TABLE OF CONTENTS

TABLE OF CONTENTS ................................................................................................................................. 1

SCHEDULE OVERVIEW .............................................................................................................................. 2

POSTER PRESENTATIONS ............................................................................................................................ 3

ORAL/CREATIVE PRESENTATIONS ........................................................................................................... 9

ABSTRACTS .................................................................................................................................................. 14

INDEX OF PARTICIPANTS .......................................................................................................................... 31
## SCHEDULE OVERVIEW

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 PM</td>
<td>Poster Presentations</td>
<td>BSC 171-173</td>
</tr>
<tr>
<td>3:20 PM</td>
<td>Sociology and Anthropology, Modern</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Classical Languages</td>
<td></td>
</tr>
<tr>
<td>3:40 PM</td>
<td>Service Leadership, Economics</td>
<td></td>
</tr>
<tr>
<td>4:00 PM</td>
<td>History, Sports Business, Philosophy</td>
<td></td>
</tr>
<tr>
<td>4:20 PM</td>
<td>History, Business, African American Studies</td>
<td></td>
</tr>
<tr>
<td>4:40 PM</td>
<td>Health Care Ethics, Medical Humanities</td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Senior Legacy Reception</td>
<td>BSC 170</td>
</tr>
</tbody>
</table>

The University community is invited to attend this reception celebrating the Senior Legacy Symposium participants.
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Recovery Pump Break</td>
<td>Krystal Braynard, Marie Hogan, Sean Lopez</td>
<td>Aerospace &amp; Mechanical Engineering</td>
</tr>
<tr>
<td>Design of a Mission Variable UAS Platform</td>
<td>Timothy Dreyer, Daniel Rolfes, Jacob Schreck, Benjamin Winokur</td>
<td>Aerospace &amp; Mechanical Engineering</td>
</tr>
<tr>
<td>Kombattan</td>
<td>Jon Gonder, Andrew Haar, Safi Islam</td>
<td>Aerospace &amp; Mechanical Engineering</td>
</tr>
<tr>
<td>Paparazzi Tilt-Rotor UAS</td>
<td>Parry Draper, Brian Kovarik, Fabiola Mazon Madrid, Adria Serra Moral</td>
<td>Aerospace &amp; Mechanical Engineering</td>
</tr>
<tr>
<td>The Coolerator</td>
<td>Mike Carlin, John Hannigan, Annie Radville</td>
<td>Aerospace &amp; Mechanical Engineering</td>
</tr>
<tr>
<td>The Role of GLUT1 in Regulation of ROS Levels in Muscle Cells</td>
<td>Emma Dwyer, Gaytri Patel, Chukwuemeka Obi</td>
<td>Biology</td>
</tr>
<tr>
<td>The efficacy of nigericin an an inhibitor of ectromelia viral replication</td>
<td>Allyson Renth</td>
<td>Biology</td>
</tr>
<tr>
<td>Respiratory viral infection elicits distinct gene expression profiles in adult and neonatal airway epithelial cells</td>
<td>Stephanie Zhang</td>
<td>Biology</td>
</tr>
<tr>
<td>Solar Autoclave for Instrument Sterilization</td>
<td>Michael Gilbreth, Christopher Hartman, Yanqui Wang</td>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>Dermal Graft</td>
<td>Ben Minden-Birkenmaier, Kayla Scott, Zach Toth</td>
<td>Biomedical Engineering</td>
</tr>
</tbody>
</table>
Oxidation of Plasmalogen, Low-Density Lipoprotein and RAW 264.7 Cells by Photoactivatable Atomic Oxygen Precursor  
Max Bourdillon  
Chemistry

Integrating Conventional Capillary Electrophoresis with Electrochemical Detection by Embedding Capillary and Electrodes in Epoxy and Polystyrene Devices  
Steven Doonan  
Chemistry

Characterization of DNA-ligating deoxyribozymes  
Katherine Foley  
Chemistry

GreenRoadway  
Brenden Graczak, Jim Kane, Bowen Pei, Rebecca Mitrovich  
Civil Engineering

Creve Coeur Dam and Channel Rehabilitation  
Nathan Lebbing, Justin Schmeltz  
Civil Engineering

Upregulation of miRNA by Epigallocatechin Gallate and Curcumin Inhibit Colon Cancer Cells  
Temitope Adeyeni  
Clinical Laboratory Science

Inhibiting Growth of Biofilms Using Plant Derived Compounds  
Melissa DiMariano, Jaime Miano, Michele Ramirez  
Clinical Laboratory Science

Optimizing a Newly Developed Method of HbF Quantitation for Use in Underdeveloped Countries  
Irene Liu  
Clinical Laboratory Science

Phytochemicals Resveratrol and Silymarin Up-Regulate MicroRNAs in DLD-1 Colon Cancer Cells  
Nicole Mueller  
Clinical Laboratory Science

Induced Crystalization of Hemoglobin C Using a Hypertonic Salt Solution  
Emma Tessier  
Clinical Laboratory Science
## POSTER PRESENTATIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Titles and Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 – 5:00 p.m.</td>
<td>Busch Student Center 171 – 173</td>
<td></td>
</tr>
</tbody>
</table>

**Women in Refrigerators: Gender as a Plot Device in Comic Books**  
Shannon Boyle  
*Communication*

**Politically Correct Communication in College Classrooms**  
Maureen Brady  
*Communication*

**The Power of Social Media for Student Organizations**  
Kaitlyn Schultz  
*Communication*

**Use of the Montessori Approach to Literacy**  
Elizabeth Barton  
*Communication Sciences and Disorders*

**Predictors of Stress in Caretakers of Persons with Dementia**  
Erin Klostermann  
*Communication Sciences and Disorders*

**Patterns of Gesture Use in Adolescent Children with ASD Referred for Social Skills Treatment**  
Christina Gabany  
*Communication Sciences and Disorders*

**Advanced Cubesat Image Processing System**  
Nathan Bossart, Joseph Mayer  
*Electrical & Computer Engineering*

**Applied Portfolio Management**  
Kun Lin  
*Finance*

**Safe-Commute Android Application**  
Jakob Klinger, Aaron Rowe, Krunal Shah, Mark Tabor, Jordan Wisch  
*Mathematics and Computer Science*

**Shawnee Lodge Member Portal**  
Christopher Webb  
*Mathematics and Computer Science*

**A Mouse to a Moose: The Emerging World of Veterinary Radiology**  
Cynthia Lammert  
*Medical Imaging and Radiation Therapeutics, Magnetic Resonance Imaging Program*
POSTER PRESENTATIONS

3:00 – 5:00 p.m.  Busch Student Center 171 – 173

Value of Tc-99m-bicisate balloon test occlusion in preoperative assessment of stroke risk prior to internal carotid artery sacrifice
Ann Havrilla
Medical Imaging and Radiation Therapeutics, Nuclear Medicine Technology Program

Brown fat detected by FDG PET/CT is protective against elevated fasting blood glucose in obese patients
Christine Van Alstine
Medical Imaging and Radiation Therapeutics, Nuclear Medicine Technology Program

Y-90 SIR-Sphere Treatment of Liver Cancer and Alternative Imaging Methods
Jason Wahidi
Medical Imaging and Radiation Therapeutics, Nuclear Medicine Technology Program

Post Radiation Changes: 18F-FDG-PET/CT in Assessment of Patients with Head and Neck Squamous Cell Carcinoma.
Emily Daugherty
Medical Imaging and Radiation Therapeutics, Radiation Therapy Program

Proton Therapy: For the Treatment of Pediatric Medulloblastoma
Carrie Smith
Medical Imaging and Radiation Therapeutics, Radiation Therapy Program

Benefits of PET/CT fusion for Radiation Oncology Treatment Planning
Kara Zimmer
Medical Imaging and Radiation Therapeutics, Radiation Therapy Program

YourPlate
Amy Beischel, Jordyn Faron, Kimaya Joshi
Nutrition and Dietetics

U101 Relationship Wellness: Cravin’ a Healthy Relationship
Katherine Buckley, Erika Collins, Lindsay Kilwin, Gabriella Lavezzi
Occupational Science and Occupational Therapy

Safe and Sound: Considerations for Healthy Environments
Jaclyn Allexan, Brianna Radici, Jessica Reilly
Occupational Science and Occupational Therapy

Student Clinical Reflections on an Occupational Therapy Intervention Program for Children with Reading Difficulties
Kelsey Cook, Annie Flanagan, Maggie Scudder
Occupational Science and Occupational Therapy
<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Department(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juntos, Podemos Ser Sanos: Promoting Wellness in Hispanic Children with Down Syndrome</td>
<td>Julianne Pelger</td>
<td>Physical Therapy</td>
</tr>
<tr>
<td>The Relationship Between Lower Extremity Movement Patterns and Pain During Stair Descent in Females with Patellofemoral Pain</td>
<td>Leah Fischer</td>
<td>Physical Therapy and Athletic Training</td>
</tr>
<tr>
<td>Lower extremity somatosensory deficit prevalence and impact on mobility in persons with multiple sclerosis</td>
<td>Christopher Sorgani</td>
<td>Physical Therapy and Athletic Training</td>
</tr>
<tr>
<td>The Impact of Identity formation, Cultural, and Political Conditions on Open LGBT Representation in State Government</td>
<td>Kirstin Palovick</td>
<td>Political Science</td>
</tr>
<tr>
<td>Economic Implications of the Fourth Amendment</td>
<td>Petina Benigno</td>
<td>Pre-law</td>
</tr>
<tr>
<td>ALIVE and Psychological Abuse: Finding Meaning in an Invisible Threat</td>
<td>Laurel Cronin</td>
<td>Psychology</td>
</tr>
<tr>
<td>The Role of Observer Effects and Feedback on Performance</td>
<td>Ratna Garigipati, Victoria Stake, Mallory Stumpf, Mark Tapia</td>
<td>Psychology</td>
</tr>
<tr>
<td>Antecedents of Seeking Social Support in the Workplace</td>
<td>Jessica Kuehler, Ashley Nussbaum</td>
<td>Psychology</td>
</tr>
<tr>
<td>The Power of Independent Studies</td>
<td>Jessica Ahlemeyer</td>
<td>School of Nursing</td>
</tr>
</tbody>
</table>
POSTER PRESENTATIONS

3:00 – 5:00 p.m.  Busch Student Center 171 – 173

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy in Nursing Beyond the Bedside</td>
<td>Maureen Mahon</td>
<td>School of Nursing</td>
</tr>
<tr>
<td>College Students Advocate for MicroFinancing Partners in Africa</td>
<td>Elizabeth Gentile</td>
<td>Social Work</td>
</tr>
<tr>
<td>City Greens Cookbook: Affordable Healthy Meals for St. Louis</td>
<td>Emily Gries</td>
<td>Social Work</td>
</tr>
<tr>
<td>End-Of-Life Care Education in Rural Southern Missouri</td>
<td>Stacey Williams</td>
<td>Social Work</td>
</tr>
<tr>
<td>Inklings</td>
<td>Briana Kagy</td>
<td>Studio Art</td>
</tr>
<tr>
<td>Traveling through Artmaking</td>
<td>Hongchen Li</td>
<td>Studio Art</td>
</tr>
</tbody>
</table>
ORAL/CREATIVE PRESENTATIONS

3:00 p.m.

