthorized access to a system is stolen credentials. Passwords are hard for humans to remember, and the typical text-based passwords are too easy for computers and our adversaries to guess. This project explores alternative authentication methods that either replace or enhance password based authentication. This will include evaluating existing alternatives with objective criteria and introducing a new experimental authentication enhancement.

P-60: ANTHONY CARELLA, RICHARD KOOP, MURAT KOTSOEV

Impact of Internet Security Awareness Training on Phishing Click-Through Rates

FACULTY SPONSOR(S): TRAIAN MARIUS TRUTA, COMPUTER SCIENCE; JAMES WALDEN, COMPUTER SCIENCE

Abstract: Our study focuses on the impact differing levels of internet security awareness training have on phishing email click-through rates (CTR). Click-through rates measure the rate at which users click on a link compared to the number of times the link is viewed. From the CTR we can use statistical algorithms to determine infection rates, economic impacts, and most importantly the value that internet security awareness has on CTR in phishing attacks. We aim to provide an academic standard by which the effectiveness of phishing campaigns and internet security awareness training can be determined and compared in the future.

P-61: NATHANIEL HUDSON

Geospatial Distribution Analysis of Sasquatch Sighting Reports

FACULTY SPONSOR(S): HONGMEI WANG, COMPUTER SCIENCE

Abstract: Throughout history, people of North America have reported sighting large bipedal creatures that resemble humans

- otherwise known as sasquatch or bigfoot. While science at large cannot confirm the existence of this supposed creature, this study uses novel geospatial methods to analyze the correlation of sighting locations of this creature and geographic variables. This presentation will discuss findings of this work upon analyzing thousands of sightings of this cryptozoological species that could suggest a suspicious correlation between sighting locations and geographic features of other large primate species - such findings include the annual rainfall of a majority of all sasquatch sighting locations.

P-62: DANIELLE SPEARS

Microaggressions: Experiences and Tolerance Among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Microaggressions are subtle but offensive comments or actions directed at members of a minority group. Studies have shown that microaggressions have many negative consequences including a decline in academic performance, negative impact on mental health and the perpetuation of stereotypes and unconscious bias. This cross-sectional study examined students' experiences with and their tolerance for microaggressions at NKU. The survey data was analyzed using SPSS. Findings are expected to assist us in better understanding microaggressions and overall campus-climate among students at NKU.

P-63: STEPHANIE REIS

Police and Their Legitimacy on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Police legitimacy has a major effect on a college's campus climate. Campus climate is very important as it can affect academic performance and success among other things. The purpose of this study is to determine if police are viewed as legitimate on NKU's campus and if this varies among different demographic groups. This quantitative study with a convenience sample will be used and the self-administered questionnaire face-to-face survey was conducted and SPSS statistical analyses will be reported in this study.

P-64: ANGELA KNIGHTEN,

NKU Student Awareness of Loan Repayment Options and the Legitimacy of Debt Relief Programs

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Student loan debt has become the second largest consumer debt next to mortgage loans, with \$1.28 trillion dollars owed in the United States alone. Nationwide there are over 7 million people who are in default status on their student loans. This study seeks to examine the awareness that NKU students have regarding repayment options and debt relief programs. This study also seeks to determine the perceptions of students in regards to the legitimacy of debt relief programs. This study expects to find that after completion, students have a better understanding of repayment options for student loan debt.

P-65: HEATHER LOVITT

Alcohol on College Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The prevalence of alcohol on NKU's campus will be researched. The purpose of this study is to discover how prevalent alcohol is among NKU students. There is not much evidence that show this. This will be accomplished through an exploratory, cross-sectional study through a 13 question survey that will take 5 minutes to complete. The study will consist of a sample size between 200 to 250 NKU students. Findings from

this study is expected to show how much and how often NKU students engage in drinking alcohol.

P-66: JESSICA STAVERMAN

Student Loan Debt and the Effects on Physical Health

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Student loan debt in the United States is increasing exponentially and is affecting large portions of the population in many ways. In 2013, 7 out of 10 college students graduated with student loan debt. While it has been proven that extreme stress negatively affects our health, little information is available regarding the correlation of student loan debt and physical health. This survey study of 200-300 NKU students is intended to examine participants' general health and the correlation of student loan debt. The study expects to find that students with higher amounts of student loan debt will experience increased health problems.

P-67: SHELBY DAVIS

Students Experiences and Perceptions of Community Police

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Safety is an important component of college campus climate, and positive perceptions of campus climate is critical to students' academic success. The purpose of this study is to examine NKU students' experiences with, and their perceptions of, community police. The survey will be conducted face-to-face with NKU students and the SPSS statistical program will be utilized in this study. This study will reveal student experiences and perceptions of community police and then compare the results with demographic and background information. The research results will help to encourage the continued effort of securing campus safety support services.

P-68: ANDREA SCHMIDT

The Likelihood of Students in Greek Life to be Active Bystanders in Sexual Assault Situations

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Sexual assault on college campuses continues to be an issue on campuses around the nation. Previous research has shown that fraternity membership is positively correlated to rape-supportive attitudes. Sorority members are found to be at a higher risk of sexual victimization. This study seeks to examine the likelihood of students involved in Greek Life to be active bystanders in situations involving sexual assault. The results of this study will show how likely students both involved in Greek Life and not involved in Greek Life are to intervene in a situation involving sexual assault on campus and off campus.

P-69: ASHLEIGH YOCKEY

Conquering Food Security Across the Country is One of the Most Significant Challenges of the Future.

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Conquering food security across the country is one of the most significant challenges of the future. Food insecurity affects millions of people across the country and has become more of a prevalent issue as more research is being done. Food insecurity compromises individual's health and nutrition which in turn is affecting individual's development. Food insecurity research thus far has stated that food insecurity affects student's academic performance and overall GPA. This study seeks to inspect the correlation between food insecurity and GPA of college students at Northern Kentucky University through a survey. Findings will be reported in this study.

P-70: DONTRISHE JARMON

Student Loan Debt and Students' Awareness and Use of Mental Health Services at NKU

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: College students with SLD suffer from mental health issues at a higher rate than students without SLD. The literature suggests that SLD can negatively impact mental and physical health. One in four college students have a mental health diagnosis and over a third of students' report having anxiety due to SLD. Mental health services can help offset these negative consequences. The current study examines NKU students' awareness and use of, as well as satisfaction with, the Health, Counseling, and Student Wellness Center. After completion of the study, the implications for practice will be discussed.

P-71: DESTINY BLAIR

Student Loan Debt: Retention Rates and Representation

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: There are multiple effects of student loan debt. This research project examines the effects of student loan debt on retention rates and representation in minority and non-traditional college students at Northern Kentucky University. Additionally, this project examines how effective NKU student support services are for students that come from different demographic backgrounds. The survey consists of 31 questions about demographics, debt, and resources on campus. With this survey we are expecting to fill the gaps in the research literature about student loan debt and its effects on retention rates and representation in minority and non-traditional college students.

P-72: SKYLA ROBBINS

Perceptions of Hookup Culture at NKU

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Hooking up has become a popular trend among young adults especially on college campuses. Since the term "hookup" is new as of recent years, there is still a lot to learn about the mental health effects that hookup culture has on young adults. This study seeks to determine the perception that NKU college students have of hookup culture and distinguish if perceptions differ depending on gender. This cross-sectional study conducts a face-to-face survey. The results also are projected to report the level of acceptance of hookup culture on NKU campus.

P-73: RACHEL MARCUM

Perceptions of Healthy Relationships among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Intimate partner violence (IPV) is an on-going problem in the United States. Literature suggests that approximately 71.1% of women first encounter a form of IPV before the age of 25 (Breiding et al., 2014). College students experiencing IPV are at risk for experiencing difficulties both during their time at a university and later in life. However, little research has been done about college students' knowledge about the healthy relationships among college students. The statistical results of the survey will be explained and discussed in this study.

P-74: MEGAN MUELLER

Awareness of Sexual Assault, Stalking, Dating Violence, and Supports Available on College Campuses

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: It is no secret that sexual assault, stalking, and dating

violence happen all around the world on a daily basis; college campuses are no different. Relatively little is known or taught about the different resources that are available to students at Northern Kentucky University when these unfortunate events do happen. The results of the study (including a sample size of approximately 250 students in all phases of their college career) are expected to measure the knowledge current NKU students have on the resources available and, if they were utilized, how effective did the experience seem to be overall.

P-75: JASMIN ARCE

Campus Climate: Ethnic Minority Students' Sense of Belonging and Overall College Experience

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Campus climate is how students and faculty perceive campus as it pertains to diversity. Literature shows that underrepresented groups tend to perceive campus climate differently than their dominant peers. Negative perceptions of campus climate correlates with lower academic success and sense of belonging. This quantitative study, with randomized sampling, sought to find if ethnic minority students' utilization of culturally based services make an impact on their sense of belonging and college satisfaction. The results are expected to show that ethnic minority students are more likely to feel as they belong to the university when they utilize culturally based programs.

P-76: EMILY CROWDER

Perceptions of Campus Climate for LGBTQ Students at NKU

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Lesbian, Gay, Bisexual, Transgender, Queer/ Questioning (LGBTQ) students face unique challenges that can negatively effect on their academic performance and involvement on campus. While NKU is a diverse campus, a recent campus climate study revealed that in regards to NKU's "Commitment to Diversity," "Respectfulness/Fair Treatment," and "Sense of Belonging", heterosexual students have significantly more positive perceptions than LGBTQ students. This study seeks to examine LGBTQ student's perceptions of campus climate in comparison to heterosexual students. The study also explores whether or not LGBTQ students who are "out" on campus perceive campus climate differently than students who are not "out."

P-77: DANIELLE SEBASTIAN

Emotional Intelligence and its Relation to Student Loan Debt

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Student loan debt is becoming the second largest debt in America. While problem is a concern because of the problem affects college graduates. The purpose of this study is twofold: to examine whether there is a relationship between student loan-debt and emotional intelligence; and to explore the ability to make good decisions and free from the loans. the results of this study will show the need to provide more on-campus services that target NKU students.

P-78: JENNIFER LASITA

NKU Students Access and Utilization of Services on Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Stress and anxiety are common experiences of college students, though these perceived normal experiences can also lead to more serious mental health struggles. There is currently a gap in the literature examining how many college students'

access campus mental health services for these concerns. This study will examine NKU students' experiences with stress and anxiety as well as their awareness and access of campus mental health services. Anticipated findings include high levels of stress and anxiety as well as a low level of awareness and access of campus sponsored services.

P-79: MEGAN SIBERT

Relationship between Social Support and Mental Health among College Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Mental illness among college students is becoming a fast-growing epidemic throughout campuses nationwide. More students are being diagnosed with anxiety disorders and depression. Students who do not have the proper social support tend to have higher rates of dealing with depression and anxiety disorders and higher levels of stress, as well as decreased academic performance and lower GPAs. The purpose of this study is to explore the relationship between mental health and level of social support among NKU's student body. This study is expected to conclude that low social support can impact the mental state of students on NKU's campus.

P-80: JAMIE BAIRD

Students' Perceptions of Effectiveness of NKU's Response to Sexual Assault

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Sexual assault is a huge problem, particularly on college campuses. Although universities have policies, procedures, and services to address sexual assault, the utilization of these services is commonly overlooked. This survey study of 100-200 NKU students seeks to examine students familiarity and satisfaction with the policies and procedures NKU has in place in response to sexual assault on campus. The results of this study will show how familiar and how satisfied NKU students' are with the university's response to sexual assault. This study directly relates to the ongoing lawsuit regarding NKU's response to a sexual assault that occurred on campus.

P-81: EMILY WRIGHT

The Impact of College Students' Field of Study on Stress

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Stress in college is accepted as the norm; however, researchers are finding that stress on college campuses is rising at a frightening rate. In fact, 87% of college students perceive themselves as stressed (Civitci, 2015). This study seeks to examine to what extent a student's field of study impacts their level of stress, and whether required internships play a role in this relationship. This information will equip collegiate leaders to educate, provide resources, and promote physical and mental well-being among college students before their stress leads to severe consequences.