BSC 251A  Impact of Chiefly Power on Mississippian Volume: The Relationship between Population and Social Complexity
Kathryn Ruble
Sociology and Anthropology

BSC 251B  Women’s New Role in the Aftermath of the Civil War in El Salvador: The Case of La Valencia and San Ramon
Claire Moll
Modern & Classical Languages

BSC 253A  Sports Business: Internships Serving the Community
Barrett Lanham
Service Leadership

BSC 253B  Coming of Age in a Lost Generation: Nick Adams, Ernest Hemingway, and the American Bildungsroman Tradition
O. Adam Cruz
English

BSC 253C  Empathy in the Doctor-Patient Relationship
Brianne Haggard
Medical Humanities

BSC 253D  On the Road with Richard Prince: Beat Movement Themes in the art of Richard Prince
Hannah Soltys
Art History

BSC 254  Sanitas South City Prep Health Program
Amanda Bartelson, Anna Johnson
Honors

BSC 256  Creve Coeur Dam and Channel Rehabilitation
Nathan Lebbing, Justin Schmeltz
Civil Engineering
3:20 p.m.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 251A</td>
<td>Spatial Distribution of Subsurface Artifacts Due to Chisel Plow Implementation</td>
<td>Robert Jonathan</td>
<td>Sociology and Anthropology</td>
</tr>
<tr>
<td>BSC 251B</td>
<td>The Globalization of Salsa: A Transglobal Phenomenon in its Local Contexts</td>
<td>Alfonso Sasieta</td>
<td>Modern &amp; Classical Languages</td>
</tr>
<tr>
<td>BSC 253A</td>
<td>The Affordable Care Act and Medicaid Expansion in Missouri</td>
<td>Richa Gupta</td>
<td>Economics</td>
</tr>
<tr>
<td>BSC 253B</td>
<td>Wilde’s Marginal Philosophy: Tracing Intellectual Enthusiasm from “Notebook on Philosophy” to The Picture of Dorian Gray</td>
<td>Bridget Bergin</td>
<td>English</td>
</tr>
<tr>
<td>BSC 253C</td>
<td>ECMO as an Ethical Means of Organ Preservation</td>
<td>Allegra Merriweather</td>
<td>Medical Humanities</td>
</tr>
<tr>
<td>BSC 253D</td>
<td>Industrial Zeitgeist: Shifting Sublime in Turner’s ‘Keelmen Heaving in Coals by Moonlight’</td>
<td>Catherine Niehaus</td>
<td>Art History</td>
</tr>
<tr>
<td>BSC 254</td>
<td>Connecting Women in St. Louis with Health Information</td>
<td>Laura Pape</td>
<td>Honors</td>
</tr>
<tr>
<td>BSC 256</td>
<td>Contextuality and Nonlocality in Consistent Histories Quantum Mechanics</td>
<td>Timothy Schnitz</td>
<td>Physics</td>
</tr>
</tbody>
</table>

3:40 p.m.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Instructor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 251A</td>
<td>&quot;That Word Known to All&quot;: An Analysis of Neanderthal Speech Capabilities</td>
<td>Ashley Heavilon</td>
<td>Sociology and Anthropology</td>
</tr>
</tbody>
</table>
BSC 251B  Bridging the Communication Gap with Spanish-speaking Patients in American Medicine  Alexandra Abbate  Modern & Classical Languages

BSC 253A  "Funding the Future of Innovation: Biomedical Research for the 21st Century  Anthony Traina  Economics

BSC 253B  He Went Through the Floor  Bob Kopfensteiner  English

BSC 253C  Health Care Issues in the Israel-Palestine Conflict  Shelly Gulhar  Health Care Ethics

BSC 253D  Classical Guitar Recital  Ben Minden-Birkenmaier  Music

BSC 254  Understanding Physician Apprehension in Elementary and Middle School Children  Amanda Waltos  Honors

BSC 256  Determining the directivity of deep earthquakes in the Japan-Okhotsk Region  Elena Baluyut  Physics

**4:00 p.m.**

BSC 251A  Figures of Fear: White Panic in a "Post-Racial" America  Christina Marie LaFon  Sociology and Anthropology

BSC 251B  Livy’s and Polybius’ Narrative of Hannibal and the Presentation of Rome’s Military Machine  Jordan Slavik  History

BSC 253A  Student Athlete Supplement Education  Grace Bonoma, Brady Moore, Kailey Pretzaff, Megan Rogers, Cassandra Sperruzza  Sports Business

BSC 253B  In Defense of Ontic Structural Realism  Ben Conover  Philosophy
Hidden Strength
Taelon Smith
African American Studies

Their Voice Matters
Austin Beals
Theatre

Refugee Resettlement in St. Louis: The Social Impacts of Resettlement Through the Eyes of St. Louis' Local Non-Profit Organizations
Beatrice Abraham
Political Science

Touch Based BAC Measuring System
Shawn Ficker, Gayatri Nijsure, Richard Pham
Electrical & Computer Engineering

4:20 p.m.

Just Fix it! A Dramaturgical Analysis of a Panera Bread
Mark Benton
Sociology and Anthropology

Dermal Graft
Alexander Mosakowski
History

Fan Experience Index: College Basketball
Matthew Braun, Will Deusche, Gavin Hagar, John Mueller, William Starnes
Business

What's with Quantum Mechanics? Comparing Relational Quantum Mechanics and Consistent Histories
Timothy Schmitz
Philosophy

Sexual Abuse Freedom Education
Monique Manuel
African American Studies
BSC 253D
Zhuangzi and Urban Poverty
Stewart Heatwole
The Micah Program

BSC 254
Lockean Privacy and The Court: An Avenue for LGBT Rights in America
Jesse Doggendorf
Political Science

4:40 p.m.
BSC 253C
Oppositional Identity Among African Americans
Dazialee Goodwin
African American Studies
ABSTRACTS

Krystal Braynard, Marie Hogan, Sean Lopez
Aerospace & Mechanical Engineering
Faculty Sponsor: Sanjay Jayaram

Vapor Recovery Pump Break
The Vapor Recovery Pump Break is a breakaway designed to be connected directly to a fuel dispenser. This project was given to us by Husky Corporation, a local company who currently has a line of various breakaways. A breakaway is a mechanical device that is connected between the dispenser and the nozzle at a gas station. This acts in the event of a “drive off” to minimize the amount of fuel loss and damage. The product is designed to be incorporated into Vapor Recovery systems and has the potential to pass both UL and ATEX standards for a Pump Break.

3:00-5:00 PM  BSC 171-173  Table 01

Timothy Dreyer, Daniel Rolfes, Jacob Schreck, Benjamin Winokur
Aerospace & Mechanical Engineering
Faculty Sponsor: Raymond Lebeau

Design of a Mission Variable UAS Platform
The Maveric is a UAS produced by Prioria Robotics. The focus is to modify the aircraft’s wings and propulsion system in order to maximize its performance for specific missions, while retaining its modular design. These missions include maximum endurance, dash velocity, and maneuverability. A complete iteration includes the new wing’s analytical model, mold creation, carbon-fiber layup, and wind tunnel testing. The wing shapes were adjusted in order to maximize the aircraft performance for each mission. Simply by attaching the respective mission’s wing to the fuselage, and replacing the motor, the Maveric UAS is adapted to the mission at hand.

3:00-5:00 PM  BSC 171-173  Table 02

Jon Gonder, Andrew Haar, Safi Islam
Aerospace & Mechanical Engineering
Faculty Sponsor: Sanjay Jayaram

Kombattan
We are the lead designers for SLU Robotics with the ultimate goal of winning the 2014 STEM TECH Olympia's 120lb combat robot competition. We are required to design, build, and test a controllable robot that will compete. The robot has a long list of rules and requirements that must be upheld and the design must pass inspection before competing. From research and design analysis, we agreed that in order for the robot to be successful, it needs to be invertible, have a strong defense, and have a more simplistic design. With this in mind we present the Kombattan: a lean mean fighting machine.

3:00-5:00 PM  BSC 171-173  Table 03

Parry Draper, Brian Kovalik, Fabiola Mazon Madrid, Adria Serra Moral
Aerospace & Mechanical Engineering
Faculty Sponsor: Raymond Lebeau

Paparazzi Tilt-Rotor UAS
The Paparazzi tilt-rotor unmanned aerial system (UAS) merges the popular technology of UAVs and tricopters in order to produce a UAS capable of climbing and cruising efficiently like a UAV as well as taking off and landing vertically, hovering, and maneuvering like a tricopter. With a low cost and highly versatile design, this platform may be used for military reconnaissance, search and rescue missions, and numerous commercial applications where a multi-use platform is desired. A pragmatic and iterative design methodology was employed, with a focus on mission requirements and optimizing the system’s capabilities and will be verified via flight testing.

3:00-5:00 PM  BSC 171-173  Table 04

Mike Carlin, John Hannigan, Annie Radville
Aerospace & Mechanical Engineering
Faculty Sponsor: Sanjay Jayaram

The Coolerator
The world is in need of a self-sustaining unit that is capable of keeping food and drinks cold without the use of ice. Currently, there are only a couple of products on the market. The problem is that these products are heavy and expensive, and most of them require a 12 V plug in source. Our team is confident that we can create a competing product that would revolutionize today’s coolers. By combining a traditional cooler with a refrigeration cycle, The Coolerator will be able to keep an environment refrigerated at or below 40 degrees Fahrenheit, diminishing the chance of food spoiling.

3:00-5:00 PM  BSC 171-173  Table 05

Lyell Brown, Cody Francis, Jake May, Jeremy Smith
Aerospace & Mechanical Engineering
Faculty Sponsor: Raymond LeBeau

C.R.O.N.U.S.: An Exploration of Saturn's moon, Titan
CRONUS is an exploration mission concept for scientific surveillance on Saturn’s moon, Titan. The mission flies a UAV through Titan’s lower atmosphere to survey the surface for liquids. The goal is to definitively prove the existence of surface liquids on the moon and to obtain scientific data of Titan’s peculiar atmosphere. The discovery of surface liquids with potential prebiotic molecules would be groundbreaking in the study of life origins. Titan’s low-gravity of 1.352 m/s² (roughly one-eighth of Earth's) and high atmospheric density, about 5.3 kg/m³ at the surface (more than four times that of Earth) make it ideal for aircraft.

3:00-5:00 PM  BSC 171-173  Table 06
Oppositional Identity Among African Americans

The theory of oppositional identity suggests that blacks scorn behaviors associated with whites. This causes oppositional identity which is exemplified by rejecting “white behaviors.” This behavior is then applied to anything deemed mainstream culture. To measure oppositional identity, researchers will issue a survey to African Americans. The survey will utilize the priming method to assess the degree to which oppositional identity is expressed. It is hypothesized that forming an oppositional identity is a coping mechanism to combat the cognitive dissonance. Knowing this, researchers can look for strategies to change the current oppositional cultural frame associated with oppositional identity.

4:40-5:00 PM  BSC 253 C

Sexual Abuse Freedom Education

C.C’s S.A.F.E House is “A place where families come to get free”. As a ministry first, we seek to provide healing to the children and their families who have been affected by sexual abuse against the child and/or children. We function as a safety net for these individuals by providing therapy, education, and raising awareness of the issue of child sexual abuse throughout the community and state. Our goal is to prevent of future abuse, and to provide support and services to every child victim on the road to recovery. We believe that with prayer and positive guidance and support, we can prevent the negative impact that sexual abuse can have on individuals, communities, and society.

4:20-4:40 PM  BSC 253 C

Hidden Strength

The topic of this project is Black identity and image as it relates to power and survival in the American context. The project will work to address the oppressive misconceptions of Blacks and how Blacks are able to use said misconceptions to their benefit. The power found in embodying stereotypes in order to function in American society as well as using them as a means to achieve some ends will be discussed. The project will analyze the origins and purpose for Black caricatures and then work to explore the gray area surrounding positive attributes to these faces. The effect of the stereotypes on Black identity will also be discussed to show how donning a stereotyped mask affects the identity of the individual. The piece will also work to satire the current state of Black America incorporating public figures, art, studies, movements and facets.

4:00-4:20 PM  BSC 253 C

The Role of GLUT1 in Regulation of ROS Levels in Muscle Cells

Reactive oxygen species (ROS) have the potential to cause insulin resistance. Glucose transporter 1 (GLUT1) transports glucose and dehydroascorbic acid, which aid in antioxidant defense. We hypothesized that conditions decreasing GLUT1-mediated transport would cause increased ROS levels in L6 myoblasts, while conditions increasing GLUT1-mediated transport would result in decreased ROS levels. GLUT1-S490A increased ROS levels and prevented the ROS-lowering effect of the ATM activator, doxorubicin. In contrast, expression of GLUT1-S490D lowered ROS levels, prevented an increase in ROS when ATM was inhibited, and prevented the pyrogallol-induced decrease in insulin signaling. We concluded that GLUT1 helps regulate ROS, which affects insulin signaling.

3:00-5:00 PM  BSC 171-173  Table 32
Allyson Renth
Biology
Faculty Sponsor: Robert Aldridge

The efficacy of nigericin as an inhibitor of ectromelia viral replication
Poxviruses remain a public health concern due to their potential use as bioterrorist agents. Currently, cidofovir is the only licensed antiviral; however, cidofovir is limited by its nephrotoxicity and administration route. We used ectromelia virus in mice as a surrogate for poxviruses that infect humans - such as variola (etiological agent of smallpox) and monkeypox. Our studies employed cell toxicity and plaque reduction assays to determine that nigericin was able to prevent viral replication in vitro. These data initiated in vivo studies that began by determining the appropriate maximum tolerated dose of nigericin that could be used in mice.

3:00-5:00 PM  BSC 171-173  Table 33

Stephanie Zhang
Biology
Faculty Sponsor: Laurie Shornick

Respiratory viral infection elicits distinct gene expression profiles in adult and neonatal airway epithelial cells
During respiratory viral infection, airway epithelial cells play an essential role in host defense, but little is known about their immune role during viral infection in neonates. Previous results demonstrated that neonates have reduced inflammation and delayed cDC migration compared to adults. We hypothesized that these results were due to differences in gene expression of the airway epithelium. Real-Time PCR measured the tracheal epithelial cell mRNA levels of MIP-2, MUC5ac, and PGD2 synthase. The results demonstrate that MIP-2 mRNA levels were decreased for neonates as compared to adults, while MUC5ac and PGD2 synthase were increased for neonates.