P-82: SHAMICA GORDON

The Relationship between Stress and Substance Abuse/Use among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Drug use amongst college students is increasing significantly. This study seeks to examine the relationship between stress and substance use/abuse amongst NKU college students. This quantitative study used random sampling given to NKU students located at the student union plaza at NKU campus. The survey also contains 4 demographic questions, inquiring about participants' gender, age, race, and number

of years at Northern Kentucky University. Data will be analyzed using SPSS computer software. Findings of this study will reveal a relationship between stress and substance use/abuse for NKU students and assist for interventions on campus around this increasing matter.

P-83: STEPHANIE SCHRAER

NKU Student's Perceptions of Barriers to Reporting Sexual Assault and Receiving Services for the LGBTQ Population

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The prevalence of sexual assault amongst college students has been the subject of numerous studies. Barriers to reporting and seeking services after an assault are well-documented. This study examines to what extent students perceive sexual orientation and sexual identity as barriers to reporting and accessing services. It will further explore whether the perceived barriers to reporting and accessing services differ amongst LGBTQ and non-LGBTQ students. By comparing the LGBTQ and non-LGBTQ students' reports, this study expects to find that differences in perceptions exist amongst the subpopulations. Such differences will illustrate the need for more LGBTQ-friendly service providers in the community.

P-84: BENJAMIN WINKLER

Prevalence of Poverty on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Poverty continues to plague the communities we live in. We see this issue on the news, social media, and headlines. There is little to identify college students who are affected by poverty. This study will survey 200-250 NKU students to examine the prevalence of poverty on NKU's campus and to evaluate areas NKU could serve students coping with poverty. The results of this study are expected to illustrate how prevalent poverty is amongst NKU students. Additionally, findings will indicate current or future services that NKU will offer to students.

P-85: KERRI PHILLIPS

The Impact of Insomnia on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Sleep is an important part of basic human function. The purpose of this study is to understand the prevalence of insomnia on NKU's campus. The impact sleep deprivation among students will be determined by collecting a randomized survey. The results of these surveys are expected to evaluate the correlation between how stress and anxiety influence the negative consequence of insomnia. By comparing this, it will inform students about this problem and the importance of sleep health.

P-86: CALLIE KELLEY

Mental Illness, College Students, and Marijuana

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: As different states across the country pass legislation to legalize marijuana for both medical and recreational use, the Federal Government still labels marijuana as a Schedule I narcotic. Because of the various issues involved in the legalization across states, many people who use marijuana for medicinal purposes self-medicate illegally. The purpose of this quantitative study is to identify NKU students' attitudes regarding the acceptability of marijuana usage, reasoning behind the decision to use, and frequent use of marijuana on NKU's campus. The statistical results of the face-to-face survey will be conducted, explained, and discussed in this study.

P-87: LORI DALEY

Financial Stress among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: For many students, attending college offers many opportunities for career advancement. However, due to the high costs of tuition, some students may find it stressful to manage tuition and personal finances. This study used non-probability, purposive sampling to examine the prevalence of financial stress on NKU's campus, the cause of this stress, and the effects financial stress has on academic performance. All primary data collected will be analyzed using SPSS and findings and implications will be discussed in this study.

P-88: SHELBY SMITH

Illicit Stimulant Drug Use Among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Very little research has been done on the specific use of stimulant medication among undergraduate and graduate students on college campus. The purpose of this study is to determine the prevalence of illicit stimulant use by NKU students and determine why students are abusing these "study drugs". The study will be conducted using self-reported face-to-face surveys and the results from this survey will be utilized by using SPSS. The findings and implications of the study will be discussed.

P-89: SUSAN BOVE

Will Anybody Help Me? Gender Differences and Bystander Intervention in the Prevention of Sexual Assault

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Sexual assault is any sort of sexual contact or behavior that occurs without consent. It is four times more likely to occur to college age women. Colleges are required to provide sexual assault education to increase bystander intervention. This study examines which gender is more likely to intervene in a sexual assault, and what are the gender specific barriers to intervention. By comparing data from 184 participants, this study anticipates that females are more likely to intervene and have different rationale for engagement. Such differences may indicate a need for gender specific education programs.

P-90: AMBER PEGG

Disabilities and Disability Service Utilization on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The term disability is often used to describe any impairment, physical or mental, that substantially impacts one or more major life activities of an individual. This study will explore the prevalence of disabilities on NKU's campus and whether services are being utilized by students. Research indicates individuals with a disability are much less likely to obtain a college degree than those without a disability. NKU acknowledges the importance of Disability Services on campus with a designated office for students. Findings will provide insight into the prevalence of students whom have a disability and whether NKU students are utilizing campus services.

P-91: HAYLEY DRERUP

Barriers to Accessing Resources for Reporting Sexual Assault on NKU's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Sexual assault among college students hold a strong prevalence in today's society. High profile cases are plastered

over the media about the attack itself, but the steps following the assault are not discussed. Reporting and resources are the steps a victim can choose or not choose to take. The purpose of this study is to examine what barriers are keeping victims from utilizing campus resources and reporting their attacks. Approximately 180 NKU students will be surveyed to get a closer look at the student's perceived barriers to reporting and accessing resources.

P-92: KAYLA WENGERT

Prevalence and Effect of Cyberbullying on Northern Kentucky University's Campus

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Cyberbullying has become a new medium for bullies to harm victims. Victims of cyberbullying experience negative emotional and psychological effects along with higher rates of suicidal behaviors. This quantitative study seeks to examine cyberbullying and the effects of cyberbullying on 200 of NKU's students. Findings from this study aim to give more insight into the prevalence of cyberbullying on NKU's campus and the influence cyberbullying has on levels of stress and anxiety experienced by NKU's students.

P-93: KERRY SCHAFER

Perceptions and Awareness of Students with Disabilities

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Research has shown that perceptions toward students with disabilities largely affects this population's feelings of inclusion and support. Only 35% of students with disabilities who received special education services in high school and later attended a postsecondary school disclosed their disability (Newman et al., 2016). This study seeks to examine the NKU student body's perceptions toward individuals with disabilities and how students define the word disability. This study also aims to find a lack of knowledge among NKU students in defining disabilities, while also finding a higher rate of positive perceptions toward students with disabilities.

P-94: ANTWAN LEE

College Student Loan Debt and its Effects on Academic Performance

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Student loan debt affects individuals during school and after school by affecting their economic decisions for the future, mental health, as well as physical health. Student loans have become the second largest consumer obligation after mortgages. In the last few years, student loan debt has hovered around the 1 trillion dollar mark. As of 2011, 90% of college funding was accounted for by the government. This study seeks to examine what the stress of worrying about student loan debt has on poor GPA, college dropout, and retention rates. Additionally, findings will demonstrate the effect on mental and physical health overall.

P-95: REBECCA PORTER

The Prevalence of Risky Sexual Behavior among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The purpose of this study is to examine the prevalence of risky sexual behavior among NKU students. We believe that individuals who have been victims of sexual assault often display higher levels of risky sexual behavior. The primary data from our study conducted a face-to-face survey used to assess the prevalence of risky sexual behavior on NKU's campus. This data can then be used to determine how best to provide support

to students who are survivors of sexual assault. Key takeaways consisted of learning more about different risky sexual behaviors among college students in order to best serve them.

P-96: TONI COOPER

Aggression and Perceptions of Healthy Relationships among NKU Students

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Research indicates that stress and anxiety can increase the use of dating violence among college students. For college age adults, mental health is the largest cause of negative consequences. This exploratory, cross-sectional study seeks to measure the level of stress that college students are experiencing, while examining their perceptions of aggressive behaviors and healthy relationships regarding domestic violence. After non probability, purposive sampling 200-250 college students at NKU, the findings are projected to illustrate the relationship between the heightened rates stress/ anxiety among students and dating violence.

P-97: MARGARET CAREY

Campus Climate: Ethnic Minorities' Perceptions of Academic and Social Support

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Positive campus climate is crucial, as it leads to higher retention rates, academic success, better physical and mental health, and a decrease in social isolation. While universities around the country are making efforts to increase diversity amongst campus, ethnic minorities are consistently reporting that campus climate is less welcoming, friendly, accepting, and more racist than the climate of their white counterparts. This study seeks to gain insight into academic and social support on campus for ethnic minorities. Results will help NKU determine how to improve quality of support minority students both socially and academically.

P-98: CLAUDIA CLINE

Suicide Ideation among NKU Students

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Ten percent of college students have seriously considered attempting suicide in the past twelve months. The consequences of suicide ideation include social isolation, difficulty adjusting to college life, academic problems, alcohol and drug abuse, and untreated depression and anxiety. NKU supports several programs for students experiencing a mental health crisis. There are no statistics, however, on the prevalence of suicide ideation among NKU students. Findings from this study may have implications for suicide prevention programs at NKU.

P-99: SHEKINAH S. HUGHES

Mental Health Safety among LGBTQ College Students

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, EDD, LISW-S, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Colleges across the country are reporting huge increases in mental health safety concerns experienced by students. Young adults who self-identify as LGBTQ experience major stresses. They are at risk for serious mental health problems, including suicide and depression. Mental health safety concerns of this population must be addressed within college campuses. With the increased number of people outside of the LGBTQ community that spread many negative attitudes, and directed harassment and violence, this population reports a

high number of valid concerns for the wellbeing of their mental and physical safety. This project addresses the concerns on our campus.

P-100: AMANDA EARHART

What are the Perceived Barriers to Accessing Mental Health Services among NKU Students?

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: College is an important setting to address and bring awareness to mental health. Most college students are in a critical developmental stage of transitioning from adolescence to adulthood. This transition, along with the challenges of college life, has been linked to increased anxiety and depression. If left untreated, mental health issues can lead to substance use, strained social relationships, and a lack of productivity. The purpose of this study is to examine students' perceptions of barriers to accessing mental health services, and students' perceptions of the importance of mental health awareness activities on campus.

P-101: BETHANY BALL

Challenges of Students at NKU: The Need for Recovery and Relapse Support Programs at NKU

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Substance use disorder is exploding in the tri-state region, and an appropriate course of action is needed. As a community, NKU has responded to this by carrying the lifesaving drug Naloxone. However, improvements still need to be made. The literature suggests that the education system is lacking in the support of recovery services and relapse prevention. This study examines the need of support in recovery services and relapse prevention, gauging the perceived needs from NKU students. Findings from this study can further inform NKU of barriers for students to stay in school and assist with increase in retention rates.

P-102: BARBARA SNELLING LOYD

Heroin and Prescription Opioid Drug Abuse Among NKU Students

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The Cincinnati-Northern Kentucky metropolitan area is currently in the grips of a heroin epidemic. Research suggests that the abuse of prescription opioids may lead to heroin use, and that drug use trends often begin with college students and later influence the general population. This project will explore the prevalence and impact of heroin and prescription opioid drug abuse among NKU students. Findings from this study will inform research into the treatment and prevention of drug abuse on college campuses, and support the development of appropriate resources at NKU.

P-103: ERICA HESCH

Impact of International Student Services on the Recruitment and Retention of International Students at NKU

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: International students have been the fastest growing population of college students since 2008, generating \$26.8 billion in 2014 and sustaining over 300,000 jobs in the U.S. Despite these figures this population has been declining at NKU for the past two years. Research has pinpointed barriers this population faces, but is inconsistent with regards to student self-report versus university perception as to their importance and impact. Research also identifies inconsistency between student

expectations and reality as influencing their retention. This study will survey NKU students to identify their barriers and measure the consistency between expectations and reality of their educational environment.

P-104: KELSEY VAAL

Parental Support and Educational Outcomes

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Parental support plays an important role in child development and continues to impact individuals as they mature. The literature shows a strong correlation between parental support and student success in younger children, with huge implications for future growth. If this support has such an impact on child development and success, it follows that it may continue to affect children as they mature into adulthood. The role of parental support in college-aged students and emerging adults, however, is not well understood. This presentation seeks to understand what role perceived parental support plays in student success at NKU.