3:00-5:00 PM  BSC 171-173  Table 34

Michael Gilbreth, Christopher Hartman, Yanqui Wang
Biomedical Engineering
Faculty Sponsor: Gary Bledsoe

Solar Autoclave for Instrument Sterilization
Many medical clinics around the world have no means of sterilizing their medical instruments due to a lack of electricity or funding. By using a combination of solar technology and a pressure cooker, we are attempting to create an inexpensive, mobile autoclave capable of creating steam for sterilization in about two hours. This project aims to provide a solar-powered alternative to electrically powered autoclaves that cannot function in remote areas of the world.

3:00-5:00 PM  BSC 171-173  Table 07

Ben Minden-Birkenmaier, Kayla Scott, Zach Toth
Biomedical Engineering
Faculty Sponsor: Gary Bledsoe

Dermal Graft
Fabrication of Manuka honey based antibacterial scaffolds: Honey has been used since ancient times to treat dermal injuries. Of particular interest to the medical field is the specific Manuka honey from New Zealand. This Manuka honey not only has the inherent hydrogen peroxide producing properties of standard honey, but also contains a Unique Manuka Factor (UMF) known to inhibit growth of a number of antibiotic resistant bacterial strains. While the antibacterial effects of Manuka honey are known, the ability to deliver this material in a clinically relevant manner is still far from ideal. The student will investigate the incorporation of Manuka honey in a variety of formulations into an electrospun nanofibrous scaffold for use in dermal regeneration. The student will optimize the concentration of honey in the scaffold and evaluate the structure’s rate of degradation and honey release kinetics in vivo.

3:00-5:00 PM  BSC 171-173  Table 08

Matthew Braun, Will Deuschle, Gavin Hagar, John Mueller, William Starnes
Business
Faculty Sponsor: Anastasios Kaburakis

Fan Experience Index: College Basketball
The purpose of the this project is to show what universities must do to increase attendance at their college basketball games. In order to do so, we have established several factors that play the biggest roles in attendance. We have researched these factors and will score them and weight them in an excel spreadsheet. We have created two models, one for the power conferences and one for the mid-major conferences in the NCAA. With two separate models, we can then compare schools within either conference as well as show which type of conference is more suitable for any individual school, using a cross-conference analysis.

4:20-4:40 PM  BSC 253 A
Max Bourdillon
Chemistry
Faculty Sponsor: Ryan McCulla

Oxidation of Plasmalogen, Low-Density Lipoprotein and RAW 264.7 Cells by Photoactivatable Atomic Oxygen Precursor
The oxidation of lipids by endogenous or environmental reactive oxygen species (ROS) generates a myriad of different lipid oxidation products that have important roles in disease pathology. The lipid oxidation products obtained in these reactions are dependent upon the identity of the reacting ROS. The photoinduced deoxygenation of various aromatic heterocyclic oxides has been suggested to generate ground state atomic oxygen (O[3P]) as an oxidant; however, very little is known about reactions between lipids and O(3P). To identify lipid oxidation products arising from the reaction of lipids with O(3P), photoactivatable precursors of O(3P) were irradiated in the presence of lysoplasmeneylcholine, low-density lipoprotein and RAW 264.7 cells under aerobic and anaerobic conditions. Four different aldehyde products consistent with the oxidation of plasmalogens were observed. The four aldehydes were: tetradecanal, pentadecal, 2-hexadecenal and hexadecanal. Depending upon the conditions, either pentadecanal or 2-hexadecanal was the major product. Increased amounts of the aldehyde products were observed in aerobic conditions.

3:00-5:00 PM  BSC 171-173  Table 35

Katherine Foley
Chemistry
Faculty Sponsor: Dana Baum

Characterization of DNA-igating deoxyribzymes
Recently, we have identified catalytic DNA, called deoxyribzymes, capable of ligation between two DNA substrates. We seek to characterize these new deoxyribzymes, including to assess the substrate sequence generality when catalyzing ligation reactions. We have initially tested the nucleotides at the ligation junction to see if all possible combinations can be ligated. Additionally, substrates that represent systematic changes to the sequences used in our in-vitro selections are being tested in ligation reactions to investigate substrate sequence generality. The results of these studies and the potential applications of these DNA-igating deoxyribzymes will be discussed.

3:00-5:00 PM  BSC 171-173  Table 37

Steven Doonan
Chemistry
Faculty Sponsor: R. Scott Martin

Integrating Conventional Capillary Electrophoresis with Electrochemical Detection by Embedding Capillary and Electrodes in Epoxy and Polystyrene Devices
Capillary electrophoresis with electrochemical detection (CEEC) provides an efficient analytical method with nearly real-time analysis. The expertise needed for current methods limits commercial applications, but this work describes a novel CEEC system that is robust and reproducible. A capillary, palladium decoupler, and detection electrode were suspended in commercially available epoxy or polystyrene and interfaced with a poly(dimethylsiloxane) (PDMS) microchannel. Despite band broadening, separations of neurotransmitters yielded 50,000-120,000 theoretical plates with a detection limit of 550 nM for norepinephrine. Similarly, integration of a capillary loop to microchip electrophoresis added separation length without the hydrophobicity and band broadening of extended PDMS channels.

3:00-5:00 PM  BSC 171-173  Table 36

Brenden Graczak, Jim Kane, Bowen Pei, Rebecca Mitrovich
Civil Engineering
Faculty Sponsor: William Lindquist

GreenRoadway
GreenRoadway’s purpose is to improve stormwater drainage, accommodate multi-modal transportation, and increase environmental awareness through the use of innovative stormwater management practices, pervious pavement bicycle lanes and sidewalks, and various safety features along the section of Grand Boulevard that runs through Saint Louis University's campus between Laclede Ave. and Lindell Blvd. This section of road has significant road damage that is causing unsafe conditions for both the commuters and pedestrians. The roads poor drainage, deep rutting, and lack of bicycle lanes are the three major areas this project is looking to address.

3:00-5:00 PM  BSC 171-173  Table 09

Nathan Lebbing, Justin Schmeltz
Civil Engineering
Faculty Sponsor: William Lindquist

Creve Coeur Dam and Channel Rehabilitation
The purpose of the project is to rehabilitate a dam which is positioned at the end of a detention pond system in Creve Coeur. The current dam has repeatedly failed, and the goal of the project is to replace this it with an earthen dam which will serve to control the outflow from an upstream office park using a new culvert design.

3:00-5:00 PM  BSC 171-173  Table 10
Temitope Adeyeni  
Clinical Laboratory Science  
Faculty Sponsor: Uthayashanker Ezekiel

**Upregulation of miRNA by Epigallocatechin Gallate and Curcumin Inhibit Colon Cancer Cells**

Dietary factors are important in Colorectal Cancer development. Studies have shown that phytochemicals, Epigallocatechin gallate (EGCG) and Curcumin inhibit Colorectal Cancer cell proliferation. However, mechanisms by which these phytochemicals act have yet to be elucidated. Several reports indicate that microRNA (miRNA) expression patterns vary between healthy and cancerous tissue. Since miRNA15a and miRNA are down-regulated in Colorectal Cancers, it is proposed that EGCG and Curcumin may inhibit cancer cell proliferation by up-regulating miRNA15a and miRNA16 expression in the cancer cells. The up-regulation of miRNA 15a, miRNA 16 and decreased cell survival observed following EGCG and Curcumin treatment support this hypothesis.

3:00-5:00 PM  BSC 171-173  Table 12

Melissa DiMariano, Jaime Miano, Michele Ramirez  
Clinical Laboratory Science  
Faculty Sponsor: Rita Heuertz

**Inhibiting Growth of Biofilms Using Plant Derived Compounds**

Biofilms are communities of microbes that adhere to surfaces (biotic or abiotic like medical devices) and form protective polymeric matrices. Biofilms are known to increase degree of antimicrobial resistance and decrease effectiveness of immune responses. Pseudomonas aeruginosa is a major cause of chronic lung infections in cystic fibrosis patients and methicillin-resistant Staphylococcus aureus is an organism that continues to develop increased antimicrobial resistance. Both of these bacteria are capable of forming biofilm that is associated with pathogenesis thereby indicating the importance of identifying biofilm inhibitory agents. Since biofilms cause antimicrobial resistance, use of alternative medicine strategies becomes attractive. Published results of antibacterial action of plant-derived compounds such as epigallocatechin gallate, plumbagin, rosmarinic acid, curcumin, glycyrrhetinic acid and silymarin were hypothesized to inhibit biofilm formation of Pseudomonas aeruginosa and Staphylococcus aureus. Using a crystal violet procedure for biofilm quantitation, effect of the plant compounds on biofilm formation was measured. Plumbagin, rosmarinic acid, silymarin and curcumin had no effect on biofilm formation of Staphylococcus aureus and Pseudomonas aeruginos. Biofilm formation by Staphylococcus aureus increased with increasing concentrations of epigallocatechin gallate thereby appearing to supplement its growth; however, biofilm formation of Staphylococcus aureus was inhibited by glycyrrhetinic acid. While results are preliminary, it is noteworthy that select plant-derived compounds elicit inhibitory effects on biofilm formation of major biofilm-producing, pathogenic bacteria. Future studies will expand on these results to further identify inhibitory plant-derived compounds and elucidate their mechanisms of action.

3:00-5:00 PM  BSC 171-173  Table 13

Irene Liu  
Clinical Laboratory Science  
Faculty Sponsor: Tim R. Randolph

**Optimizing a Newly Developed Method of HbF Quantitation for Use in Underdeveloped Countries**

The purpose of this study is to calibrate a method previously developed in our lab to quantitate HbF to be used in underdeveloped countries. The method exploits the ability of a weak citric solution to selectively elute intracellular HbA & HbS while retaining HbF. Eluted HbA & HbS are measured spectrophotometrically and the absorbance is inversely proportional to HbF levels. Two approaches to calibrate the method include standardizing the blood volume introduced into the test system and using a 100% hemolysis tube as an internal standard. Preliminary data suggest that both methods show promise but require more data to determine which produces superior results.

3:00-5:00 PM  BSC 171-173  Table 14

Nicole Mueller  
Clinical Laboratory Science  
Faculty Sponsor: Uthayashanker Ezekiel

**Phytochemicals Resveratrol and Silymarin Up-Regulate MicroRNAs in DLD-1 Colon Cancer Cells**

The standard treatment for colon cancer comprises of radiation and patient-specified chemotherapy; however, the treatments tend to kill healthy cells along with cancerous cells. Previous studies have shown that phytochemicals resveratrol and silymarin inhibit colon cancer cell proliferation. In many types of cancers, miR-15a and miR-16 are down-regulated, leading to the overexpression of oncogenes Bcl2 and Bmi-1. Pertaining to this experiment, resveratrol from red grapes and silymarin from milk thistle were added to DLD-1 colon cancer cells. The miRNA levels are quantified using real-time PCR. Resveratrol and silymarin up-regulated miR-15a and miR-16 levels, thereby inhibiting DLD-1 cell growth.

3:00-5:00 PM  BSC 171-173  Table 15

Emma Tessier  
Clinical Laboratory Science  
Faculty Sponsor: Tim R. Randolph

**Induced Crystalization of Hemoglobin C Using a Hypertonic Salt Solution**

The purpose of this study is to develop a method to identify hemoglobin C in blood samples that is quick, easy and inexpensive for use as a diagnostic test in underdeveloped countries. A variety of approaches have been tried (slide and tube) in different types of salt solutions (saline and PBS) in a range of concentrations using five genotypes of human blood samples (AA, AC, SC, AS and CC). The highest HbC crystal formation has been achieved using the tube method in a 3% salt solution. The method induces crystal formation in AC, CC, and SC samples but not in AA or AS suggesting potential as a testing method to detect HbC to be used in underdeveloped countries.

3:00-5:00 PM  BSC 171-173  Table 16
Shannon Boyle  
**Communication**  
Faculty Sponsor: Elizabeth Richard  

**Women in Refrigerators: Gender as a Plot Device in Comic Books**  
Comic books, like any form of media, have tropes that creators repeat issue to issue, decade to decade and that have become ingrained in the culture. One of those is Women in Refrigerators, the repetition of female characters being killed and experiencing extreme violence for the sake of motivating a main male character. This trope has become problematic as female characters disproportionately experience unnecessary violent acts and the events serve plot advancement. Under these conditions gender has been constructed as a plot device, disregarding the agency of female characters and reinforcing gendered stereotypes.

3:00-5:00 PM  
BSC 171-173  
Table 38

Maureen Brady  
**Communication**  
Faculty Sponsor: Elizabeth Richard  

**Politically Correct Communication in College Classrooms**  
This project delves into the moments during which students decide whether or not to participate in a classroom discussion. Upper level communication courses were observed and recorded and interviews were conducted with students in those classes to determine why or why not students chose to participate in classroom discussions, particularly those pertaining to sensitive issues wherein political correctness is relevant.

3:00-5:00 PM  
BSC 171-173  
Table 39

Kaitlyn Schultz  
**Communication**  
Faculty Sponsor: Jennifer E. Ohs  

**The Power of Social Media for Student Organizations**  
This project focuses on the use of social media by student organizations for the purpose of encouraging members and non-members of the organizations to attend events that are not mandatory for the student population. My analysis of strategy and effectiveness of social media practice yields knowledge about successful use of social media for engaging students and encouraging participation at SLU events. This knowledge is presented in a web-based guide of best social media practices for student organizations aimed at helping student leaders achieve their goals.

3:00-5:00 PM  
BSC 171-173  
Table 40

Elizabeth Barton  
**Communication Sciences and Disorders**  
Faculty Sponsor: Travis Threats  

**Use of the Montessori Approach to Literacy**  
The Montessori approach to education is different from the traditional educational approach. Maria Montessori, founder of this education system, created a curriculum in which every activity has a specific purpose. There are several different activities that occur before learning how to write, such as pouring water from a pitcher into a glass, and cleaning up a mess, which results in an easier time forming letters. This approach to reading and writing has an impact on future literacy. This project aims to explore the effects that the Montessori approach to education has on literacy and future academic achievement.

3:00-5:00 PM  
BSC 171-173  
Table 41

Erin Klostermann  
**Communication Sciences and Disorders**  
Faculty Sponsor: Travis Threats  

**Predictors of Stress in Caretakers of Persons with Dementia**  
This study used a survey to assess which factors are more likely to influence adult children caretakers of parents with dementia's grief, stress, or disruption to their lives. The survey was sent to caretakers who participate in the Alzheimer's Association services. The survey addressed basic demographic information, questions regarding where and how their parents receive care and how caring for their parent has affected their own lives. The purpose of this study was to determine factors associated with increased stress and grief which then was aggregated in order to contribute more knowledge to the services needed by this population.

3:00-5:00 PM  
BSC 171-173  
Table 42

Christina Gabany  
**Communication Sciences and Disorders**  
Faculty Sponsor: Barbara Braddock  

**Patterns of Gesture Use in Adolescent Children with ASD Referred for Social Skills Treatment**  
The aim of this project was to describe patterns of gesture use in adolescent children with ASD referred for social skills treatment. Gesture rate, type, and informational relationship with co-speech productions were measured using Systematic Analysis of Language Transcripts. As a group, just over half of the speakers produced some gesture with spontaneous speech. When gesture type was analyzed, speakers most often produced iconic gestures to augment their speech or add information beyond what was communicated in words. Results will be discussed in terms of gesture use relative to measures of communication ability and ASD social responsiveness.

3:00-5:00 PM  
BSC 171-173  
Table 43
**The Affordable Care Act and Medicaid Expansion in Missouri**

The research focuses on the Medicaid Expansion component of the Affordable Care Act (ACA) and the Medicaid Expansion debate in the state of Missouri. It provides supporting arguments for the positive impact of Medicaid Expansion in Missouri and the negative impact on the state if Medicaid Expansion is not passed. Conclusions are drawn by studying the impact of Medicaid Expansion on state residents, health care system and professionals, and the overall state economy.

3:20-3:40 PM  BSC 253 A

**Anthony Traina**

*Economics*

Faculty Sponsor: Heather Bednarek

*"Funding the Future of Innovation: Biomedical Research for the 21st Century*

This presentation conducts a review of current literature about the interaction between private and public funding of biomedical research and development (R&D). In addition, new regression analysis is presented to provide support for the view that public funding for basic research is a complement to private funding. In conclusion, the presentation suggests that to maintain scientific progress not only at a domestic, but global level, governments must focus their money on funding basic research, aimed at broadening the base of scientific knowledge. Innovation is not the product of deliberate policy, but the outcome of unleashing scientific creativity and ingenuity.

3:40-4:00 PM  BSC 253 A

**Nathan Bossart, Joseph Mayer**

*Electrical & Computer Engineering*

Faculty Sponsor: Kyle Mitchell

**Advanced Cubesat Image Processing System**

This project builds off of the Space Systems Research Lab's current imager payload, redesigning it for more advanced capabilities. It will require a custom built thermally regulated CMOS imager, an ARM processor for general flow control, and an FPGA to offload high-throughput computation and custom hardware control. The system will be capable of basic image processing, including object identification, relative distance and angle detection, and classification of properly marked faces (with light/color patterns) of a Cubesat spacecraft.

3:00-5:00 PM  BSC 171-173  Table 11

**Richa Gupta**

*Economics*

Faculty Sponsor: Heather Bednarek

**Shawn Ficker, Gayatri Nijsure, Richard Pham**

*Electrical & Computer Engineering*

Faculty Sponsor: Kyle Mitchell

**Touch Based BAC Measuring System**

This project aims to develop a device that can prevent alcohol impaired driving. The device will be a proof-of-concept prototype that will determine alcohol concentration by measuring infrared energy that is absorbed and reflected by ethanol molecules present in consumable alcohol. This technology can then be broadened to measure alcohol concentration in blood (BAC) directly through the skin of a human subject. The main application of this device is to integrate it into steering wheels, door handles, or gear shifts of all commercial cars to prevent a driver’s car from starting if their BAC is above the legal limit.

4:00-4:20 PM  BSC 256

**Bridget Bergin**

*English*

Faculty Sponsor: Ellen Crowell

**Wilde’s Marginal Philosophy: Tracing Intellectual Enthusiasm from “Notebook on Philosophy” to The Picture of Dorian Gray**

The main goal of this essay is to offer a use of Wilde’s Oxford philosophy notebook from 1876 in assessing the evolution of his artistic use of philosophical thought by reading the notebook alongside the 1891 edition of the novel The Picture Dorian Gray. Particularly, I will focus on Dorian Gray’s portrait as an image that echoes and expands upon the nascent interest in palimpsestic philosophy apparent in Wilde’s notebook by considering the portrait as the physical illustration of the competing moral philosophies of Basil Hallward, Lord Henry Wotton, and Dorian Gray. I will also read the notebook alongside his critical essays “The Decay of Lying,” “Critic As Artist,” and “The Soul of Man Under Socialism” and explore Wilde’s pattern of exploring competing schools of philosophy by layering the ideas and pushing them to an extreme conclusion. I hope to offer an original approach to Wilde’s philosophical process and a reading of some of his earliest marginal philosophy.

3:20-3:40 PM  BSC 253 B

**O. Adam Cruz**

*English*

Faculty Sponsor: Ellen Crowell

**Coming of Age in a Lost Generation: Nick Adams, Ernest Hemingway, and the American Bildungsroman Tradition**

In my Research Intensive honors English final project, I explored the works of Ernest Hemingway—particularly in his Nick Adams short stories and in his post-humorous memoir A Moveable Feast—to explore Hemingway’s contribution in the American literature version of the genre of bildungsroman, or Coming of Age literature. My paper focuses specifically on Hemingway’s context in the post World War I Lost generation, and his usage of trauma and craft as essential markers in initiation into adulthood.

3:00-3:20 PM  BSC 253 B
He Went Through the Floor

My short story is an attempt at navigating the distinction between the literary forms of the novella and the short story. The novella is often judged by page length, likened to a longer short story or a much shorter novel; yet these opinions often fail to appreciate the mechanics of such a story. I will push to attain the unusual and efficient level of focus and expansion that the novella offers a writer. My story looks at the consequences a natural disaster has on a young man as he struggles to cope with the loss of his brother.

3:40-4:00 PM BSC 253 B

Kun Lin

Finance

Faculty Sponsor: Brain Betker

Applied Portfolio Management

In this presentation, we will first discuss what is Applied Portfolio Management, what do students do, and how does it help students apply their qualitative and quantitative analysis skills to equity research. Then we will present APM's equity portfolio performance, relative to the equity market index (S&P 500) over a specific period of time. At last, we will address the importance of having students involved in real world investing, and promoting equity research within the area of Finance.

3:00-5:00 PM BSC 171-173 Table 52

Shelly Gulhar

Health Care Ethics

Faculty Sponsor: Jill Burkemper

Health Care Issues in the Israel-Palestine Conflict

Political turmoil is often the focus of discussion regarding the Israel-Palestine conflict, and issues related to health care are frequently overlooked. This presentation will discuss the health care situations in Israel and Palestine, and will argue that Israel has a positive obligation to provide adequate health care to Palestine. This project will corroborate this view by discussing, first, that Israel gives its own citizens a positive right, second that Palestinians enjoy a negative right to access health care, and lastly, that Israel is violating Palestinians’ negative rights to health care.

3:40-4:00 PM BSC 253 C

Alexander Mosakowski

History

Faculty Sponsor: Mark Ruff

Advantaged vs. Disadvantaged in the Warsaw Ghetto Diaries: Perspectives of the Jewish Police by Social Status

This paper examines how the inhabitants of the Warsaw Ghetto perceived the members of the Jewish police. The goal of the paper is to demonstrate using diaries and memoirs that social status was important factor in the inhabitant’s judgment towards the police. Examining the published accounts of the ghetto inhabitants, diaries that belonged to Jews with higher status in the ghetto were more sympathetic to the police, while diaries that belonged to Jews with lower status were more resentful to the police. The findings highlight how the German policy of ghettoization created divisions and moral uncertainty in the Jewish community.

4:20-4:40 PM BSC 251 B

Jordan Slavik

History

Faculty Sponsor: Mark Ruff

Livy’s and Polybius’ Narrative of Hannibal and the Presentation of Rome’s Military Machine

The battle of Cannae was one of the worst defeats in Roman military history. This new analysis of Cannae, drawing on the accounts of Livy and Polybius and wrestling with modern scholarship, provides a fresh look at previously unanswered questions. Addressing modern scholarship and the accounts of Polybius and Livy, this paper analyzes the weakness behind the Roman leadership, the location of the battlefield, Varro’s fear of a Carthaginian ambush, the Carthaginian confidence in Hannibal, the psychology of the Roman troops, and the dangers of the Romans’ rigid organizational hierarchy.

4:00-4:20 PM BSC 251 B

Laura Pape

Honors

Faculty Sponsor: Jessica Perolio

Connecting Women in St. Louis with Health Information

This project centered on bringing health information to women in Saint Louis. To gain a new perspective on nutrition, I spent the summer of 2013 working on the Markegard organic farm. Using this information, I worked with students at SLU School of Medicine to design a ten week course about wellness called Project L.E.A.N. (Live, Exercise, Attitude, Nutrition) through the YWCA’s transitional housing program. Each class focuses on a new aspect of the L.E.A.N. mission, including cooking a healthy meal together. A weekly information survey and blood pressure and weight measurements will help assess the success of this course.

3:20-3:40 PM BSC 254
Amanda Waltos
Honors
Faculty Sponsor: Jessica Perolio

Understanding Physician Apprehension in Elementary and Middle School Children
Many patients suffer from fear of physicians and the medical system, placing strain on the provider-patient relationship, especially in pediatric populations. This project investigates the underlying causes of physician apprehension in children and develops lessons to address wellness issues and reduce fear, focusing on education, emotional concerns, and developmentally appropriate information. Physician apprehension and understanding of medical topics are measured pre- and post-lesson to gauge comprehension and fear reduction. Preliminary results demonstrate confidence that these lessons: (a) discover pediatric medical fears and confidences, (b) educate children on illness and wellness, (c) reduce fear surrounding doctors, and (d) inspire healthy decision-making.

3:40-4:00 PM  BSC 254
Amanda Bartelson, Anna Johnson
Honors
Faculty Sponsor: Nancy Weaver

Sanitas South City Prep Health Program
The Sanitas program was implemented in 2013 at South City Prep (SCP), a local inner-city public charter school for 5th-8th grade. Current research shows that school based health programs have the potential to strongly influence the development of positive health behaviors in at-risk students. The year long, multi-faceted intervention included community needs assessment, a specially designed curriculum with classroom instruction, family outreach education programming, and a community health fair for students and families. The program was evaluated using the Transtheoretical model, with the goal of assessing student movement from the "pre-contemplation" to the "contemplation" stage of health awareness.

3:00-3:20 PM  BSC 254
Jakob Klinger, Aaron Rowe, Krunal Shah, Mark Tabor, Jordan Wisch
Mathematics and Computer Science
Faculty Sponsor: Michael H. Goldwasser

Safe-Commute Android Application
The purpose of this project is to create a cell phone application that prevents any driver from texting and driving, but meanwhile enables phone functionality for all passengers. When movement is detected at a rate greater than 15 MPH, a lock-screen display will take over the phones. The display will provide access to emergency contacts and passenger unlock capabilities. Passengers will be able to unlock their phones via a bluetooth or an image processing routine. Once the application detects movement at less than 15 MPH, the lock screen will disappear.