P-105: ERIN MEYER

Perceptions of Sexual Assault Programming on NKU's Campus

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: This study explores NKU students' perceptions about sexual assault and sexual assault services on campus. Sexual assault is a challenge both in the community as a whole and on campus. Title IX mandates and the Norse Violence Prevention Center have created a venue for reporting and prevention education programming; however, the student body's understanding of the prevalence of sexual assault on campus, accessing available resources, and its effectiveness is currently unknown. The results of this project will inform future sexual assault prevention programming and the strategies for responding to sexual assault survivors' needs on campus.

P-106: REBECCA YOUNG

High School to College Transition

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: One in three first-year college students will not return for their sophomore year. College attrition may be associated with individual employment issues, resulting in a decrease in future earnings and damage to the economy due to having a less educated work force. This study seeks to analyze the relationship between the transition from high school to college and retention rates at Northern Kentucky University. The findings of this study will provide insight into the relationship between retention rates and the support received by students during their transition from high school to college.

P-107: ANTOINN HUDSON

Absence of a Male Presence in the Social Work Field

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: This case study describes the significant gender gap between men and women in the social work field and stigmas regarding the absence of males. Due to certain mentalities about men, professions such as social work tend to be viewed as more feminine. These professions encourage traits such as caring and nurturing and focusing on family and children. Dialogue among males may be conducive to initiating, communicating, and sharing emotions and expressing vulnerabilities. The goal of this research is to provide support for the premise that more males are needed as social workers.

P-108: WILLIAM BOMKAMP***Perceptions of Mental Health Among NKU Students***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Research indicates that mental health challenges among students on college campuses are on the rise. Students report an increase in serious mental health symptoms which include hopelessness, overwhelming anxiety, depression, and suicidal thoughts. About half of individuals experiencing mental health symptoms do not seek treatment. Stigma is a barrier often cited as a reason why. The purpose of this research is to identify how perceptions of mental illness impact a student's willingness to access needed mental health services. Findings can inform college mental health centers on the need to improve access to needed mental health services on campus.

P-109: GABRIELLE DRALLE***Perceptions of Rape Culture on NKU's campus***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The historic prevalence of sexual assault continues to be an issue that faces our society today. Students, particularly female students, on college campuses have been identified as being at an increased risk for experiencing sexual assault. A proposed theory to explain the epidemic of sexual violence is rape culture within our society. Traditional gender roles, sexism, victim blaming, and general acceptance of sexual assault are all components that make up this culture. As a result, it is paramount to understand the motivations and cultural forces, which lead to the high prevalence of sexual assault.

P-110: PAUL BLISS***Student Loan Debt***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Student loan debt is a rampant problem for both current and post-graduate students. Many individuals with student loan debt often experience negative ramifications, such as mental health issues or financial stress. The intent of this study is to determine the effects and/or perceptions of student loan debt. Data will be collected from current students enrolled at NKU in either undergrad or graduate programs. Students will respond to a questionnaire, addressing current implications of student loan debt. Based on this data, our community can continue to develop services to better support our students.

P-111: BRITTANI CALHOUN***Campus Safety***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: At Northern Kentucky University and all college campuses, it is unfortunately common for students to experience events that may impact their safety. Safety should be taken seriously and publicized as a top priority within our community. NKU offers a number of policies and resources designed to help protect and support its students. This case study is about our campus safety, and the relationship of safety to violence prevention initiatives. These two particular topics reflect recognition of the campus challenges related to safety that may affect students while attending, learning, and studying on campus.

P-112: MORGEN HAMILTON***Mental Health Impact on NKU Student Success***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This study explores how mental health impacts the success of students at NKU. In particular, the research examines the connection between mental health and everyday life as a college student. This research will look at NKU students who suffer from a variety of mental health illnesses and what impact these illnesses have on their GPA, their involvement on campus, and their likelihood to drop out. This information can guide in further development of the services offered at NKU and shed light on how to support students in pursuit of a more successful college career.

P-113: SARAH BUFFIE***Trauma-Informed Education***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This project assesses the learning and teaching of trauma-informed care facilitated among the faculty/staff at NKU. Our university offers 14 undergraduate and 11 post-graduate opportunities in the human services fields. Graduates of these programs will be serving people who have experienced at least one traumatic event in their lifetime. NKU is beginning to equip graduates with the information necessary to provide trauma-informed care. It is paramount that NKU examine the understanding and impact of trauma-informed professionals to provide data to educational systems to prove that this front-end education will have social and economic implications in the long-term.

P-114: SAMANTHA MICKLER***The Relationship between Student Self-perception and Alcohol Use and Abuse***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Alcohol use and abuse among college students is a major social problem. Alcohol is the most commonly used drug by college students and accounts for half of substance abuse admissions on campus. The Student Alcohol Survey given at Northern Kentucky University supports that alcohol is having an effect on students. This research aimed at evaluating self-perception and its relationship with alcohol use. This was measured by having students analyze their personal values and their personal attitude towards alcohol. If the predictors of alcohol are better understood, prevention and interventions can be tailored to be more effective for college students.

P-115: DAVID V. WILSON II***Intimate Partner Violence in the Northern Kentucky Community***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Intimate Partner Violence (IPV) is a critical subject that is often ignored. Decades of research studies in this area have consistently concluded that the quality of life is improved by support. In addition, client ambivalence regarding the situation has demonstrated that there is little a clinician can do until the client is receptive. The best option for clinicians is to provide support, which often improves quality of life for clients even in IPV situations. The purpose of this study is to identify both existing support/perceived support in the NKU community, and how the support systems can be improved.

P-116: ABIGAIL WILLIAMS***The Impacts of Unplanned Pregnancies***

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Studies have shown that the rate of unintended pregnancies is highest among women between the ages of 18-24. Additionally, 61% of community college students who have children after enrolling do not finish their education.

Understanding the impact of unplanned pregnancies on college students will provide insight into this social issue. This study will examine the relationship between the importance of finishing one's education prior to having children and preventative measures being taken as a result of this project. The findings will aid in creating more supportive services to promote academic success for student parents.

P-117: PAIGE WILLIAMS

Students' Perceptions of Cyberbullying on NKU's Campus

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Bullying has been a notable concern for students across the United States, causing significant short and long term consequences, including depression and suicide. With the substantial use of technology with easy access to phones, laptops and tablets, bullying has evolved from harassing others in person to harassment online – cyberbullying. The purpose of this study is to examine students' understanding and perceptions of cyberbullying as well as its impact on Northern Kentucky University's campus. The results of this study will provide some insight on the prevalence of cyberbullying on NKU's campus.

P-118: GABRIELLA WILKINSON

Barriers to Success for NKU Students: Homelessness and Housing Insecurity

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: In 2014, 56,000 college students identified themselves as homeless on the federal financial aid application (FAFSA). The potential impacts of homelessness and housing insecurity on a college student are pervasive and longlasting, but resources for these students are not abundant. This research seeks to identify the impact of homelessness and housing insecurity on NKU students who have experienced homelessness or housing insecurity first-hand, along with those who know someone who has experienced it. This study seeks to support the development of appropriate on-campus and community-based resources to reduce barriers to success for students who experience homelessness and housing insecurity.

P-119: REBECCA TAULBEE

Trauma among NKU Students

FACULTY SPONSOR(S): JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Trauma is impacting thousands of individuals across the world. It is important to examine trauma on NKU's campus because there are students who have experienced trauma during their life. Trauma can be experienced during childhood, adolescence, young adult or adult life. The research study will identify trauma that NKU students have experienced and if they received therapy services. The research survey will cover demographics, race, and exposure to trauma and if those exposed received therapy services. The results will be used to better serve students at NKU.

P-120: KIM RAPP

How Stress Impacts NKU Students Academically

FACULTY SPONSOR(S): JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: College students often experience high levels of stress due to a variety of factors. High or excessive stress levels can have long term effects on both health and academic performance. The top three reported challenges among college students are stress (30%), anxiety (21.9%), and difficulties sleeping (20%). This study explored how stress levels impact academic

success, specifically related to GPA and confidence level regarding graduation. We surveyed 250 students on NKU campus to see how stress impacts their lives. The results will be used to enhance services for students that are struggling with stress.

P-121: TONYA DAVIDSON

Alcohol and Drug Use Associated With Trauma Among NKU Students

FACULTY SPONSOR(S): JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This research explores the association between childhood trauma and alcohol or substance use. Childhood trauma is associated with emotional disorders and co-morbid conditions such as alcohol and drug abuse. Surveys are being used to measure different childhood traumas, including physical abuse, neglect and emotional abuse or experiencing a traumatic event such as a car accident, witnessing violence, or having parents that used drugs or alcohol during their upbringing. This research specifically looks at students who currently use drugs and indicate an experience with trauma. The results will be used to identify ways to better serve the students.

P-122: ANGELA ROBINSON

Is College Worth the Gamble

FACULTY SPONSOR(S): JONATHAN TRAUTH, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: College is an investment that students are starting to second guess. The yearly increases in tuition and fees often leave students stressed and in debt even before entering the workforce. NKU's tuition is increasing at an annual rate of 4.8% and the average debt of NKU graduates in 2015 was \$27,285. This study will examine the financial stress and how that affect students' decision in choosing to attend and complete college. Research was gathered by surveying NKU students along with other research techniques.

P-123: MATTHEW FREY, JACOB KOORS

What have we learned since 2012? Revisiting the National Financial Capabilities Study to examine financial literacy

FACULTY SPONSOR(S): ABDULLAH AL-BAHRANI, ECONOMICS & FINANCE

Abstract: Financial literacy is a vital component for a prosperous future, yet many are aloof to the necessity and complexity of managing their finances. Using a national sample that includes more than 28,000 observations we examine individuals' financial literacy and capabilities. We find that financial outcomes have improved since 2012 however, some financial behaviors indicate that policy should focus on increasing financial education. The average consumer spends more than they make, and are unable to source 2,000 dollars in the event of an emergency. This is just one piece of evidence that depicts the requisite nature of financial education.

P-124: KRISTEN PETRONIO

How the Roles and Portrayals of Women in Mythology and Jane Austen Novels Reflect Society Then and Now

FACULTY SPONSOR(S): ROXANNE KENT-DRURY, ENGLISH

Abstract: My research project addresses the treatment and portrayal of women in both Jane Austen novels and Mythology. I am also connecting it back to how women have been seen as unequal to men for centuries including women that work. I use mythology tales from Greece, Rome, and movie adaptations. I also look at the portrayal and societal expectations of women within Jane Austen novels and movie adaptations. I'm studying how female characters are portrayed and the jobs they worked to show how this relates to the society then and our current one. Collectively, I'm comparing women in each realm.

P-125: TIFFANY TROUTT***Women in Love and Love: The Emphasis on the Ideological***

FACULTY SPONSOR(S): TONYA KROUSE, ENGLISH

Abstract: D.H. Lawrence's novel *Women in Love* contrasts two sexually intimate relationships to critique modern ideas about love and industrialization. Historically, critics have discussed Lawrence's indebtedness to Romantic period literature, which led me to investigate how his Romantic influences helped him challenge Modernist themes. My research explores Lawrence's rejection of modernity, and his attempt at returning to earlier ideas about love and nature. By situating Lawrence's contrasting relationships through the ideals of Romanticism and Modernism, it becomes possible to gain greater insight into Lawrence's worldview.

P-126: ELIZABETH GAUCK***Stephen Dedalus as a Rhetor in Ulysses***

FACULTY SPONSOR(S): TONYA KROUSE, ENGLISH, LIBRARY INFORMATICS; EMILY DETMER-GOEBEL, ENGLISH

Abstract: In the "Scylla and Charybdis" episode of James Joyce's *Ulysses*, Stephen Dedalus gives a speech about the biographical origins of Shakespeare's *Hamlet*. Previous sources explored Stephen's isolation and the relevance of his theories in this episode, which led me to question Stephen's effectiveness as a rhetor. In my research, I discovered that Stephen lacks rhetorical authority because he does not believe his arguments and he transfers too much of his own history onto Shakespeare. By evaluating Stephen as a rhetor, I offer new insight into one of the most important characters in modernist literature.