3:00-5:00 PM  BSC 171-173  Table 44

Christopher Webb
Mathematics and Computer Science
Faculty Sponsor: Erin Chambers

Shawnee Lodge Member Portal
The Shawnee Lodge Member Portal is a web based membership management and interaction program designed to assist the Boy Scouts of America, Greater St. Louis Area Council manage member information. The member portal allows member management to occur not only at the council level but also at the individual member level so that member data is more accurate and reliable.

3:00-5:00 PM  BSC 171-173  Table 45

Brianne Haggard
Medical Humanities
Faculty Sponsor: Anne Stiles

Empathy in the Doctor-Patient Relationship
This paper explores the role that empathy plays in the doctor-patient relationship through a comparative analysis of two short narratives: Rosalind Warren’s patient perspective in "Outpatient", and "Becoming Flora: When the Illness Narrative is Our Own", a non-fiction narrative by nurse-practitioner Cortney Davis. Empathy in the doctor-patient relationship is influenced by several factors, including communication, emotion, and the structure of medical education. Because of the central role that empathy plays in the doctor-patient relationship, it influences both patient-satisfaction levels and health outcomes. Recognizing and embracing empathy in the doctor-patient relationship will be a key factor in continuing to improve medical practice.

3:00-3:20 PM  BSC 253 C

Allegra Merriweather
Medical Humanities
Faculty Sponsor: Anne Stiles

ECMO as an Ethical Means of Organ Preservation
In America, thousands of people die due to limited availability of transplantable organs annually. In order to improve this situation, Michigan surgeons believe Extracorporeal Membrane Oxygenation would be a morally appropriate solution. Once patients are declared dead due to irreversible cessation of their circulatory and respiratory systems, they will be placed on the heart and lung machine, ECMO, until appropriate time for transplantation. Some ethicists find this unnerving, arguing that placing the deceased on ECMO is restoring the very component of life which allowed them to be considered dead in the first place, circulation. Is this the case? Are these surgeons declaring people dead simply to gain their organs for donation? These are the issues that will be addressed in this in depth presentation.

3:20-3:40 PM  BSC 253 C
Cynthia Lammert  
*Medical Imaging and Radiation Therapeutics, Magnetic Resonance Imaging Program*  
Faculty Sponsor: Marcey Kennedy

**A Mouse to a Moose: The Emerging World of Veterinary Radiology**  
**Purpose:** To explore the world of veterinary radiology and its relationship to human medicine.

**Methods:** A literature review was performed and surveys were distributed to investigate the vast variety of technology and how radiology is being utilized in the world of veterinary medicine both clinically and in research.

**Results:** Unanimously, veterinarians agree that advanced modalities are becoming essential for optimal diagnosis in animals. Impressive technology exists to image both very small and incredibly large animals.

**Conclusion:** Veterinary and human radiology are not created equal. Animals need dedicated equipment to accommodate unique anatomy and provide vital insight for diagnosis and treatment.

3:00-5:00 PM  BSC 171-173  Table 17

Ann Havrilla  
*Medical Imaging and Radiation Therapeutics, Nuclear Medicine Technology Program*  
Faculty Sponsor: Crystal Botkin, Debra Hewing, William Hubble

**Value of Tc-99m-bicisate balloon test occlusion in preoperative assessment of stroke risk prior to internal carotid artery sacrifice**  
**Objectives:** Internal carotid artery sacrifice (ICAS) may be required in treatment of cerebral aneurysms and tumors and is a high risk procedure. The interventional radiology balloon temporary occlusion test (IRBTO) paired with the two day Tc99m-bicisate brain perfusion study (BPS) can be a useful way to predict the outcome before occluding the artery in question. The purpose of this study is to examine the value of BPS exams as a predictor of stroke risk prior to ICAS.

**Conclusions:** Combined IRBTO and BPS is an effective way in predicting focal neurological deficit prior to ICAS. Considering the risk of ICAS, the best patient outcomes are obtainable when both IRBTO and BPS are performed and negative.

3:00-5:00 PM  BSC 171-173  Table 18

Christine Van Alstine  
*Medical Imaging and Radiation Therapeutics, Nuclear Medicine Technology Program*  
Faculty Sponsor: William Hubble

**Brown fat detected by FDG PET/CT is protective against elevated fasting blood glucose in obese patients**  
**Objective:** It has been demonstrated that brown fat (BF) is protective against features of metabolic syndrome. Two important factors used to diagnose metabolic syndrome are body mass index (BMI) >30, and fasting blood sugar (FBS) >100 mg/dl. Also, studies have shown a higher female prevalence of BF. The purpose of this study is to determine if BF is protective against elevated FBS in obese patients and if gender plays a role.

**Conclusion:** Obesity and elevated FBS are important risk factors for metabolic syndrome. This data shows that BF may be protective against an elevated FBS in obese patients. Although previous studies showed a higher prevalence of females with BF, there was no significant gender difference in FBS among obese patients in this study.

3:00-5:00 PM  BSC 171-173  Table 19

Jason Wahidi  
*Medical Imaging and Radiation Therapeutics, Nuclear Medicine Technology Program*  
Faculty Sponsor: Crystal Botkin

**Y-90 SIR-Sphere Treatment of Liver Cancer and Alternative Imaging Methods**  
Selective Internal Radiation Therapy (SIRT) is a new and promising therapy that has changed the options and outcomes of treatment compared to conventional radiotherapy. SIR-Spheres are microscopic Y-90 radioactive spheres used to deliver SIRT to the liver. It differs from traditional systemic therapies since the radiation is delivered directly to the tumor. There are, however, different techniques to assess what portion of the liver is being treated. The current imaging guidelines for confirming the placement of the microspheres is a SPECT scan detecting the Bremsstrahlung radiation from the Y-90 microspheres.

An encouraging alternative to confirm placement of the microspheres is performing a PET/CT scan to increase image resolution and potentially increase quantitative capabilities. This alternative imaging method may provide a more accurate estimation of dose received and may pave the way for more personalized dosimetry.

3:00-5:00 PM  BSC 171-173  Table 20
Emily Daugherty  
*Medical Imaging and Radiation Therapeutics, Radiation Therapy Program*  
Faculty Sponsor: Sherry Bicklein, Kathy Kienstra

**Post Radiation Changes: 18F-FDG-PET/CT in Assessment of Patients with Head and Neck Squamous Cell Carcinoma.**  
Squamous cell carcinoma (SCC) represents more than 90% of all head and neck cancers. On average, 30% of these cases will recur locally within 5 years of initial treatment. These disease pathologies often bear a similar resemblance to pathologic changes caused by radiation therapy (RT) treatment. Therefore, imaging and accurate detection of these cases is crucial in constructing an appropriate treatment strategy. The purpose of this study was to retrospectively review SCC patients who had undergone RT and look for occurrence of post therapy changes on imaging. A systematic review of PET/CT reports was performed to identify these changes.  
3:00-5:00 PM BSC 171-173 Table 21

Carrie Smith  
*Medical Imaging and Radiation Therapeutics, Radiation Therapy Program*  
Faculty Sponsor: Sherry Bicklein, Kathy Kienstra

**Proton Therapy: For the Treatment of Pediatric Medulloblastoma**  
Within the pediatric population, tumors of the central nervous system are the most common solid tumor in childhood, with medulloblastoma accounting for close to half of all pediatric brain tumors. The purpose of the project was to research and assess the advantages of the improved dose distribution of proton therapy. The research approach used was the evaluation of retrospective reviews, case studies, and comprehensive data on the topic. It was concluded that pediatric patients with medulloblastoma, due to their developing normal tissues and anticipated lifespan, are likely to have the maximum clinical gain from proton therapy treatment. The desired outcome was continued investment in proton therapy equipment.  
3:00-5:00 PM BSC 171-173 Table 22

Kara Zimmer  
*Medical Imaging and Radiation Therapeutics, Radiation Therapy Program*  
Faculty Sponsor: Sherry Bicklein, Kathy Kienstra

**Benefits of PET/CT fusion for Radiation Oncology Treatment Planning**  
The main goal of treatment planning is to deliver the maximum amount of dose to the tumor while sparing the surrounding normal tissue and critical structures. Incorporating multiple imaging modalities allows this process to be accomplished; specifically PET/CT. This imaging combination fuses two important components of patient information utilizing functional/metabolic activity from PET and anatomic information from CT. Results from this combination of multimodality imaging helps to accurately construct and provide the best treatment option for the patient. The purpose of this project is to explore the leading ways to construct the best treatment plan for the patient with the available imaging modalities.  
3:00-5:00 PM BSC 171-173 Table 23

Stewart Heatwole  
*Misiah Program*  
Faculty Sponsor: Donald Stump

**Zhuangzi and Urban Poverty**  
My presentation will explore the work of the fourth century B.C.E. Daoist Philosopher and how his ideas of fasting might apply to those living in urban poverty. This will be done by first explicating the work of Zhuangzi and then a synthesis will be made with some common elements to gang culture in urban settings. The conclusion is that Zhuangzi provides those trapped in gang cultures a narrative of how to remove themselves from said culture without demonizing themselves or others in the process.  
4:20-4:40 PM BSC 253 D

Alexandra Abbate  
*Modern & Classical Languages*  
Faculty Sponsor: Kara McBride

**Bridging the Communication Gap with Spanish-speaking Patients in American Medicine**  
Considering the growing Spanish-speaking population in the U.S., this investigation examines obstacles that exist in medicine regarding communication between English-speaking physicians and Spanish-speaking patients and discusses solutions that can facilitate improvement in cultural competence of the parties involved. The effectiveness of cultural competence training for medical students and the practice of medical interpreting is evaluated. It is argued that increasing the number of bilingual physicians who have the ability to communicate effectively with Spanish-speaking patients would reduce unnecessary medical expenses and foster more patient trust when paired with a greater focus on cultural competence training and bedside manner.  
3:40-4:00 PM BSC 251 B

Claire Moll  
*Modern & Classical Languages*  
Faculty Sponsor: Olga Arbelaez

**Women’s New Role in the Aftermath of the Civil War in El Salvador: The Case of La Valencia and San Ramon**  
This is a study of the changing role of the marginalized women in post-war El Salvador living in two communities outside of San Salvador. Due to the wave of men emigrating from the country today and those lost during the war era, the women have been left to take leadership of their various positions in society: within their own family, within their community, and within the church. This study is based on oral interviews with women from La Valencia and San Ramon designed to gather information on their own self-perception as leaders and decision makers and to compare those perceptions with their realities. Due to the societal structures in place, it was not surprising to find that the women did not perceive themselves as leaders.  
3:00-3:20 PM BSC 251 B
The Globalization of Salsa: A Transglobal Phenomenon in its Local Contexts
Salsa music and dancing is a Latin American cultural manifestation that has suddenly become a global phenomenon. My research identifies the corners of the world that salsa has reached, pinpoints how those cultures have embraced and molded salsa to make it their own, analyzes the current popularity of salsa on a global scale, and finally, attempts to explain why salsa has permeated so many different cultures and become such a widespread phenomenon.

3:20-3:40 PM  BSC 251 B

Ben Minden-Birkenmaier
Music
Faculty Sponsor: Pamela Dees

Classical Guitar Recital
This performance is a condensed version of my senior recital. Selections will be taken from a program of classical guitar works spanning over four hundred years of musical history. Notable composers include J.S. Bach, Mauro Giuliani, John Dowland, and Joaquin Rodrigo, among others.

3:40-4:00 PM  BSC 253 D

Amy Beischel, Jordyn Faron, Kimaya Joshi
Nutrition and Dietetics
Faculty Sponsor: Lori Jones

YourPlate
Developed by senior dietetics students, "YourPlate" is a marketing campaign package targeting SLU students and administration to address challenges against healthy eating. The campaign includes a print advertisement (to be displayed around campus), a video segment (to be shown on campus TV's), and an audio file (to be played on radio stations in the surrounding community). By utilizing a three-pronged approach, this campaign can reach audiences in all sectors to help students take charge of their diets as well as spread the message of a living a well balanced, nutritious life.

3:00-5:00 PM  BSC 171-173  Table 24

Katherine Buckley, Erika Collins, Lindsay Kilwin, Gabriella Lavezzi
Occupational Science and Occupational Therapy
Faculty Sponsor: Cindy Matlock, Jeanne Eichler

U101 Relationship Wellness: Cravin' a Healthy Relationship
The U101 healthy relationship program was developed and implemented through the fluid sequence of courses in the Occupational Science and Occupational Therapy curriculum. It focuses on identifying and maintaining healthy romantic and non-romantic relationships, taking place at CRAVE Coffee House located on the medical center campus. "Cravin' a Healthy Relationship" provides a positive influence on mental health and scholastic performance for freshmen students. In addition, it promotes a supportive local business. As the program continues to mature, it is hoped to be a standing supplement to the existing welcome programs at SLU.

3:00-5:00 PM  BSC 171-173  Table 25

Jaclyn Allexan, Brianna Radici, Jessica Reilly
Occupational Science and Occupational Therapy
Faculty Sponsor: Jeanne Eichler

Safe and Sound: Considerations for Healthy Environments
The project examines how sound levels and types of sounds impact stress levels, productivity, and overall functioning. In this example, a wellness program was designed at a children's museum in order to promote the awareness and creation of sound healthy environments. The program challenges us as future therapists to consider sound as an important part of the environment; one that significantly impacts our clients' level of independence. The wellness program researched specific sound components (noise levels, effects of music, background noise), ways to create safe sound environments, and a project generalization to numerous settings. Materials developed are available for review.

3:00-5:00 PM  BSC 171-173  Table 26

Kelsey Cook, Annie Flanagan, Maggie Scudder
Occupational Science and Occupational Therapy
Faculty Sponsor: Lenin Grajo

Student Clinical Reflections on an Occupational Therapy Intervention Program for Children with Reading Difficulties
This poster presentation will discuss the clinical experiences of three first-year Master of Occupational Therapy (MOT-1) students as they participated in research on the impact of occupational therapy (OT) services for children with reading difficulties. The MOT-1 students assisted in the delivery of an 8-week, theory-based, pilot OT intervention program to help improve the reading participation of five school-aged children with reading challenges. After each therapy session, the graduate students engaged in clinical reflection to document significant learning experiences. This presentation will highlight the importance of reflective and theory-driven practice as graduate students prepare for entry-level OT practice.

3:00-5:00 PM  BSC 171-173  Table 27
What’s with Quantum Mechanics? Comparing Relational Quantum Mechanics and Consistent Histories

At first glance, Relational Quantum Mechanics (RQM) and Consistent Histories (CH) are very different attempts to interpret the results of quantum mechanics; RQM is a wholly epistemic approach – quantum mechanics is about what we can say about nature. All statements in RQM are observer-dependent. CH is an ontic approach, which aims to give a realist account of quantum mechanics. All statements in CH are framework-dependent. I show that CH can be constructed out of RQM and a set of allowances as to what statements can be made, making clear what ontological assumptions CH makes that RQM does not.

4:20-4:40 PM BSC 253 B

Ben Conover

In Defense of Ontic Structural Realism

John Worrall’s (1989) “Structural Realism: The Best of Both Worlds?” reinvigorated the debate between realism and anti-realism in the philosophy of science by introducing structural realism as a middle way to avoid Larry Laudan’s ‘pessimistic meta-induction’ without committing to our best scientific theories as correctly describing the things that are in the world. This paper defends the ontic form of structural realism (OSR) developed by James Ladyman and collaborators with significant effort made towards tracking the historical development of the view and providing innovative and crucial replies to recurrent criticisms.

4:00-4:20 PM BSC 253 B

Julianne Pelger

Juntos, Podemos Ser Sanos: Promoting Wellness in Hispanic Children with Down Syndrome

Children with Down syndrome thrive when provided early therapeutic intervention. However, barriers to health care prevent Hispanic families from seeking those interventions for their children. My goal was to create a general wellness program in Spanish that could be done at home and would significantly improve the health of these children. The exercises and minor lifestyle changes described focus on improving strength, endurance and balance, while decreasing the likelihood of developing obesity. The program also promotes further therapeutic intervention through referrals to clinics and programs in the Greater St. Louis Area that cater to Spanish-speaking patients and their families.

3:00-5:00 PM BSC 171-173 Table 28

Leah Fischer

The Relationship Between Lower Extremity Movement Patterns and Pain During Stair Descent in Females with Patellofemoral Pain

Patellofemoral pain (PFP) is related to impaired movement. Movement was assessed through clinical tests that may not necessarily be related to function. I examined whether movement during stair descent, a functional activity, is associated with a single limb squat, a clinical test. I also analyzed whether 2D measurements could detect differences in movements between females with and without PFP during stair descent, and whether impaired movement was associated with pain. Movement during the stair descent and single limb squat are related. Movement is more impaired during the stair descent in females with PFP, and pain is associated with impaired movement.

3:00-5:00 PM BSC 171-173 Table 29

Alexander Garbin

Relationship between postural sway, clinical disability, and self-perceived limitations in balance and walking in persons with multiple sclerosis: A preliminary report

The purpose of this study was to examine the relationships between postural sway, clinical disability (Expanded Disability Status Score), and self-perceived limitations in balance (Activities-Specific Balance Confidence) and walking (12-item MS Walking Scale) in persons with multiple sclerosis (pwMS). Seventy-two pwMS completed a modified Clinical Test of Sensory Interaction and Balance. Postural sway measures were calculated from a sensor worn on the lumbar spine. Bivariate correlations were computed between postural sway measures and the aforementioned outcome measures. Preliminary results suggest jerk and time domain measures correlate better to clinical disability and self-perceived limitations than frequency domain measures.

3:00-5:00 PM BSC 171-173 Table 30

Christopher Sorgani

Lower extremity somatosensory deficit prevalence and impact on mobility in persons with multiple sclerosis

The purposes of this study were to determine the prevalence of lower limb somatosensory loss in persons with multiple sclerosis (pwMS), and whether or not the association between somatosensory loss and walking limitations differs depending on level of clinical disability. Standardized clinical tests were used to assess three sensory modalities (vibration perception, joint position sense, and light touch sensation) and walking speed and endurance. PwMS were divided into mild, moderate, and severe groups based on clinical disability. Results show somatosensory loss is more pronounced in severe MS. Somatosensory loss has no correlation with walking limitations regardless of MS severity.

3:00-5:00 PM BSC 171-173 Table 31
Elena Baluyut  
*Physics*  
Faculty Sponsor: Linda Warren

**Determining the directivity of deep earthquakes in the Japan-Okhotsk Region**  
One of the fundamental questions in seismology is why earthquakes occur at depths >50 km. One way to distinguish between different proposed mechanisms for such deep earthquakes is to determine fault plane orientation. I studied 14 earthquakes with depths between 60-650 km in the Japan-Okhotsk Sea region. This region's two subducting plates, the Philippine Sea and Pacific, are ~130-150 myr and subsequently encompass some of the coldest oceanic lithosphere on Earth. By measuring the differential rupture duration between seismic stations, I determined rupture direction, rupture velocity, and the fault plane. 9 earthquakes showed directivity with rupture along the subhorizontal plane.

3:40-4:00 PM   BSC 256

Timothy Schmitz  
*Physics*  
Faculty Sponsor: William Thacker

**Contextuality and Nonlocality in Consistent Histories Quantum Mechanics**  
Quantum mechanics is among the most successful physical theories in terms of predictive accuracy. However, how to properly interpret its formalism remains uncertain. The Consistent Histories interpretation attempts to give an account of measurement, locality, the wavefunction, and commutation which eliminates the special role of observation, preserves classical logic, and allows one to make objective (albeit framework-dependent) statements about properties in the world. But is Consistent Histories “consistent” with results in quantum mechanics? Arguing from the Kochen-Specker theorem and steering, one finds that Consistent Histories may need significant revision to conform to established results.

3:20-3:40 PM   BSC 256

Beatrice Abraham  
*Political Science*  
Faculty Sponsor: Jason Windett

**Refugee Resettlement in St. Louis: The Social Impacts of Resettlement Through the Eyes of St. Louis’ Local Non-Profit Organizations**  
St. Louis has a long history of hosting refugees from around the world including Vietnam, Bosnia, Somalia, Iraq, and Nepal. This project examines the social impact of influx of refugees on St. Louis. This was done by examining the role of non-profit organizations that aid in resettlement and how their role has changed with the changing demographics of incoming refugees since the 1990s. In-person interviews with employees from six local non-profit organizations were conducted and data analysis from the interviews is expected to highlight the challenges and changes these social service providers have faced over the past 20 years.

4:00-4:20 PM   BSC 254

Jesse Doggendorf  
*Political Science*  
Faculty Sponsor: Wynne Moskop

**Lockean Privacy and The Court: An Avenue for LGBT Rights in America**  
The LGBT community has fought their oppression through different legal arguments – ranging from individual liberty guarantees to the condemnation of moral legislation. The variety of arguments in LGBT cases has led to disagreements concerning the usefulness of each approach in obtaining the desired outcomes. I argue that the most pragmatic route to equal rights for this community lies in the successful privacy arguments of the past. More specifically, advocacy for LGBT plaintiffs should be based in Lockean ideals concerning privacy. These ideals construct an umbrella under which the LGBT community may expect progress in governmental recognition of its rights.

4:20-4:40 PM   BSC 254

Kirstin Palovick  
*Political Science*  
Faculty Sponsor: Jason Windett

**The Impact of Identity formation, Cultural, and Political Conditions on Open LGBT Representation in State Government**  
This research examines the impact of identity formation, cultural, and political factors predicting the election of openly LGBT state legislators. I argue that an individual’s prior experiences, as well as the contextual indicators of their environment, concerning LGBT individuals or rights can impact their political attitudes and, in turn, influence their political behavior. I will demonstrate this relationship through a quantitative analysis to gauge the connection between the previously listed factors and openly LGBT representation. I also utilize a qualitative analysis of the different methods that states have utilized to legalize same-sex marriage and how this impacts openly LGBT representation.

3:00-5:00 PM   BSC 171-173  Table 46

Petina Benigno  
*Pre-law*  
Faculty Sponsor: Joyce LaFontain

**Economic Implications of the Fourth Amendment**  
In my submission to the Pre-Law Legal Journal, I discussed the Fourth Amendment and its growing ambiguity among scholars. I focused my research on the economic and social costs of the Fourth Amendment and discussed how varying precedent contributes to economic and social costs. Ex ante precedent based on living Constitutional theory will prove to maximize economic and social implications of the Fourth Amendment.

3:00-5:00 PM   BSC 171-173  Table 53
Laurel Cronin  
_Psychology_  
Faculty Sponsor: Terri Weaver

**ALIVE and Psychological Abuse: Finding Meaning in an Invisible Threat**  
While interning at ALIVE (Alternative to Living in Violent Environments) I worked with interpersonal violence victims. A common trend was pulled from each conversation with clients and that was that psychological abuse was present in 100 percent of the relationships. Terms concerning psychological abuse were taken from a research study conducted by Brackley and Queen (2009). These include captivity, defining moments, dissociation from self, fixing, taking a stand, mindful manipulation and relentless terror. These are combined with journal entries recorded during my time at ALIVE to analyze further the common trends in the relationships that involved psychological abuse alone. ALIVE offers counseling services to victims dealing with all forms of abuse, including psychological abuse. My time at ALIVE and further research has opened my eyes to the severity of psychological abuse and its effects. I feel a call to action to further help advance societies knowledge concerning psychological abuse and research on this often difficult to measure construct.

3:00-5:00 PM  BSC 171-173  Table 47

Ratna Garigipati, Victoria Stake, Mallory Stumpf, Mark Tapia  
_Psychology_  
Faculty Sponsor: Kristin Kiddoo

**The Role of Observer Effects and Feedback on Performance**  
Feedback is important in academic settings and forms a crucial facet of most teacher-student relationships. Research suggests that both negative feedback from an instructor and being placed in a situation of potential evaluation by observers worsens subsequent academic performance. The current study aimed to combine the concepts of feedback and observer presence to explore their effects on arithmetic task performance. Participants were asked to imagine a hypothetical scenario in which they had failed to complete an assignment and prepare a defense, after which either positive or negative feedback was given either in the presence or absence of an observer. It was predicted that performance on the math task would be lower with negative feedback than with positive feedback. Additionally, it was predicted that an observer would lead to lower performance, but only when the participant was given negative feedback.

3:00-5:00 PM  BSC 171-173  Table 48

Jessica Kuehler, Ashley Nussbaum  
_Psychology_  
Faculty Sponsor: Mindy Shoss

**Antecedents of Seeking Social Support in the Workplace**  
A correlational study was performed using a survey to analyze the relationship amongst personality factors of agreeableness and extraversion and Internal Locus of Control on behaviors relating to giving, receiving, and seeking social support in the workplace. The data obtained from the survey shows correlations amongst the personality factors of agreeableness and extraversion as well as Internal Locus of Control and their relation to giving, receiving, and seeking social support in the workplace. These findings assist in providing further knowledge behind the use of social support in the workplace setting. Additionally, this study inspires future research to investigate the reasoning behind these individual differences.

3:00-5:00 PM  BSC 171-173  Table 49

Jessica Ahlemeyer  
School of Nursing  
Faculty Sponsor: Judy Carlson

**The Power of Independent Studies**  
The purpose of this presentation is to explore the ways independent studies offer unique learning opportunities to students. Independent studies are an underutilized opportunity for students to cultivate and explore topics of interest. This helps students foster passions and prepares students for graduate level education. This project will highlight my personal experience with a nursing independent study focusing on academic writing and my experience working closely with a mentor. It will provide an overview of the benefits of independent studies and how to develop an effective independent study.