P-127: SHELBY BUCK***"All... inhabited space bears the essence... of home:" Manipulations of and Interactions with Space in Jean Rhys's Good Morning, Midnight***

FACULTY SPONSOR(S): TONYA KROUSE, ENGLISH

Abstract: Jean Rhys's modernist novel *Good Morning, Midnight* introduces readers to Sasha Jensen, a depressed, alcoholic woman who wanders the streets of Paris looking for a welcoming space in which to exist. Previously, critics discussed how the physical spaces in the novel offer details about Sasha's characterization. Moving beyond these interpretations, I explore how Sasha uses the spaces to describe her traumatic emotions, instead of confronting those emotions directly. Sasha's projection is a coping mechanism, and it is one that is not immediately or entirely clear to the reader. I show how Sasha uses space to externalize her sentiments about life.

P-128: HALEY KIRLEY***"Street angel and house devil"; Performative Gender and Identity in Nighttown***

FACULTY SPONSOR(S): TONYA KROUSE, ENGLISH

Abstract: James Joyce's 1922 novel *Ulysses* is set over the course of one day, June 16, 1904. Divided into eighteen episodes, the novel experiments with form and content. My research focuses on the "Circe" episode, which is written as a stage play and is set in Dublin's red light district, Nighttown. Previous criticism has examined the performative nature of gender and sexuality in "Circe." This scholarship grounds my research, which focuses on the theatrical costuming of the chapter's characters. My research investigates the ways in which *Ulysses* embodies gender in narrative and suggests a new way of reading Joyce's narrative experiments.

P-129: ANDREW WALKER***The Linguistic Evolution of "RPG"***

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: This poster presentation focuses on the linguistic evolution of the alphabetized "RPG" (from the phrase "role-

playing game") from the 1970's to today. Originating as term for the 1974 fantasy tabletop role-playing game *Dungeons and Dragons*, RPG was the formal reference encouraged by the creators of *Dungeons and Dragons* in order to keep their trademark from becoming a generic term. With the advent of computer gaming, RPG has found new life as a much broader descriptor in the gaming industry.

P-130: GRACE BECK***Paper Manufacturing and Use in the 1800's***

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH, HONORS

Abstract: Focusing on a nineteenth-century handwritten letter from the American Civil War era currently held by NKU's Special Collections, this presentation examines papermaking in U.S. in the 1800's. At that time, paper was manufactured by processing rags. Advanced papermaking machinery, such as the steam-powered printing press and the Fourdrinier machine, developed during the industrial revolution and significantly improved the process. As society relied more heavily upon paper as a commodity, the primary materials used to make it shifted from rags to wood. The letter represents the papermaking process of the period and demonstrates some new technologies in paper construction and design.

P-131: JUDE NOEL***Evolving Definitions of "Aesthetic" from the Enlightenment to the Internet***

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: Since its first usage in the early 18th century, the term "aesthetic" has sustained its importance in the realm of cultural critique while still evolving alongside the art it refers to. My poster demonstrates research into the factors determining these shifts in meaning, pointing towards the democratization of art as the key component in shaping the English-speaking world's aesthetic lens.

P-132: KATIE DANIELS***Reinventing the Word "Geek:" From Circus Sideshow Freak to Celebrated Subculture***

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: The word "geek" has a long and colorful history, one that demonstrates the linguistic evolution of a perjorative insult to a complimentary term. This poster presentation explores the word's Middle German origins as 'geck,' a synonym for a fop or foolish person used by such celebrated writers as Shakespeare, to its renewed popularity in the late twentieth century when the word was re-branded as a school insult along with dweeb, dork, nerd, and goober. Today "geek" has undergone a notable amelioration to become the positive description of a highly self-motivated, technology-savvy subculture.

P-133: SHANNON FOXTON***The Legitimacy of the Word "Themselves"***

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: This poster presentation focuses on the gender-neutral reflexive pronoun "themselves" in American English, a word that is not yet accepted by the *Oxford English Dictionary* and standard English language usage manuals. The presentation traces the pronoun's evolution from the fourteenth century to the 1980's when, following the feminist movement, the use of gender-neutral pronouns grew in popularity and examines the connection of "themselves" to sexism, gender-neutrality, and misguided plural usage in the U.S.

P-134: GRACE NECAMP***History of the R-Word***

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: This oral presentation traces the history of the word

"retard(ed)"—from its origins as a simple, non-offensive noun in the eighteenth century to its use as a clinical description for an individual with intellectual disabilities in the late nineteenth century and twentieth centuries and finally to its adoption as a highly derogatory slang term in the twentieth and twenty-first centuries. The linguistic development of the word demonstrates how a relatively neutral term can undergo a pejorative transformation to become a slur that serves only to insult and exclude.

P-135: KRYSTAL VICTOR

#BlackLivesMatter: Social Media and Language

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: Nearly half a century after Dr. Martin Luther King Jr. gave his famous "I Have a Dream" speech to unite people as equals regardless of the color of their skin, a modern Civil Rights Movement was sparked on social media: the hashtag BlackLivesMatter on Twitter. My research project explores the phrase #BlackLivesMatter, including its origin, social media impact, and linguistic significance.

P-136: JAMES HARRIGAN

The Technology of 19th-Century Writing and the Epistolary Form

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH, HONORS

Abstract: This poster presentation will focus on the collection of Civil War-era letters written by Cyrus Reasoner, a Union soldier, that are currently held by NKU's Special Collections. Although formal letter writing was once a main form of communication, cursive writing and the art of the handwritten letter are disappearing due to advancements in technology. Texting with your thumbs has replaced the cursive script produced by a dip or nib pen and ink. The Reasoner letters provide valuable insight into handwriting techniques in nineteenth-century America and the lost art of letter writing.

P-137: ERIC GOETZ

Historical Preservation, Photography and Community Engagement Projects

FACULTY SPONSOR(S): BRIAN HACKETT, HISTORY & GEOGRAPHY

Abstract: Community Engagement, Photography, and the Historical preservation process are essential elements for understanding and recording our past. An art and a science,

this field of professionalism is a gateway to all things unique and noteworthy that makes up our human history. The National Historic Preservation Act of 1966 infused with community engagement projects teaches individuals to be skilled and professional in many areas indicative to economic prosperity and urban renewal. Learning the skills and trades associated with these processes and professions are not just educational but extremely rewarding allowing for great personal contributions to the future of the human experience.

P-138: ROBERT DAVIS

Hamburgers and History

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: My project will examine the origins and the development of the hamburger throughout world history into its modern form. My poster will explore the initial conception of the hamburger from its unclear origins and its naming derived from the city of Hamburg, Germany; the many variations and styles that were created throughout its spread across the world; and its simple but satisfying formula that allows it to remain one of the most popular food dishes on the planet. This project will attempt to educate students on the history of the hamburger and its impact on global culture and economics.

P-139: ANDREW BITTERLING

Diets Needed to Survive without Meat in Poor Areas

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY

Abstract: In poor areas of the world, eating meat is a luxury that does not happen often. This often creates various nutritional deficiencies, such as a lack of calcium, omega-3 fatty acids, and vitamin B-12. Unless these people frequently ate foods with these nutrients, many developmental problems could occur. By exploring various plant nutritional values, diets that include the essential vitamins and nutrients for survival can be created.

P-140: JENNA BELL

An Analysis on the Nutritional Aspects of Hummus

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY, HONORS

Abstract: Generally, hummus has the reputation of being a healthier alternative snack since it includes ingredients, like beans, which are high in protein, and heart disease fighting-olive



oil. It has evolved from a light, simple refreshment to variety of different styles with various flavorings and toppings. This study will determine if the wholesome meal, hummus, lives up to these standards. My research will dive into the nutritional make-up of this traditional Mediterranean dish, as well as a comparison of popular brands.

P-141: WILLIAM BARDGETT

Oil Palms - A Culinary and Industrial Game Changer

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY, HONORS
Abstract: Oil palms are an oil producing plant native to Western Africa. These palms produce a thick oil that has been used in a variety of ways by natives and non-natives, from cooking to industrial lubricant. In my presentation, I will be examining the history of the domesticated oil palm through the lens of its impact on the societies that have utilized it. This will include connections to European imperialism in Africa, and the oil palm's role in the European industrial revolution. I will also explain the status of the oil palm in modern times.

P-142: MICHEAL MASTIN

Exploring Alternative Food Systems - Polyculture

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY, HONORS
Abstract: This project will examine polyculture, and discuss the advantages and disadvantages of this agricultural system as compared to monoculture. I will examine some effective polyculture systems. The poster will also delve into potential cultural, economic, and biological influences polyculture can have on the environment and human society.

P-143: KELSEY KAHMANN

History and Impact of Vanilla

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY
Abstract: This research project will explore the origin, spread, and impact of vanilla in world history. The poster will examine the origin and spread of vanilla, as well as its influence on world economics and culture. The project will also include the importance of vanilla as a spice in modern times.

P-144: NIKOLE SEAY

The Cocoa Bean and its Impact throughout History

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY
Abstract: This project will examine the origins, spread, and impact of the cocoa bean in world history. My poster will trace the cocoa bean from its origins in South America to the global staple crop it has become today, influencing not only diets, but also world economics and culture.

P-145: JUSTIN HAVLIN

The Origins, Spread, Nutritional Value, and Important Facts of the Potato in World History

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HISTORY & GEOGRAPHY, HONORS
Abstract: For my project I will be covering the origins, spread, nutritional value, and important facts of the potato in world history. With my poster I will explain how the potato plant spread from Peru, South America to nearly every region of the earth. Along with showing the spread of the crop, I will also cover many different facts on the potato that are not well known to most people. My main goal for this poster project is to educate others on how inspirational and disastrous the potato has been for humanity in world history.

P-146: ANDREW QUILLEN

Breaking the Ice: How Ice has Affected Mankind

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HONORS
Abstract: This research project takes at its subject something

that seems mundane, but isn't -- ice. While today ice seems an afterthought of modern convenience, it was once a luxury and would eventually become a prized commodity in the early global economy. This project will trace the changing role of ice in economics and culture, up to the modern day.

P-147: NIKOLAS JOZIC

Goin' Apes for Grapes

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HONORS, HISTORY & GEOGRAPHY
Abstract: This research project will look at the history of grapes and examine how these fruits have helped to shape the modern world as we know it. The poster will examine the origin and spread of grape varieties, as well as their economic, political, cultural, and ecological influence on World History.

P-148: FRANCESCA WEBSTER

Human Evolution through Cooking

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HONORS, HISTORY & GEOGRAPHY
Abstract: This project will examine how cooking and food preparation affected human evolution both biologically and culturally. My poster will start at the origin of cooking and look at how the hominid body changed because of it and will also explore aspects of how cooking influenced culture and what modern culture constructs may have come from the use of cooking.

P-149: NADINE SWINFORD

The History of Chocolate

FACULTY SPONSOR(S): JONATHAN REYNOLDS, HONORS
Abstract: This project will examine the significance and impact of cacao (chocolate) throughout world history, along with where it originated, how it spread, and different ways it can be processed. The poster will follow the cacao from ancient Mesoamerica, to becoming the chocolate people know and love today. Not only has chocolate become one of the most common flavors among desserts and candy, it has had a long history influencing different cultures and economics.

P-150: JAMIE MUSHRUSH, KARI CURRY, AUSTIN ANGLIN

Examining Biomechanical Differences between Female Dancers and Non-Dancers

FACULTY SPONSOR(S): HAYLEY ERICKSEN, KINESIOLOGY & HEALTH
Abstract: At a young age, dancers train to perfect the form and techniques of their craft. Dancers often encounter different chronic, stress related, and acute injuries that non-dancers may not experience due to the difference in joint angle, flexibility, range of motion, and overall balance. Dancers and non-dancers adapt to their specific activities imposed demands which can lead to different biomechanical disadvantages and potentially contribute to increased injury risk. The purpose of this research is to examine the biomechanical differences between dancers and non-dancers in knee and hip flexion, and knee abduction during a jump-landing task.