3:00-5:00 PM  BSC 171-173  Table 57

Maureen Mahon  
School of Nursing  
Faculty Sponsor: Judy Carlson

**Advocacy in Nursing Beyond the Bedside**  
The purpose of this presentation is to share a brief overview of the multitude of pathways for nurses in clinical practice to create federal and state legislation changes which directly and indirectly affect patient outcomes, and it also highlights many of my personal experiences in advocacy efforts as an undergraduate student at Saint Louis University. In conclusion, this presentation provides an overview of the important roles needed in advocacy presently and how to start one’s journey towards being a change agent in legislation today.

3:00-5:00 PM  BSC 171-173  Table 58
Barrett Lanham  
Service Leadership  
Faculty Sponsor: Ben Smyth

**Sports Business: Internships Serving the Community**  
The purpose of this presentation is to highlight my internship experience as a sports business student and as a member of the Service Leadership program. The presentation helps to reflect on how important internships are to build your professional portfolio down the road for careers, along with making a difference in the communities you touch through sports and service.

3:00-3:20 PM  BSC 253 A

Elizabeth Gentile  
Social Work  
Faculty Sponsor: Beth Barrett

**College Students Advocate for MicroFinancing Partners in Africa**  
The social justice goal is to reach the college student population to advocate for MicroFinancing Partners in Africa. This is done through a creation of advocacy efforts to promote social justice. MPA is an agency whose mission is to empower those in extreme poverty through micro-lending programs in Uganda, Tanzania, and Kenya. If MPA is able to expand its outreach there would be a great impact for the clients through out Africa. The advocacy efforts are the creation of a college board, an immersion trip, a yearly fundraiser, a informational You Tube video, and various talks and presentations.

3:00-5:00 PM  BSC 171-173  Table 54

Emily Gries  
Social Work  
Faculty Sponsor: Emily McGinnis

**City Greens Cookbook: Affordable Healthy Meals for St. Louis**  
The City Greens Cookbook is a community-based effort through the City Greens Market at Catholic Charities Midtown Center. The purpose of the project was to create a cookbook from both scholarly research and feedback from the community. The student created a survey informed by previous studies and analyzed the results with statistical analysis. She also reached out to community members through taste tests and focus groups, and created a cookbook tailored to the community’s need. While much is being done to make healthy ingredients accessible, this project looks at the need for instructional material for healthy food preparation.

3:00-5:00 PM  BSC 171-173  Table 55

Stacey Williams  
Social Work  
Faculty Sponsor: Emily McGinnis

**End-Of-Life Care Education in Rural Southern Missouri**  
This project identifies a gap that exists on a national level in regards to education about end-of-life care options, specifically, hospice care.

3:00-5:00 PM  BSC 171-173  Table 56

Mark Benton  
Sociology and Anthropology  
Faculty Sponsor: Scott Harris

**Just Fix It! A Dramaturgical Analysis of a Panera Bread**  
This presentation uses the dramaturgical perspective—which compares social life to the theater—to examine a local Panera Bread Restaurant. I will show how Panera employees manage emotions, navigate between back and front stage arenas, and fashion costumes in order to manage the impressions they make on customers. The goal of employees’ dramaturgical efforts is to foster the impression that Panera is accommodating, professional, relaxing, and concerned with food quality. This study demonstrates the enduring utility of the theatrical metaphor for analyzing any aspect of social life.

4:20-4:40 PM  BSC 251 A

Ashley Heavilon  
Sociology and Anthropology  
Faculty Sponsor: Mary R. Vermilion

**“That Word Known to All”: An Analysis of Neanderthal Speech Capabilities**  
This paper investigates the debate surrounding Neanderthal-Homo sapiens hybridization and the implications that this controversy has on the taxonomic status of Neanderthals and our understanding of human evolution. Despite valid morphological, archaeological, and genetic approaches, the question of Neanderthals’ taxonomic status remains unresolved. This survey addresses this complex problem through examining species concepts, theories of human origins, the history of the matter characterized by the contemporary technologies available to researchers, the current generally accepted theory on the amount of admixture between anatomically modern humans and Neanderthals, and proposes a theory that may solve the issue of Neanderthals’ taxonomic status.

3:40-4:00 PM  BSC 251 A

Robert Jonathan  
Sociology and Anthropology  
Faculty Sponsor: Mary R. Vermilion

**Spatial Distribution of Subsurface Artifacts Due to Chisel Plow Implementation**  
This research explores the debate about the spatial redistribution of subsurface artifacts due to the implementation of a chisel plow. The study involved an experiment in which all variables were controlled for. Including the planting of coded artifacts at specific depths in a defined area, this area was subsequently plowed to varying specifications, the test area was excavated according to rigorous archaeological standards, and an analysis of the spatial redistribution of artifacts was conducted. The number of passes of the chisel plow was the primary independent variable observed. Ideally, the experimental data will contribute concrete results to further enlighten the debate.

3:20-3:40 PM  BSC 251 A
Kathryn Ruble  
*Sociology and Anthropology*  
Faculty Sponsor: Mary R. Vermilion  

**Impact of Chiefly Power on Mississippian Volume: The Relationship between Population and Social Complexity**  
**Impact of Chiefly Power on Mississippian Mound Volume: The Relationship Between Population and Social Complexity**  

Variation in the volume of Mississippian mounds is an important factor in understanding the structural organization of mound centers in the Southeastern and Midwestern United States. But, what determines the volume of the mounds? Two interpretations present two sides of the debate: is mound volume determined by duration of use or the political power of the chiefdom? This paper will use the evaluation of 35 sample mound centers recording mound volume index, the duration of mound use, the number of construction stages, and the number of mounds at the site. I conclude that the political power of the chiefdom is the primary factor in the determination of mound volume.

---

Briana Kagy  
*Studio Art*  
Faculty Sponsor: Sharron Pollack  

**Inklings**  

Seeking to fuse my interests in studio art and philosophy of mind, I have used various printmaking techniques to render portions of my most vivid dreams. The content of the work reflects the unique mode of thought that occurs in the dream state. The unconscious mind is free to be innovative and make organic connections in a way that the conscious mind is not; in dream states, the mind has exceptional capabilities. Complementing my philosophical exploration of the mind-body problem, I have brought a particularly mysterious function of the mind into the physical realm through my artwork.

3:00-5:00 PM BSC 171-173 Table 50

---

Austin Beals  
*Theatre*  
Faculty Sponsor: Lou Bird  

**Their Voice Matters**  

Their Voice Matters was a program where I and 2 other students went to the Centralia Community Center and with 6 underprivileged kids, created a show, which we brought back and produced in its entirety, with full set, lights, costumes and 5 other actors. On April 11th, we brought them to SLU and their show was presented in a black tie, invitation only premier to members of the SLU community and the families of the kids. We told the kids that we cared about what they had to say, and on the 11th we proved it, and that we weren't the only ones.

3:00-5:00 PM BSC 171-173 Table 51

---

Grace Bonoma, Brady Moore, Kailey Pretzlaff, Megan Rogers, Cassandra Sperruzza  
*Sports Business*  
Faculty Sponsor: Anastasios Kaburakis  

**Student Athlete Supplement Education**  

A group of four student-athletes and one Athletic Training student have identified the need for a supplement education program in the St. Louis University Athletic Department. The goal of the program is to define what a supplement is, identify popular supplement products, explain the consequences of unhealthy supplement use, offer healthy alternatives to supplement use and identify resources for further information. The program is intended to be delivered to student-athletes annually before the fall competition season. Developed in collaboration with the National Center for Drug Free Sport, the St. Louis University athletic department and NCAA resources.

4:00-4:20 PM BSC 253 A
INDEX OF PARTICIPANTS

Alexandra Abbate  
*Modern & Classical Languages*  
3:40 PM  
BSC 251 B

Beatrice Abraham  
*Political Science*  
4:00 PM  
BSC 254

Temitope Adeyeni  
*Clinical Laboratory Science*  
3:00 - 5:00 PM  
BSC 171-173 Table 12

Jessica Ahlemeyer  
*School of Nursing*  
3:00 - 5:00 PM  
BSC 171-173 Table 57

Jaclyn Alleman  
*Occupational Science and Occupational Therapy*  
3:00 - 5:00 PM  
BSC 171-173 Table 26

Elena Baluyut  
*Physics*  
3:40 PM  
BSC 256

Amanda Bartelson  
*Honors*  
3:00 PM  
BSC 254

Elizabeth Barton  
*Communication Sciences and Disorders*  
3:00 - 5:00 PM  
BSC 171-173 Table 41

Austin Beals  
*Studio Art*  
3:00 - 5:00 PM  
BSC 171-173 Table 51

Amy Beischel  
*Nutrition and Dietetics*  
3:00 - 5:00 PM  
BSC 171-173 Table 24

Petina Benigno  
*Pre-law*  
3:00 - 5:00 PM  
BSC 171-173 Table 53

Mark Benton  
*Sociology and Anthropology*  
4:20 PM  
BSC 251 A

Bridget Bergin  
*English*  
3:20 PM  
BSC 253 B

Grace Bonoma  
*Sports Business*  
4:00 PM  
BSC 253 A

Nathan Bossart  
*Electrical & Computer Engineering*  
3:00 - 5:00 PM  
BSC 171-173 Table 11

Max Bourdilllon  
*Chemistry*  
3:00 - 5:00 PM  
BSC 171-173 Table 35

Shannon Boyle  
*Communication*  
3:00 - 5:00 PM  
BSC 171-173 Table 38

Maureen Brady  
*Communication*  
3:00 - 5:00 PM  
BSC 171-173 Table 39

Matthew Braun  
*Business*  
4:20 PM  
BSC 253 A

Krystal Braynard  
*Aerospace & Mechanical Engineering*  
3:00 - 5:00 PM  
BSC 171-173 Table 01
## INDEX OF PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyell Brown</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 06</td>
</tr>
<tr>
<td>Katherine Buckley</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 25</td>
</tr>
<tr>
<td>Mike Carlin</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 05</td>
</tr>
<tr>
<td>Erika Collins</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 25</td>
</tr>
<tr>
<td>Ben Conover</td>
<td>Philosophy</td>
<td>4:00 PM</td>
<td>BSC 253 B</td>
</tr>
<tr>
<td>Kelsey Cook</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 27</td>
</tr>
<tr>
<td>Laurel Cronin</td>
<td>Psychology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 47</td>
</tr>
<tr>
<td>O. Adam Cruz</td>
<td>English</td>
<td>3:00 PM</td>
<td>BSC 253 B</td>
</tr>
<tr>
<td>Emily Daugherty</td>
<td>Medical Imaging and Radiation Therapeutics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 21</td>
</tr>
<tr>
<td>Will Deuschle</td>
<td>Business</td>
<td>4:20 PM</td>
<td>BSC 253 A</td>
</tr>
<tr>
<td>Melissa DiMariano</td>
<td>Clinical Laboratory Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 13</td>
</tr>
<tr>
<td>Jesse Doggendorf</td>
<td>Political Science</td>
<td>4:20 PM</td>
<td>BSC 254</td>
</tr>
<tr>
<td>Steven Doonan</td>
<td>Chemistry</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 36</td>
</tr>
<tr>
<td>Parry Draper</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 04</td>
</tr>
<tr>
<td>Timothy Dreyer</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 02</td>
</tr>
<tr>
<td>Emma Dwyer</td>
<td>Biology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 32</td>
</tr>
<tr>
<td>Jordyn Faron</td>
<td>Nutrition and Dietetics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 24</td>
</tr>
<tr>
<td>Shawn Ficker</td>
<td>Electrical &amp; Computer Engineering</td>
<td>4:00 PM</td>
<td>BSC 256</td>
</tr>
<tr>
<td>Leah Fischer</td>
<td>Physical Therapy and Athletic Training</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 29</td>
</tr>
<tr>
<td>Annie Flanagan</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 27</td>
</tr>
</tbody>
</table>
# INDEX OF PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Program</th>
<th>Time</th>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katherine Foley</td>
<td>Chemistry</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 37</td>
<td></td>
</tr>
<tr>
<td>Cody Francis</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 06</td>
<td></td>
</tr>
<tr>
<td>Christina Gabany</td>
<td>Communication Sciences and Disorders</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 43</td>
<td></td>
</tr>
<tr>
<td>Alexander Garbin</td>
<td>Physical Therapy and Athletic Training</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 30</td>
<td></td>
</tr>
<tr>
<td>Ratna Garigipati</td>
<td>Psychology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 48</td>
<td></td>
</tr>
<tr>
<td>Elizabeth Gentile</td>
<td>Social Work</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 54</td>
<td></td>
</tr>
<tr>
<td>Michael Gilbreth</td>
<td>Biomedical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 07</td>
<td></td>
</tr>
<tr>
<td>Jon Gonder</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 03</td>
<td></td>
</tr>
<tr>
<td>Dazialee Goodwin</td>
<td>African American Studies</td>
<td>4:40 PM</td>
<td>BSC 253 C</td>
<td></td>
</tr>
<tr>
<td>Brenden Graczak</td>
<td>Civil Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 09</td>
<td></td>
</tr>
<tr>
<td>Emily Gries</td>
<td>Social Work</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 55</td>
<td></td>
</tr>
<tr>
<td>Shelly Gulhar</td>
<td>Health Care Ethics</td>
<td>3:40 PM</td>
<td>BSC 253 C</td>
<td></td>
</tr>
<tr>
<td>Richa Gupta</td>
<td>Economics</td>
<td>3:20 PM</td>
<td>BSC 253 A</td>
<td></td>
</tr>
<tr>
<td>Andrew Haar</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 03</td>
<td></td>
</tr>
<tr>
<td>Gavin Hagar</td>
<td>Business</td>
<td>4:20 PM</td>
<td>BSC 253 A</td>
<td></td>
</tr>
<tr>
<td>Brianne Haggard</td>
<td>Medical Humanities</td>
<td>3:00 PM</td>
<td>BSC 253 C</td>
<td></td>
</tr>
<tr>
<td>John Hannigan</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 05</td>
<td></td>
</tr>
<tr>
<td>Christopher Hartman</td>
<td>Biomedical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 07</td>
<td></td>
</tr>
<tr>
<td>Ann Havilla</td>
<td>Medical Imaging and Radiation Therapeutics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 18</td>
<td></td>
</tr>
<tr>
<td>Stewart Heatwole</td>
<td>Micah Program</td>
<td>4:20 PM</td>
<td>BSC 253 D</td>
<td></td>
</tr>
</tbody>
</table>
INDEX OF PARTICIPANTS