P-151: JACOB HENDERLIGHT, JORDAN HAUCK, DARIUS HILSON, JOHN BACKSCHEIDER, KARLY HAUBNER

Knowledge of Concussions in High School Student Athletes with a Full Time Athletic Trainer Versus No Athletic Trainer

FACULTY SPONSOR(S): HAYLEY ERICKSEN, KINESIOLOGY & HEALTH; RACHELE VOGELPOHL; JOSEPH HACKER, KINESIOLOGY & HEALTH, KINESIOLOGY & HEALTH
Abstract: An estimated 100,000 sport-related concussions occur annually in the high school population. High school students' brains are still developing which increases the effects of a concussion and extends recovery time after the injury. Athletic trainers can sometimes be the only healthcare professional accessible to athletes, and they play an essential role in

increasing knowledge and awareness of concussions; which can assist in reducing the frequency and severity of injuries. The purpose of this study is to identify differences in concussion knowledge among students attending high schools with a full time athletic trainer and high schools without an athletic trainer.

P-152: CARLY BURGHEIM, ALLISON GREELY, MICAELA SMITH, BRADLEY THOMAS

An Assessment of the Relationship between Access to Athletic Training Services and the Attitudes of Concussions in High School Athletes

FACULTY SPONSOR(S): JOSEPH HACKER, KINESIOLOGY & HEALTH

Abstract: In recent years, athletic injuries, specifically concussions, have become more pronounced. Concussions have gained a lot of publicity due to increased awareness of their prevalence and long term effects. Athletic Trainers play a vital role in the education and prevention of athletic injuries and illnesses. Education on the signs and symptoms of concussions will increase the likelihood of self-reporting, thus decreasing the risk of a more significant brain injury. The purpose of this research study is to analyze the attitudes of high school athletes regarding concussions based on the impact of access to athletic training services.

P-153: MAKENA WARNER, KENDRA HUDSON, HEIDI ZWICK

Prospective Comparison of Hip and Knee Strength in Dancers and Non-dance Female Athletes

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH; HAYLEY ERICKSEN, KINESIOLOGY & HEALTH

Abstract: Both non-dance female athletes and trained dancers expose their bodies to high physical demands that often results in injury. Previous research has indicated that dancers have a lower overall incidence of injury and a lower incidence of ACL injury compared to non-dance female athletes. Hip and knee muscular strength plays an important role in lower extremity stabilization and may aid in injury prevention. The purpose of this prospective study is to examine strength characteristics between dancers and non-dance female athletes who sustained a lower extremity injury compared to those who did not in order to identify risk factors for injury.

P-154: CHASE STANLEY, KYLER HENDRICKS, SAMANTHA CLIFFE, MACKENZIE CURRAN, CODY CHAMBERS

Perceptions of Athletic Trainers as Health Care Providers in the High School Setting

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH; JOSEPH HACKER, KINESIOLOGY & HEALTH

Abstract: Athletic trainers (AT) are health care professionals that are trained in the prevention, diagnosis, and rehabilitation of orthopedic injuries. In the high school setting, many administrators, parents, and students are not aware of the education that ATs receive. The lack of knowledge about the profession could have an impact on the school's desire to hire an AT or the student athlete's willingness to see an AT when injured. The purpose of this study is to determine the perception of ATs among high school student-athletes in schools who have full time athletic training coverage compared to those who have no coverage.

P-155: SHANDA HARRIS, MACKENZIE LAUMANN, YASMINE XANTOS

Sparks to the Rivalry Fire: Examining Antecedents to Rivalry in Professional Sports by Geographic Regions

FACULTY SPONSOR(S): JOE COBBS, MARKETING, SPORTS BUSINESS & CONSTRUCTION MANAGEMENT

Abstract: Previous research of sports fans has identified different outcomes to rivalry based on geographic regions. However, the potential for regional variation in the elements that contribute

to rivalry has yet to be explored. To address this question, we used the US Census regions to designate four areas (Northeast, Midwest, Southeast, West) plus Canada. We surveyed fans (N = 4,388) across five major professional leagues to quantify the importance of eleven rivalry antecedents. Results showed the sparks to rivalry were different based on teams' geographic location, which is relevant to media, team, and league administrators tasked with promotion, scheduling, and security.

P-156: SALLY DUFEK, ALYSSA FARMER, JOSEPH HASTINGS

Statistical Programming in the Pharmaceutical R&D Industry

FACULTY SPONSOR(S): BROOKE BUCKLEY, MATHEMATICS & STATISTICS; LISA HOLDEN, MATHEMATICS & STATISTICS

Abstract: Bringing a new drug to market requires conducting rigorous clinical trials and gaining approval by the Food and Drug Administration (FDA). This process includes testing the drug for both safety and efficacy and then restructuring the collected data into a standardized form for submission to the FDA. Beginning in 2016, clinical trial data is required to be submitted according to guidelines created by the Clinical Data Interchange Standards Consortium. Working with Medpace, a contract research organization, this project entails the standardization of data collected during a clinical trial for the development of a weight-loss drug.

P-157: JACOB ENGLERT

Using Statistical Weights to Align JN-25 Messages

FACULTY SPONSOR(S): CHRIS CHRISTENSEN, MATHEMATICS & STATISTICS

Abstract: The primary World War II Japanese naval cipher was a five-digit enciphered code, which the Allies designated JN-25. Throughout the war, JN-25 evolved with the issuing of new codebooks, additive books, and instructions for use. The Allies' primary attack on JN-25 was a mathematical procedure called differencing, which began by aligning messages "in depth." In December of 1943, a change was made in JN-25 additive books that made the then current methods of alignment ineffective, and US Navy codebreakers began developing new methods to align messages. This project tests the effectiveness of one of those methods, which uses Shinn weights.

P-158: RACHEL ZIEVERINK

Counting the Annual and Monthly Visitors to the Great Parks of Hamilton County

FACULTY SPONSOR(S): MARY LEE GLORE, MATHEMATICS & STATISTICS

Abstract: Estimating the number of people who visit each park in the Great Parks of Hamilton County is important and useful in justifying and securing outside funding and helping management to make informed decisions. The task of estimating the number of visitors, monthly and annually, involved using electronic car and trail counters and various other sampling techniques. In addition to estimates of the number of visitors, a margin of error was also calculated. A process was created in Microsoft Access so that Great Parks could continue to add future data and to improve the estimates.

P-159: PARKER KAIN, RACHEL DRIEHAUS, JACOB ENGLERT

Modeling the Development of Chronic Kidney Disease in the Pediatric Population

FACULTY SPONSOR(S): LISA HOLDEN, MATHEMATICS & STATISTICS; DHANUJA KASTURIRATNA, MATHEMATICS & STATISTICS

Abstract: In the past two decades, the pediatric population has experienced a rise in the number of chronic kidney disease cases, but medical research has primarily focused on the adult population. For instance, it has been shown that a significant variable in the prediction of chronic kidney disease in adults is the severity of an acute kidney injury. Working with data from a study conducted at Cincinnati Children's Hospital Medical

Center, a statistical model is developed to predict the likelihood a pediatric patient who has experienced an acute kidney injury will go on to develop chronic kidney disease.

P-160: LAURA FARRO, COURTNEY TAYLOR, SAMUEL KUNKLER

Ensuring the Insurer: A Modern Statistical Approach to Estimating Unpaid Losses

FACULTY SPONSOR(S): LISA HOLDEN, MATHEMATICS & STATISTICS; DHANUJA KASTURIRATNA, MATHEMATICS & STATISTICS

Abstract: Essential to the survival of an insurance company is the ability to predict outstanding liabilities. It is the job of a reserving actuary to determine the cost of those losses that have not yet been paid or reported, otherwise known as the loss reserve.

Actuaries typically use, and often do not deviate from, a standard set of methods for estimating reserves. This project details a modern statistical approach to estimating loss reserves. Working with datasets supplied by American Modern Insurance Group, the new models are developed and tested against standard actuarial techniques.

P-161: MADISON CULBERTSON, COLTON GEARHART, JOEY LIST

A Statistical Approach to Modeling Losses in Multi-Peril Homeowners Insurance

FACULTY SPONSOR(S): LISA HOLDEN, MATHEMATICS & STATISTICS; DHANUJA KASTURIRATNA, MATHEMATICS & STATISTICS

Abstract: American Modern Insurance Group (AMIG) provides specialty insurance for such items as manufactured homes, watercraft, and motorcycles. Policyholder premiums are then based on the type of coverage chosen and the potential risk of a loss. In the case of homeowner's insurance, losses are caused by different perils such as fire, wind, liability, and hail. Currently, AMIG's actuaries develop models to predict the frequency and severity of expected losses without regard to the individual peril. In this work, models for loss, based on the individual perils, are developed and tested against historical data provided by AMIG.

P-162: COLTON GEARHART

Markov Chain Monte Carlo Methods and Their Applications in Actuarial Sciences

FACULTY SPONSOR(S): DHANUJA KASTURIRATNA, MATHEMATICS & STATISTICS

Abstract: In the general insurance market, insurers have to use data from past years to make inferences about future claims. The statistical analysis can be done with a Bayesian approach, which is becoming more and more common in the field of actuarial science. In this research project, Bayesian methods are applied to basic risk models using simulation based procedures for estimation. Additionally, this project examines a set of simulation techniques named Markov Chain Monte Carlo methods, more specifically Gibbs sampling. Then, inferences are applied to these models within an insurance context.

P-163: LAURA FARRO, MADISON CULBERTSON

Modeling and Predicting the Consequences of Climate Change: Seasonal Changes in Early 20th-Century Nova Scotia and the Work of Alexander MacKay

FACULTY SPONSOR(S): ANDREW LONG, MATHEMATICS & STATISTICS

Abstract: Phenology is the study of seasonal timings of natural phenomena and a strong indicator of climate change. Alexander MacKay, superintendent of Nova Scotia schools in the early 1900s, had students gather phenological data in one of the earliest citizen-science projects. We extract MacKay's data, reconciling missing values and inconsistencies using techniques such as nonlinear regression based on the Singular Value Decomposition (SVD). Mathematical models are created using SVD and tensor SVD decompositions of the data to predict "first appearance time" of plants in Nova Scotia. We test our models against modern data collected in emulation of MacKay's project.

P-164: AMANDA MCINTOSH, CELESTE TAULBEE

Research on Different Types of Colorectal Screenings

FACULTY SPONSOR(S): PAM DAVIS, NURSING

Abstract: The purpose of this research study was to educate nursing students about colorectal screenings. The method used to conduct this research was a pre and posttest. The students will participate in the research based on the teaching of the Cologuard screening compared to current screenings, for example FIT. The results showed our education was successful. A recommendation is to have a Cologuard test kit to demonstrate. The project will impact those involved by gaining education on the current options for colorectal screening. The significance of the project is to inform nursing students on different options for colorectal screenings.

P-165: SANDRA ROWE

From Cancer Patient to Cancer Survivor: Bridging the Gaps in the Transition of Care

FACULTY SPONSOR(S): PAM DAVIS, NURSING

Abstract: The purpose of this capstone project was to identify underlying obstacles brain tumor survivors face when canceling appointments and not continuing their posttreatment plan of care. Implementation of this project involved a qualitative study which included a survey of a sample of patients enrolled in a brain cancer survivorship program. The obstacles explored were the type of care received, reasons for not receiving care, barriers to scheduling and/or keeping appointments, and improvement suggestions for the program. Lack of research and evidence exists regarding the shortcomings in brain tumor survivorship care and outlining new recommendations for survivorship care in the future.

P-166: JANE SOLLBERGER, LAUREN MCQUEARY

Population Health in NKY: Stigma Experienced by Opioid-Dependent Pregnant Women

FACULTY SPONSOR(S): TERESA HUBER, NURSING, HONORS; SANDRA GRINNELL, NURSING

Abstract: This study is conducted in response to increasing rates of opioid use in pregnant women in the Northern Kentucky area. Research shows that stigma constitutes a major barrier to treatment. A literature review was performed for this study. Quantitative data (statistics and surveys) as well as qualitative data (themes found in interviews) will be collected. Objectives include identifying specific examples of stigma faced and how stigma affects access to healthcare during the perinatal period. By examining the results of this study, the experience of stigma can be reduced to facilitate treatment and yield improved quality of life for opioid-dependent women.

P-167: EMILY GREIS, MARIA POHLABELN

Supplemental Instruction: Collaborate, Connect, Achieve

FACULTY SPONSOR(S): ERIN ROBINSON, NURSING; JULIE HART, NURSING

Abstract: Nursing student success is paramount to the vitality of the nursing profession. However, the transition into nursing education is challenging for students. The application of concepts to nursing practice is often difficult for beginning students. To assist with the challenges in the first semester of nursing, a peer/faculty led supplemental instruction (SI) program was established. SI sessions are collaborative efforts between model students and a faculty member teaching the course. The purpose of the SI sessions is to promote collaborative learning utilizing a myriad of educational strategies. Qualitative and quantitative data analysis will be completed to determine program effectiveness.

P-168: JENNIFER WARDLOW***Effect of Temperature and Humidity on the Mechanical Properties of MEMS-Scale Components***

FACULTY SPONSOR(S): SEYED ALLAMEH, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: A newly developed micro-testing system is used to characterize mechanical properties of advanced materials. An environmentally-controlled chamber, encasing the testing system, allows the temperature and humidity to be controlled during the mechanical testing of materials. Micro-samples made from aluminum foam and covetic aluminum, using CNC milling and EDM shearing, were tested under various environmental conditions. The effect of the environmental factors on the mechanical properties of micro-specimens were investigated and reported.

P-169: EVAN VALENTINE, TURKY ALSUBAIL, MARWAN ALDUHAILAN***Application of Advanced Technology to Promotion of History of Newport***

FACULTY SPONSOR(S): SEYED ALLAMEH, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: There are efforts to promote the renovation of Newport museum. Faculty and students of NKU work with the museum to plan activities and promote the history and the heritage of Newport. Proposed by the museum officials, this project is focused on the application of newer technologies, such as use of 3D concrete printer to replicate the bust of James Taylor, the founder of Newport. This includes the 3D scanning of the current statue in the capital and printing with biomimicked materials implementing lightweight designs such as lattice blocks and sandwich structures. The bust will be installed at Newport museum site.

P-170: STACY BRUENEMAN***NKU Astrophysics Round Table***

FACULTY SPONSOR(S): NATHAN DE LEE, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY; SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: In an age of rapid scientific discovery, astrophysics is an inspiring topic capturing the interest of young minds. The NKU Physics, Geology, and Engineering department has stepped forward to give students an opportunity to learn about and discuss different areas of astrophysics and fundamentals of physics. In the Astrophysics Round Table, we have examined concepts in particle physics and extrasolar planets, along with how research is conducted by NKU's professors and students. Valuable skills and techniques are taught, which can be applied to both academics and further the students' understanding. This poster will discuss the first year of this program.

P-171: DEREK ILES***Using LiDAR to Gauge Stream Restoration over Time***

FACULTY SPONSOR(S): SARAH JOHNSON, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: Using GIS, it is possible to quantify how well stream restoration projects are preventing excessive erosion and causing necessary sediment aggradation. Natural stream systems have an equal amount of sediment erosion and aggradation over time. This is called equilibrium. From a geomorphological standpoint, the goal for a stream restoration project is to restore a stream back to equilibrium. This research shows that using LiDAR data can help people in the stream industry and in stream research be able to quantify how well the stream restoration projects bring the stream to equilibrium over time.

P-172: CARTER KRING***Modeling and Verifying the ISS-CREAM Detector Geometry in GEANT4***

FACULTY SPONSOR(S): SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The ISS-CREAM instrument will be installed on the International Space Station in August 2017. It will measure the charge and energy of cosmic rays. The rate of energy deposition and the probability of charge-changing interactions in the instrument is dependent on the composition and amount of material. A highly detailed model of the ISS-CREAM instrument has been made using the GEANT4 particle physics software package in order to create a simulations model capable of accurately depicting these interactions. A number of verifications of the model of the instrument geometry are discussed.

P-173: BRIAN BUTLER***The Analysis of Silicon Counting Detector (SCD) Tests at CERN***

FACULTY SPONSOR(S): SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The ISS-CREAM instrument is designed to directly measure cosmic ray elemental composition from proton to iron at energies between 100 GeV - 10 TeV from the International Space Station. It will investigate cosmic ray origin, acceleration, and propagation. The silicon charge detector (SCD), one of the four subsystems of ISS-CREAM, will measure through-going cosmic ray charge. A prototype of the SCD utilizing flight electronics was placed in a test beam at CERN in 2016 from which the detector's charge resolution and response linearity was measured.

P-174: TYLER STRAIGHT***Fitting Response Non-Linearities in the ISS-CREAM Silicon Charge Detector Test Beam Data***

FACULTY SPONSOR(S): SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The ISS-CREAM experiment is designed to measure cosmic ray elemental spectra and is scheduled to launch and be installed on the International Space Station in August 2017. The Silicon Charge Detector (SDC) measures the charges of incident cosmic particles. The SDC was calibrated at CERN in November 2016 in a fragmented lead test beam using flight components and electronics. The detector response to the ions was slightly non-linear compared to expectations. Fits to the data are used to adjust the data to produce a linear dependency.

P-175: TYLER LABREE***Calibration of the ISS-CREAM Calorimeter with GEANT4 simulations***

FACULTY SPONSOR(S): SCOTT NUTTER, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The ISS-CREAM instrument studies the elemental composition of cosmic rays from the ISS. The calorimeter (CAL), which measures cosmic ray energy, was placed in a beam at CERN. This analysis compares results of computer simulations using GEANT4 of the CAL to the CERN beam data. Calibration constants for energy deposition (in MeV) vs electronics units, statistics related fluctuations, detector non-uniformity, and electronics noise are found. The values are then applied to simulated data to verify it reproduces the measured CERN data. GEANT4 simulations of flight data are then extrapolated using these results.

P-176: ZAKARIA CHARAFI, EIKE LOHRBACH***Norse SAE Mini Baja***

FACULTY SPONSOR(S): MORTEZA SEDAT, PHYSICS, GEOLOGY & ENGINEERING TECHNOLOGY

Abstract: The Society of Automotive Engineers is a professional organization for students in the mechanical engineering/technology field. This project is to simulate real-world engineering design and related challenges. Students involved are tasked to design, build, test, promote, and race the vehicle according to the Society of Automotive Engineers rules. The vehicle must withstand severe rough terrains during the

competition. Norse Baja team members are responsible to generate financial support for their project. This project reports on the design, manufacturing, project planning, and logistics of this project. The competition data related to the technical inspection for the 2016 car will be presented.

P-177: SAMUEL HUGHES

Are Immigrants Criminal? Contrasting Public Opinions with Research Findings

FACULTY SPONSOR(S): ARELYS MADERO-HERNANDEZ, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: A growing anti-immigration rhetoric suggests immigrants are disproportionately engaged in criminal activity. Recent developments, like the controversial Executive Order signed by President Donald Trump "Protecting the National from Foreign Terrorist Entry into the United States," suggest that immigrants make the country less safe. In contrast, there is growing evidence from studies that show quite the opposite: immigrants have less of an involvement in criminal activity than native-born people. The goal of this project is to explore the perceptions of NKU students on this issue and to contrast those perceptions with findings from actual studies of crime.

P-178: CHRISTINA PLETOWSKI

Forced Labor and Sex Trafficking in the U.S.

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Sex trafficking, a modern form of slavery, exists throughout the whole world. Given its global prominence, human trafficking is a key issue for the United States. Sex traffickers use violence, threats, lies, debt bondage, and other forms of coercion to force adults and children to engage in commercial sex acts against their will. It is an annual multi-billion-dollar

business for traffickers. Many structural factors, including lax law enforcement, immigration policies, a lack of public awareness, and the uncontrollable big global trafficking business, challenge combating this underground industry.

P-179: MAGGIE CARRINO, LAUREN DALY, ERICA MCCULLOUGH

Female Genital Cutting: The Story of Africa

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Female genital cutting is a persisting problem for young girls and women. While this atrocity occurs in many countries, the worst offender is Africa. There is an ongoing movement to halt FGC due to its social injustice and unethical medical implications. This presentation seeks to educate individuals about the frequency and severity of FGC. Through the use of statistics and research on the types of FGC, individuals will leave with a better understanding of this issue that continues to plague young girls and women at an alarming rate.

P-180: ADRIANA GONZALES, MIKAELA MUSTAINE

He Who Dominates the Public Sector

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: A patriarchal system gives men a systematic advantage over women, resulting in wholesale exploitation of women in both the public and private sectors. The focus of this project examines the pornography industry to highlight how this male-dominated system reinforces political, economic, and social norms that subjugate women in both the public and private sectors. The pornography industry—organized and run by men—continually degrades women, giving them little opportunity to improve their economic status and, by extension, to challenge political and social norms.

P-181: CASEY CRANE, DOWNEY TYLER, EMILY BALTES THOMPSON

Rats Administered Antipsychotic Drugs Early in Life Have Fewer Dopamine Neurons

FACULTY SPONSOR(S): MARK BARDGETT, PSYCHOLOGICAL SCIENCE

Abstract: Rats administered the antipsychotic drug, risperidone, early in life are more active during adulthood. Motor behavior is regulated in part by dopamine-producing neurons within the substantia nigra. This study determined whether early-life risperidone administration alters the number of dopamine neurons in the substantia nigra. Brain sections from adult rats administered risperidone early in development were stained for tyrosine hydroxylase, an enzyme found in dopamine neurons. Stereological methods were used to quantify the number of neurons expressing this enzyme. Preliminary analysis indicates that, compared to control rats, the risperidone-treated animals had fewer dopamine neurons in their substantia nigra.

P-182: ANDREW SCHMIDL, EMILY BALTES THOMPSON, CASEY CRANE, TYLER DOWNEY

Early Life Risperidone Exposure Increases Tyrosine Hydroxylase Levels in the Adult Striatum

FACULTY SPONSOR(S): MARK BARDGETT, PSYCHOLOGICAL SCIENCE

Abstract: An experiment was conducted to determine the impact of early life exposure to antipsychotic drugs on dopamine neurotransmission in the brain. The expression of tyrosine hydroxylase, an enzyme important in dopamine synthesis, was studied in adult male and female rats that received the antipsychotic drug risperidone during development. A statistical trend suggested that tyrosine hydroxylase expression was elevated in the striatum of rats that received risperidone early in life. This suggests that children treated with risperidone early in life may possess high dopamine levels in the striatum, a brain region important in movement and reward.



P-183: EMILY BALTES THOMPSON, CASEY CRANE, BETHANIE COX, TYLER DOWNEY, SIMON SEGAL***Early-Life Antipsychotic Drug Administration Modifies Social Play in a Rat Model of Autism***

FACULTY SPONSOR(S): MARK BARDGETT, PSYCHOLOGICAL SCIENCE

Abstract: Autism is marked by alterations in social behavior, and risperidone is an antipsychotic drug approved for use in this disorder. We investigated the effects of early-life risperidone administration on adolescent social play in a maternal immune activation model of autism in rats. Social behaviors were examined in adolescent female and male rats in two contexts - whether the target rat was in the presence of a familiar rat or a novel one. While maternal immune activation had little impact on behavior, rats administered risperidone early in life displayed changes in some social behaviors based on their sex and testing context.