Ashley Heavilon  
Sociology and Anthropology  
3:40 PM  
BSC 251 A

Marie Hogan  
Aerospace & Mechanical Engineering  
3:00 - 5:00 PM  
BSC 171-173 Table 01

Safi Islam  
Aerospace & Mechanical Engineering  
3:00 - 5:00 PM  
BSC 171-173 Table 03

Anna Johnson  
Honors  
3:00 PM  
BSC 254

Robert Jonathan  
Sociology and Anthropology  
3:20 PM  
BSC 251 A

Kimaya Joshi  
Nutrition and Dietetics  
3:00 - 5:00 PM  
BSC 171-173 Table 24

Briana Kagy  
Studio Art  
3:00 - 5:00 PM  
BSC 171-173 Table 50

Jim Kane  
Civil Engineering  
3:00 - 5:00 PM  
BSC 171-173 Table 09

Lindsay Kilwin  
Occupational Science and Occupational Therapy  
3:00 - 5:00 PM  
BSC 171-173 Table 25

Jakob Klinger  
Mathematics & Computer Science  
3:00 - 5:00 PM  
BSC 171-173 Table 44

Erin Klostermann  
Communication Sciences and Disorders  
3:00 - 5:00 PM  
BSC 171-173 Table 42

Bob Kopfensteiner  
English  
3:40 PM  
BSC 253 B

Brian Kovarik  
Aerospace & Mechanical Engineering  
3:00 - 5:00 PM  
BSC 171-173 Table 04

Jessica Kuehler  
Psychology  
3:00 - 5:00 PM  
BSC 171-173 Table 49

Christina Marie LaFon  
Sociology and Anthropology  
4:00 PM  
BSC 251 A

Cynthia Lammert  
Medical Imaging and Radiation Therapeutics  
3:00 - 5:00 PM  
BSC 171-173 Table 17

Barrett Lanham  
Service Leadership  
3:00 PM  
BSC 253 A

Gabriella Lavezzi  
Occupational Science and Occupational Therapy  
3:00 - 5:00 PM  
BSC 171-173 Table 25

Nathan Lebbing  
Civil Engineering  
3:00 - 5:00 PM  
BSC 171-173 Table 10

Hongchen Li  
Studio Art  
3:00 - 5:00 PM  
BSC 171-173 Table 59
<table>
<thead>
<tr>
<th>Name</th>
<th>Major</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kun Lin</td>
<td>Finance</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 52</td>
</tr>
<tr>
<td>Irene Liu</td>
<td>Clinical Laboratory Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 14</td>
</tr>
<tr>
<td>Sean Lopez</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 01</td>
</tr>
<tr>
<td>Maureen Mahon</td>
<td>School of Nursing</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 58</td>
</tr>
<tr>
<td>Monique Manuel</td>
<td>African American Studies</td>
<td>4:20 PM</td>
<td>BSC 253 C</td>
</tr>
<tr>
<td>Jake May</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 06</td>
</tr>
<tr>
<td>Joseph Mayer</td>
<td>Electrical &amp; Computer Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 11</td>
</tr>
<tr>
<td>Fabiola Mazon Madrid</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 04</td>
</tr>
<tr>
<td>Allegra Merriweather</td>
<td>Medical Humanities</td>
<td>3:20 PM</td>
<td>BSC 253 C</td>
</tr>
<tr>
<td>Jaime Miano</td>
<td>Clinical Laboratory Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 13</td>
</tr>
<tr>
<td>Ben Minden-Birkenmaier</td>
<td>Biomedical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 08</td>
</tr>
<tr>
<td>Ben Minden-Birkenmaier</td>
<td>Music</td>
<td>3:40 PM</td>
<td>BSC 253 D</td>
</tr>
<tr>
<td>Rebecca Mitrovich</td>
<td>Civil Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 09</td>
</tr>
<tr>
<td>Claire Moll</td>
<td>Modern &amp; Classical Languages</td>
<td>3:00 PM</td>
<td>BSC 251 B</td>
</tr>
<tr>
<td>Brady Moore</td>
<td>Sports Business</td>
<td>4:00 PM</td>
<td>BSC 253 A</td>
</tr>
<tr>
<td>Alexander Mosakowski</td>
<td>History</td>
<td>4:20 PM</td>
<td>BSC 251 B</td>
</tr>
<tr>
<td>Nicole Mueller</td>
<td>Clinical Laboratory Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 15</td>
</tr>
<tr>
<td>John Mueller</td>
<td>Business</td>
<td>4:20 PM</td>
<td>BSC 253 A</td>
</tr>
<tr>
<td>Catherine Niehaus</td>
<td>Art History</td>
<td>3:20 PM</td>
<td>BSC 253 D</td>
</tr>
<tr>
<td>Gayatri Nijsure</td>
<td>Electrical &amp; Computer Engineering</td>
<td>4:00 PM</td>
<td>BSC 256</td>
</tr>
<tr>
<td>Ashley Nussbaum</td>
<td>Psychology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 49</td>
</tr>
<tr>
<td>Name</td>
<td>Major</td>
<td>Time</td>
<td>Location</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------</td>
<td>---------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Chukwuemeka Obi</td>
<td>Biology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 32</td>
</tr>
<tr>
<td>Kirstin Palovick</td>
<td>Political Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 46</td>
</tr>
<tr>
<td>Laura Pape</td>
<td>Honors</td>
<td>3:20 PM</td>
<td>BSC 254</td>
</tr>
<tr>
<td>Gaytri Patel</td>
<td>Biology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 32</td>
</tr>
<tr>
<td>Bowen Pei</td>
<td>Civil Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 09</td>
</tr>
<tr>
<td>Julianne Pelger</td>
<td>Physical Therapy and Athletic Training</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 28</td>
</tr>
<tr>
<td>Richard Pham</td>
<td>Electrical &amp; Computer Engineering</td>
<td>4:00 PM</td>
<td>BSC 256</td>
</tr>
<tr>
<td>Kailey Pretzlauff</td>
<td>Sports Business</td>
<td>4:00 PM</td>
<td>BSC 253 A</td>
</tr>
<tr>
<td>Brianna Radici</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 26</td>
</tr>
<tr>
<td>Annie Radville</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 05</td>
</tr>
<tr>
<td>Michele Ramirez</td>
<td>Clinical Laboratory Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 13</td>
</tr>
<tr>
<td>Jessica Reilly</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 26</td>
</tr>
<tr>
<td>Allyson Renth</td>
<td>Biology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 33</td>
</tr>
<tr>
<td>Megan Rogers</td>
<td>Sports Business</td>
<td>4:00 PM</td>
<td>BSC 253 A</td>
</tr>
<tr>
<td>Daniel Rolles</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 02</td>
</tr>
<tr>
<td>Aaron Rowe</td>
<td>Mathematics &amp; Computer Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 44</td>
</tr>
<tr>
<td>Kathryn Ruble</td>
<td>Sociology and Anthropology</td>
<td>3:00 PM</td>
<td>BSC 251 A</td>
</tr>
<tr>
<td>Alfonso Sasieta</td>
<td>Modern &amp; Classical Languages</td>
<td>3:20 PM</td>
<td>BSC 251 B</td>
</tr>
<tr>
<td>Justin Schmeltz</td>
<td>Civil Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 10</td>
</tr>
<tr>
<td>Timothy Schmitz</td>
<td>Physics</td>
<td>3:20 PM</td>
<td>BSC 256</td>
</tr>
<tr>
<td>Name</td>
<td>Major</td>
<td>Time</td>
<td>Room</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Timothy Schmitz</td>
<td>Philosophy</td>
<td>4:20 PM</td>
<td>BSC 253 B</td>
</tr>
<tr>
<td>Jacob Schreck</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 02</td>
</tr>
<tr>
<td>Kaitlyn Schultz</td>
<td>Communication</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 40</td>
</tr>
<tr>
<td>Kayla Scott</td>
<td>Biomedical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 08</td>
</tr>
<tr>
<td>Maggie Scudder</td>
<td>Occupational Science and Occupational Therapy</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 27</td>
</tr>
<tr>
<td>Adria Serra Moral</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 04</td>
</tr>
<tr>
<td>Krunal Shah</td>
<td>Mathematics &amp; Computer Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 44</td>
</tr>
<tr>
<td>Jordan Slavik</td>
<td>History</td>
<td>4:00 PM</td>
<td>BSC 251 B</td>
</tr>
<tr>
<td>Carrie Smith</td>
<td>Medical Imaging and Radiation Therapeutics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 22</td>
</tr>
<tr>
<td>Jeremy Smith</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 06</td>
</tr>
<tr>
<td>Taelon Smith</td>
<td>African American Studies</td>
<td>4:00 PM</td>
<td>BSC 253 C</td>
</tr>
<tr>
<td>Hannah Soltys</td>
<td>Art History</td>
<td>3:00 PM</td>
<td>BSC 253 D</td>
</tr>
<tr>
<td>Christopher Sorgani</td>
<td>Physical Therapy and Athletic Training</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 31</td>
</tr>
<tr>
<td>William Starnes</td>
<td>Business</td>
<td>4:20 PM</td>
<td>BSC 253 A</td>
</tr>
<tr>
<td>Victoria Stake</td>
<td>Psychology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 48</td>
</tr>
<tr>
<td>Mallory Stumpf</td>
<td>Psychology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 48</td>
</tr>
<tr>
<td>Mark Tabor</td>
<td>Mathematics &amp; Computer Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 44</td>
</tr>
<tr>
<td>Mark Tapia</td>
<td>Psychology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 48</td>
</tr>
<tr>
<td>Emma Tessier</td>
<td>Clinical Laboratory Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 16</td>
</tr>
<tr>
<td>Zach Toth</td>
<td>Biomedical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173 Table 08</td>
</tr>
<tr>
<td>Anthony Traina</td>
<td>Economics</td>
<td>3:40 PM</td>
<td>BSC 253 A</td>
</tr>
</tbody>
</table>
## INDEX OF PARTICIPANTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Time</th>
<th>Location</th>
<th>Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christine Van Alstine</td>
<td>Medical Imaging and Radiation Therapeutics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 19</td>
</tr>
<tr>
<td>Jason Wahidi</td>
<td>Medical Imaging and Radiation Therapeutics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 20</td>
</tr>
<tr>
<td>Amanda Waltos</td>
<td>Honors</td>
<td>3:40 PM</td>
<td></td>
<td>BSC 254</td>
</tr>
<tr>
<td>Yanqui Wang</td>
<td>Biomedical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 07</td>
</tr>
<tr>
<td>Christopher Webb</td>
<td>Mathematics &amp; Computer Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 45</td>
</tr>
<tr>
<td>Stacey Williams</td>
<td>Social Work</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 56</td>
</tr>
<tr>
<td>Benjamin Winokur</td>
<td>Aerospace &amp; Mechanical Engineering</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 02</td>
</tr>
<tr>
<td>Jordan Wisch</td>
<td>Mathematics &amp; Computer Science</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 44</td>
</tr>
<tr>
<td>Stephanie Zhang</td>
<td>Biology</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 34</td>
</tr>
<tr>
<td>Kara Zimmer</td>
<td>Medical Imaging and Radiation Therapeutics</td>
<td>3:00 - 5:00 PM</td>
<td>BSC 171-173</td>
<td>Table 23</td>
</tr>
</tbody>
</table>