P-184: ELIZABETH WIEDERHOLD***Changes in Vocational Identity Status: Impact of a Careers Course***

FACULTY SPONSOR(S): ROBIN BARTLETT, PSYCHOLOGICAL SCIENCE; JAMES THOMAS, PSYCHOLOGICAL SCIENCE

Abstract: Vocational identity statuses were assessed for psychology majors during a required one-credit hour career planning course by having students complete the Career Exploration and Decidedness Inventory-Revised (CEDI-R) during the first and last week of the term. Results indicate that many students moved from the less mature Foreclosure and Diffusion statuses to the more mature Achievement and Moratorium statuses, suggesting that more students are making informed choices about their future vocations.

P-185: NATALYA ERP***Are Tendencies Toward Making the "Best" Decision vs. a "Good Enough" Decision Related to Career Decision Making in College Student***

FACULTY SPONSOR(S): ROBIN BARTLETT, PSYCHOLOGICAL SCIENCE

Abstract: Previous research shows some students who enter a career planning course undecided on a career remain undecided at the end of the course. Interestingly, they remain undecided even though they demonstrate increased career-related knowledge, levels of explorations, and career decision-making confidence. This pilot study examines the responses of career decided versus undecided students on several measures related to decision making. Psychology majors (N = 40) enrolled in the course completed questionnaires of career exploration and decidedness, career decision-making self-efficacy, and tendencies toward making the "best" decision versus a decision that is "good enough". Analysis will examine relations between these measures.

P-186: ELIZABETH WIEDERHOLD***Impact of a Careers Course on Career-Undecided Psychology Majors***

FACULTY SPONSOR(S): ROBIN BARTLETT, PSYCHOLOGICAL SCIENCE; JAMES THOMAS, PSYCHOLOGICAL SCIENCE

Abstract: Psychology majors enrolled in required one-credit hour career planning course completed the Career Exploration and Decidedness Inventory-Revised (CEDI-R) during the first and last weeks of the term. Students scoring below the median on the pre-course Decidedness scale were divided into two groups. One had post-course scores that remained below the pre-course median; the other had post-course scores above that median. Pre and post-course scores of these groups were compared across several measures. Both groups increased their level of exploration and gained significant career-related knowledge during the course, but those who remained undecided reported continuing decision-making difficulties related to inconsistent information.

P-187: CAITLIN TURNER, EMILY BALTES THOMPSON, CLARE MEARNES
Acute Effects of Alcohol mixed with Energy Drinks versus Alcohol Alone on Balance and Aggression

FACULTY SPONSOR(S): CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE

Abstract: This study examined if the consumption of Alcohol mixed with Energy Drinks (AmED) versus alcohol alone altered balance and motor control. Using a within-subjects design, subjects (n=16) attended 4 sessions where they were given alcohol and energy drinks, alone and in combination. Participants completed an assessment of balance, field sobriety tasks, and computerized aggression tasks. Results indicated that participants display better balance and less impairment on field sobriety tasks following the AmED dose, compared to alcohol alone. Thus, consumption of AmED might alter the reliability of the police standardized field sobriety test (funded by NIH grants AA019795 and GM103436).

P-188: CAITLIN TURNER, EMILY BALTES THOMPSON, CLARE MEARNES
Alcohol Consumption in College Students and the use of Social Media

FACULTY SPONSOR(S): CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE

Abstract: This study examined the relationship between drinking habits and postings about alcohol use on social media. During a single session, participants (n=200) were asked to complete questionnaires that assess alcohol use and impulsivity. Then, subjects logged onto their social media accounts to complete a Social Media Questionnaire (SMQ), which queries past 30-day postings related to alcohol use. Results indicated total SMQ scores were significant predictors of recent drinking behaviors and risky drinking that may lead to dependence. Therefore, social media profiles may provide a means to identify candidates for alcohol abuse interventions (funded by NIH grants AA019795 and GM103436).

P-189: EMILY HOLT, CINDY GLOVER, BRIAN SCHULTZ, JEFFERY KESTNER
Measuring Disposition to the IKEA Effect

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: The IKEA Effect is when someone participates in the construction of something and consequently places higher value in results of their efforts than similar products that they did not participate. This study developed and validated new measures for IKEA Effect assessment, constructed items to represent dimensions making up IKEA Effect, revealed evidence of external validity through relationships with related constructs and investigated internal factor structure of proposed dimensions. It is hypothesized that internal structure of the construct will be comprised of four factors, and disposition to experience IKEA Effect will relate positively to self-efficacy, learning disposition, psychological ownership, and cognitive dissonance.

P-190: RACHEL TALBOTT, JOSEPH FREEMAN, BRIAN BODZIONY, KELLY MUSTARD***Willingness to Change: Development of a New Measure of Organizational Attitude***

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Organizations are ever changing entities. Without employee acceptance, proposed organizational changes risk failure. To increase the likelihood of success, many organizations invest research efforts to identify attitudinal antecedents to better understand and design change strategies. To date, much research has focused on various aspects of change, but a gap in the literature exists on employee perspectives of change. One construct that may provide additional insight into how employees perceive change is individual willingness to change in work settings. We began creating a new measure of willingness to change that focuses on four aspects of change: openness, anxiety, reluctance, and motivation.

P-191: QUINCEY CALDWELL, TAKUDZWA CHIKWATI, CORRION COOPER, KRISTIN WILSON***Development and Validation of a Willingness to Learn Scale***

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: This study describes the preliminary development and validation of a new measure of willingness to learn in work settings. We proposed a three-dimensional construct reflecting learning self-efficacy, learning motivation, and learning orientation; examined internal structure using exploratory factor analysis; and assessed hypothesized relations with six learning-related constructs to evaluate external validity. Overall, the scale dimensions demonstrated strong construct validity, moderate initial reliabilities, and an intercorrelated factor structure. Taken together, this evidence suggests potential utility for and continued development/refinement of the Willingness to Learn Assessment (WLA).

P-192: VIRENDRA NIRWAN, AMANDA ARMOUR, ASHLEY BAKER, TIFFANIE JONES***Development and Preliminary Validation of a Multidimensional Turnover Intention Scale (MTIS)***

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Recent research suggests that the global annual turnover rate is approaching nearly 20%, an increasing concern for international organizations. Excessive employee turnover has multiple implications for organizations, from low workforce morale to the exhaustion of significant resources. Hence, the present study describes the initial development of a multidimensional turnover intention scale to enable organizations to identify potential problems and engage in appropriate preventive actions. Because existing measures typically define only behavioral and cognitive aspects of turnover intention, the current study expanded the multidimensional approach by proposing and assessing behavioral, cognitive, and affective dimensions of the turnover intention construct.

P-193: CLAIR TISCHNER***Note-Taking Method and Recall Performance: Effects of Computer-Based Versus Handwritten Note-Taking***

FACULTY SPONSOR(S): KALIF VAUGHN, PSYCHOLOGICAL SCIENCE

Abstract: Students often take notes during lectures so that they can restudy them later (e.g., before an exam), but which note-taking method is best? In our experiment, students watched a video on cellular respiration and either took notes on pen and paper, took notes electronically, restudied the video, or took no notes and did not restudy the video (control condition). Participants then answered general questions about the video (e.g., "What are the two forms of cellular respiration?"). Results from this research will inform students about the best note-taking strategies and also provide insight into which note-taking method students prefer to use.

P-194: NICHOLAS PRIOR, KATHERINE ROGERS, HUNTER CAMPBELL, MARGARET KELLER, HANSEN SHULTS***Effects of Metabotropic Glutamate Receptor Ligands on Delay-Discounting Performance***

FACULTY SPONSOR(S): JUSTIN YATES, PSYCHOLOGICAL SCIENCE

Abstract: The goal of the present study was to determine the role of metabotropic glutamate receptors (mGluRs) in mediating sensitivity to reinforcer magnitude and sensitivity to delayed reinforcement in a delay-discounting procedure. JNJ 16259685, an mGluR1 receptor antagonist, significantly increased sensitivity to delayed reinforcement, regardless if the delay to the large reinforcer increased or decreased across the session. JNJ 16259685 decreased sensitivity to reinforcer magnitude in rats trained on the descending schedule only. Conversely, MPEP, an mGluR5 receptor antagonist, did not alter performance in

the delay-discounting task. Overall, blocking mGluR1, but not mGluR5, receptors increases impulsive choice.

P-195: HUNTER CAMPBELL, NICHOLAS PRIOR, KATHERINE ROGERS, MARGARET KELLER, HANSEN SHULTS***Effects of Ifenprodil on Amphetamine Reward in High Impulsive Rats***

FACULTY SPONSOR(S): JUSTIN YATES, PSYCHOLOGICAL SCIENCE

Abstract: Because there are few treatments that are effective in blocking psychostimulant reward, the goal of the present study was to determine if ifenprodil, a drug that has previously been shown to reduce the rewarding effects of morphine, can reduce amphetamine reward in high impulsive rats. Rats (n = 32) were tested in a conditioned place preference (CPP) paradigm to assess the rewarding effects of amphetamine. Ifenprodil (3.0 mg/kg) did not decrease amphetamine CPP in high impulsive rats. Instead, ifenprodil tended to increase CPP in low impulsive rats. These results suggest that ifenprodil may not be effective in attenuating psychostimulant reward.

P-196: CASSANDRA PENLEY***NAGPRA: The Good, The Bad, and The Ugly***

FACULTY SPONSOR(S): THADDEUS BISSETT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The intent of the Native American Grave Protection and Repatriation Act (NAGPRA) was to bring scientists and native groups together to compromise. Instead, high-profile legal contests between those groups, such as the 20-year battle over the remains of Kennewick Man, have made NAGPRA about "wins" or "losses," one-sided results that are good for neither side and bad for both. This paper discusses examples of legal cases that contradict the spirit of the legislation, and as counterpoint, describes the successful resolution of indigenous groups' claims of human remains under the umbrella of NAGPRA.

P-197: ZACHARY JENT***The Effects of Toxic Waste Facilities***

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: I chose this topic because I have a great concern about the impact of toxic waste facilities on communities. What sparks my interest is the trend of illness in potentially toxic communities and the impact on specific populations. Data suggests that proximity to toxic waste facilities is correlated with increased health issues. I am focusing on the neighborhood surrounding Pilot Chemical Corporation in Cincinnati. I will map out what specific demographic populations live in proximity to this facility. I am using standard health indicators including comparative mortality and morbidity rates nationwide and in nearby populations to test for health issues.

P-198: SYDNEY BRINKDOEPKE***Research on Problems and Activism Taking Place on Coeur d'Alene Reservation***

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: I am doing this research to address the myth that issues faced by Native Americans are just part of the past; I will present the contemporary issues facing the people of the Coeur d'Alene reservation and will also identify activism that takes place on the reservation to address those issues. I will do this by utilizing content analyses of published work and ideas from sources such as indigenous newspapers and social media.

P-199: ALLISON WARNER***Social Issues and Indigenous Activism on the Fort Apache Reservation***

FACULTY SPONSOR(S): NICOLE GRANT, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The motivation behind this project stems from my passion and knowledge about Native American social issues and community activism. There are common myths and preconceived notions about Native Americans that stand in the way of our understanding of the social issues that the people of the Fort Apache Reservation face. To understand indigenous issues it is important to listen to the voices of Native American people speaking for themselves. My method of research includes content analyses of published sources by indigenous authors, including newspapers, letters, indigenous activist pages, and the reservation's official website.

P-200: SAM THOMPSON

Keeping Track: An Attribute Analysis of Client Paperwork and Work at The Point Arc

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster presents the results of a study on how case workers at The Point Arc of Northern Kentucky organize their tasks and work. The Point helps people with physical and/or mental disabilities find employment and a place in society, during which much paperwork is created for each client. This research used ethnosemantic methods of interviews, card sorting, and attribute analysis to discover how case workers organize client paperwork and the types of work that they do for clients.

P-201: SHELBY PENNYCUFF

The Pen is Mightier: The Microculture of English Professors

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster presents the results of ethnographic research on the microculture of university English faculty members. Data was collected through ethnographic interviews and pile-sorting in an effort to identify themes within their microculture. The findings of this research include an underlying theme of passion for teaching their students, as well as three aspects that guide their profession: (1) the tools they, as faculty, use to teach the students (2) the writing they teach students; and (3) what elements are seen in that writing.

P-202: CHAD DUNBAR

The Secret World of DC Universe Online Gamers: Ethnography of Massively Multiplayer Online Gamers

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster is the result of an ethnosemantic project examining the meanings, routines, shared experiences, and social structures created by members of a microculture of online video gamers, who collectively play a cross-platform massively multiplayer online game called DC Universe Online. Methods used include ethnographic interviews, card-sorting, constructing folk term taxonomies, and immersion in gaming experience alongside informants. A theme that emerged from this research was one of creating social bonds within the game that extended offline.

P-203: LAURA BRONTE MURRELL, CAILEY RADCLIFFE, EMILY FOX, KOURTNEY ZIGELMIER

Attribute and Network Analyses of Sugar Cane Varieties among Northern Belize Farmers

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster presents the results of undergraduate research during an ethnographic field school in Orange Walk District, Belize, during June 2016. In collaboration with the National Institute of Culture and History, Sugar Industry Research

and Development Institute, and both the Belize Sugar Cane Farmers and Progressive Sugar Cane Producers Associations, ethnosemantic data on sugar cane varieties were collected during interviews with 66 farmers in northern Belize. Data were analyzed using attribute and network analyses to describe the cultural model of sugar cane among northern Belize farmers, which will be used by our collaborators in development programs to improve crop yields.

P-204: KATIE CHASTAIN

Queer Discourse in Convention Culture

FACULTY SPONSOR(S): SHARYN JONES, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Many queer individuals find themselves attracted to anime convention spaces. The purpose of this research project is to understand what social and cultural conditions contribute to these safe spaces. Queer affirming panels presented at conventions include the acceptance and celebration of LGBTQ+ relationships in anime and manga works. The importance of safe spaces is also explored in this project, which involves participant observation, as well as structured and unstructured interviews. Queer discourse in conventions culture attempts to understand the correlation between the LGBTQ+ community and anime convention culture from a transdisciplinary social science perspective.

P-205: SAGE BOYERS

Artifacts & Archives: A Comparative Study at the 1839 Parker Academy

FACULTY SPONSOR(S): SHARYN JONES, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The Parker Academy was established in 1839 with the goal of creating a community where anyone could receive an education, regardless of race or gender. Excavations began in spring of 2015 and have continued through 2016. In addition to the many interesting artifacts and features that have been uncovered, NKU holds an extensive archive on the Academy. Through the analysis of archival data and archaeological remains the students who once attended the academy come alive. My project compares and contrasts archaeological data with archival information in order to build a rich and more accurate picture of daily life.

P-206: BRITTANY CARREON

The Future of Elderly Living Arrangements and its Impacts on Social Workers' Role and Status in American Society

FACULTY SPONSOR(S): BONI LI, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: It is estimated that every single day there are more than 10,000 baby boomers in America that will reach senior age. This trend will continue without slowing down. Our society must take action to create new strategies and policies to meet these challenges. This research focuses on the establishment of new social policies to assist the elderly, their family, caregivers and the important role of social workers in today's society. A high percentage of the elderly remain at home as their living arrangements therefore they will need assistance from different social care services among which social workers can play in role.

P-207: MATT STEINHAUER

Fukushima's Aftermath

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster focuses on Fukushima's aftermath and its widespread effects on the Japanese population. By examining the nuclear disaster as well as other recent events including earthquakes through a cultural lens, findings include broadening attitudes of community and unity as well as religious and even spiritual aspects to coping with these catastrophic events.

P-208: JANE SOLLBERGER***Western Diet Impact on Southeast Asian Health***

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster examines the impact of Western dietary lifestyle on Southeast Asian people, specifically the Chinese population. A comparison of the typical Asian diet with the typical Western diet explains how someone previously consuming an Asian diet can experience health problems when switching to a Western diet. Obesity, cardiovascular diseases, diabetes, and cancer are linked to a Western diet and have been found on the rise in Southeast Asian people. To address this, surveillance and monitoring of health statistics must continue, as well as education about the negative health effects associated with the Western diet and encouragement of physical activity.

P-209: DREW TIMMONS***The Lookout House: A Look Into The History And Material Culture Of Northern Kentucky's Gambling***

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Understanding the cultural context and background of a pair of dice in the collections of Northern Kentucky University's anthropology museum initiated this project. Studying and preserving material culture is important in exhibitions and museums as it allows for a better understanding of the people who used the material and allows for future research into the culture and the material. This poster examines the history of gambling in Northern Kentucky and its impact on the area. Specifically the Lookout House, a famous gambling den, its history, its significance, as well as who frequented the establishment is the focus of this research.

P-210: MEGAN MARSHALL, MICHAYLA LUSTENBERG***Guess Who?: A Biodemographic of NKU's Anthropology Human Skull Collection***

FACULTY SPONSOR(S): MONICA WAKEFIELD, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: In the Laboratory of Anthropology at Northern Kentucky University, there is a collection of 16 NAGPRA compliant human skulls. We decided to do an osteological profile on the collection to uncover if perhaps, we had a collection with similar ages, sex, and geography ancestry. After analyzing the skulls through various methods, we have a majority of middle-aged males with primarily Asian ancestry traits. The collection contains a few outliers being younger, older, female, and of different or mixed ancestry than the majority. Although our results did support our hypothesis, more research is required for our data to be significant.

P-211: JENNIFER WARDLOW***The Dehumanization of Franz Marc: Looking Back into German Expressionism***

FACULTY SPONSOR(S): NANCY JENTSCH, WORLD LANGUAGES & LITERATURES

Abstract: At the turn of the 20th century, a new artistic movement was developed across Germany rejecting the conservative social and political values that became the stranglehold of the nation. The artists of the Expressionistic movement employed their artwork to express deep humanistic concerns about the ambivalent attitude towards society. An in-depth analysis of Franz Marc, a leader of the German Expressionism art movement, shows his recognition of the dehumanization and alienation of modernization in urban life. Using Franz Marc's artistic styles and techniques, an original art piece was created to show that this viewpoint is still prevalent in modern society.



STUDENT PARTICIPANTS

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CONFERENCE OF HONORS

MONDAY, APRIL 17, 2017

STUDENT UNION 105

8:00-8:50 AM

Melissa Jackson (Erin Strome)
The Effects of the Target of Rapamycin Pathway on Genome Stability

Mikael Soto (Traian Marius Truta)
Inside the Queen City

9:00-9:50 AM

Jason Callihan (Keith Walters)
Applications of Organometallic Chemistry to Contemporary Solar Cell Technology

10:00-10:50 AM

Greg Jones (Alexis Pulos)
Paint by Death: Characterization in Dark Souls 3

Miranda Lewis (Doug Krull)
The Effect of Religion on Mortality Salience in a Consumer Psychology Context

11:00-11:50 AM

Nicole Norman (Rachael Banks)
A Lesson in Loss

Peter Huffman (David Thomas)
Hipster Images: The Myth of the Archetypal Record Store Customer

12:00-12:50 PM

Molly Hartig (Angela Lipsitz)
Reducing Prejudice Against Transgender Individuals Using Imagined Contact

Jane Sollberger White (Teresa Huber)
Population Health in NKY: Stigma Experienced by Opioid-Dependent Pregnant Women

1:00-1:50 PM

Nick Snider (Jessica Hindman)
Reclaiming the Narrative: Understanding my LGBT Identity through Personal Essays

Laura Bronte Murrell (Douglas Hume)
A Cross-Cultural Analysis of Perceived Impacts on the Environment

2:00-2:50 PM

Nathaniel Hudson (Hongmei Wang)
Geospatial Distribution Analysis of Sasquatch Sighting Locations in North America

Corey Shrader (Timothy McCord)
Reconciling Technology with Nature

3:00-3:50 PM

William Bardgett (Jonathan Reynolds)
To Save a Party: The Story of President Garfield and His Assassin

Jared Koshiol (Greg De Blasio)
Improving Lyric Intelligibility in Live Music and Concert Settings

4:00-4:50 PM

Christina Spears (John Carmen)
Discovery of Novel Antimicrobials

Aubrey Franzen (Richard Fox)
Diagnosing Student Learning Errors Through Classification

CONFERENCE OF HONORS

TUESDAY, APRIL 18, 2017

STUDENT UNION 105

8:00-9:15 AM

Erica Adams (John Carmen)
Antibiotic drug potential of microorganisms that inhabit native Kentucky insects

Lauren Hensley (Richard Fox)
Automated Music Recognition Using Pattern Recognition in AI

Madelyn R. Neidhardt (Jessica Hindman)
Lost in Translation Cultural Comparisons of American and Dominican Culture

9:25-10:40 AM

Maggie Fulmer (Ali Godel)
The Sounds that Shape Us

Kristen Ghouse (Bethany Noblitt)
Attitudes of NKU Students Toward Mathematics

Peter Enzweiler (Donelle Drees)
Local Food for a Sustainable Tomorrow

10:50-12:05 PM

Austin Alley (Zachary Hart)
The Generation of Life — An Introspective Study of Millennials and End-of-Life Care

Kaitlin Dyer (Carl Miller)
Patient Rights: Bridging the Gap Between Health Professionals and their Patients

Shelby Russell (Belle Zembrod)
The Physical and Cognitive Benefits of Equine Assisted Therapy

12:15-1:30 PM

Lexie Lowe (Nancy Kersell)
Purging the Deutschland: A Study on the Cultural Eugenics of Degenerate Art

Hayley Kirley (John Alberti)
But Isn't that just for kids?: Digging Deeper into the Young Adult Genre

Cadence Blevins (Douglas Hume)
A Network Analysis of the Northern Kentucky University Anthropology Program

3:05-4:20 PM

Madison Rich (Kristin Hornsby)
Little White Magic: The State of Transgender Representation in Theater and Fictional Media

Emanuel Picazo (Joan Ferrante)
Using Dance to Mourn the Creation of Racial Categories in The United States

Kirsten Hurst (Joan Ferrante)
Becoming Color Brave

CONFERENCE OF HONORS

WEDNESDAY, APRIL 19, 2017

STUDENT UNION 105

8:00-8:50 AM

Shelby Lesak (Patrick Schultheis)
Rural Healthcare in Kentucky

9:00-9:50 AM

Ronald Brookbank (Donelle Dreese)
Autobiography Through Exploration of Body

Ryan Downey (Rhonda Davis)
University Interdisciplinary Techniques to Interdisciplinary Thinking in Students

10:00-10:50 AM

Jacob Telesz (Amber J. Onorato)
The Synthesis of Diketopiperazines as Potential Antifungal Molecules

Jen McMahon (Nick Brummer)
Personal Portfolio

11:00-11:50 AM

Sabrina Harral (Jacqueline Emerine)
Gender Differences in Body Image Issues

Rena Nelson (Robert Wilcox)
How Studying Abroad Influences Civic Literacy

12:00-12:50 PM

Keegan Johnson (Ali Godel)
Fandoms: Modern Communities Shaping our Culture

Christine Rowland (Sookyoung Cho)
Personal Organizer

1:00-1:50 PM

Katie Ruwe (Brian Robertson)
What is a Stage Manager?

Lillian O'Bryan (Belle Zembrodt)
Empowering Youth Experiencing Homelessness

2:00-2:50 PM

Celina Junker (Nicholas Brummer)
A Cure for Clutter

Alexandria Salyers (Lee Kersting)
Accounting: The Study and Application

3:00-3:50 PM

Kelsey Zalac (Jeff Varrone)
On the Rails of Happiness

Maria Hils (Paul Tenkotte)
Teaching History through Cultural Resources in Cincinnati and Northern Kentucky

4:00-4:50 PM

Jamie Weimer (Christine Curran)
The Effects of Chronic Taurine Exposure in C57BL/6J Mice: A Dose-Response Study

Sarah Kellam (Sara Drabik)
Student-Athlete Documentary

SPECIAL THANKS TO...

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