### Biology

**An Analysis of the Potential of Eryngial as a Treatment for Neosporosis**  
Presenters: Hannah Adams and Gabrielle Bachtel  
Faculty Sponsors: Dr. Wayne Forbes, Dr. Steven Strain and Ms. Joy Strain

**Utilizing Live-Cell Imaging in Drosophila Cells to Identify Stressors that Induce Protein Misfolding**  
Presenter: Annette Choi  
Faculty Sponsors: Dr. Martin Buckley and Dr. Stacy Hrizo

**Identification of the Digits in Embryonic Laysan Albatross (Phoebastria immutabilis)**  
Presenter: Joshua Jones  
Faculty Sponsors: Dr. Susan Rehorek and Dr. Timothy Smith

**Evaluation of Activation of HSF and UPR Protein Folding Pathways by Chemical Stressors Using a Yeast Reporter System**  
Presenter: Emily Lackner  
Faculty Sponsors: Dr. Stacy Hrizo and Dr. Martin Buckley

**Examination of Nuptial Pads in Xenopus laevis Exposed to the Pesticide Imidacloprid**  
Presenter: Victoria Pasquale  
Faculty Sponsors: Dr. Miranda Falso and Dr. Paul Falso

**Analysis of the Role of Melatonin in Tissue Regeneration in Drosophila melanogaster**  
Presenter: Ryan Riegel  
Faculty Sponsors: Dr. Martin Buckley and Dr. Simon Beeching

**Evaluation of Heat Shock Factor Activation by the Chemotherapeutic Agent, Bortezomib, in a Drosophila melanogaster Model System**  
Presenter: Austin Shirk  
Faculty Sponsors: Dr. Stacy Hrizo and Dr. Martin Buckley

**Examination of HSF Activation In a Saccharomyces cervisiae Model for TPI Deficiency**  
Presenters: Kathryn Skolnick and Lily-Jean Schlosser  
Faculty Sponsor: Dr. Stacy Hrizo

### Chemistry (cont’d)

**Investigating Solution Properties of Manganese 12-Metallacrown-4**  
Presenter: Jacob Palmer  
Faculty Sponsor: Dr. Thaddeus Boron

**Increased Expression of Transglutaminase 2 in Human Erythroleukemia Cells**  
Presenter: Shannon Schultz  
Faculty Sponsor: Dr. Paul Birckbichler

**A Study of L-Neoplanocin Analogues: Synthesis and Antiviral Properties**  
Presenter: Alexander Smith  
Faculty Sponsor: Dr. Qi Chen

**Cell Growth Inhibition and Transglutaminase Expression in Human Erythroleukemia Cells**  
Presenter: Gabi Spencer  
Faculty Sponsor: Dr. Paul Birckbichler

### Communication

**The Development and Benchmarking of Contemporary Sustainability Indicators for Rural Ethnic Chinese Villages: A Case Study of the Social, Economic and Ecological Issues of Two Gelao Villages Near Chongqing Municipality**  
Presenters: Marlee Thiel, Marshall Tuten, Thomas Fabian and Aisha Aldubayan  
Faculty Sponsors: Dr. Li Pu and Dr. John Golden

### Computer Science

**Towards Modeling the Scheduling of Scientific Applications**  
Presenter: Alexander Gessinger  
Faculty Sponsor: Dr. Nitin Sukhija

**Implementing Multiple Clustering Techniques While Progressing Towards a Simpler Dynamic Routing Process in Vehicle Routing Problems**  
Presenter: Alexander Gessinger  
Faculty Sponsor: Dr. Sam Thangiah

### Criminology and Criminal Justice

**The Effectiveness of Mental Health Courts in the Criminal Justice System: When Examined in Western Pennsylvania**  
Presenter: Austin Mora  
Faculty Sponsor: Dr. Jeffrey Roth
## Elementary Education/Early Childhood

**Head Start Pre-School Teachers Phonemic Awareness Coaching**
Presenters: Lauren Denny, Sara Lydick, Victoria St. Claire and Christina Donatelli
Faculty Sponsors: Dr. Sara Tours and Dr. Laura Kelley

## Exercise and Rehabilitative Sciences

**Using Weather Devices to Determine Outdoor Activity Modifications**
- Presenter: Kelsey Tanler
- Faculty Sponsor: Dr. Kim Keeley

## Geography, Geology and the Environment

**Drone Assisted Investigation of Dune Field Morphology in the White River Badlands, South Dakota**
- Presenters: Henry Kramer and Colton Byers
- Faculty Sponsor: Dr. Patrick Burkart

**Hydrogeology of Slippery Rock University**
- Presenter: Nicholas Russo
- Faculty Sponsor: Dr. Patrick Burkart

**The Geology of Pittsburgh and the Surrounding Areas: Carnegie Museum of National History Interactive GIS Map**
- Presenter: Nicholas Russo
- Faculty Sponsor: Dr. Tamra Schiappa

## History

**Suburbs and Scholarship: Women in Higher Education in Bellevue, PA, 1849-1914**
- Presenter: Nikol Damato
- Faculty Sponsor: Dr. William Bergmann

## Mathematics and Statistics

**Maximum Likelihood Estimation (MLE) for Location and Scale Parameters of Burr Type III Distributions**
- Presenter: Emily Foley, Madeline Baillie and Michaela Piper
- Faculty Sponsor: Dr. Woosuk Kim

**Location and Scale Parameter Estimation of Burr Type III Distribution by Monte Carlo Markov Chain (MCMC) Procedure**
- Presenters: Kyle Maraffi, Lucas Pilarski and Adam Majewski
- Faculty Sponsor: Dr. Woosuk Kim

## Physical and Health Education

**The Effects of Tactical Strength & Conditioning on Firefighters’ Job-Related Task Performance**
- Presenter: Jacob Economou and Nathan Hoffman
- Faculty Sponsor: Dr. Istvan Kovacs

**Self-Regulated Training with Robot Improves Table Tennis Forehand Efficiency**
- Presenter: Austin McClinton
- Faculty Sponsor: Dr. Istvan Kovacs

## Physical and Health Education (cont’d)

**Influence of Trampoline-Based Activity Sessions on the Participation of Youth with Autism Spectrum Disorder in Afterschool Physical Activity**
- Presenters: Kelci Peterson, Kassandra Burger and Caitlyn MacKelvey
- Faculty Sponsor: Dr. Dallas Jackson

**Gravitational Waves and the Expansion of the Universe**
- Presenter: Drake Butz
- Faculty Sponsor: Dr. Krishna Mukherjee

**The Impact of the Photoacoustic Effect on Communication**
- Presenters: Adam Giovanelli and Luke Wenger
- Faculty Sponsor: Dr. Krishna Mukherjee

**Seismic Mapping of Oil and Natural Gas Reservoirs**
- Presenter: Jesse Hansel
- Faculty Sponsor: Dr. Krishna Mukherjee and Dr. Mohammed Kazemi

**Observing Gravitational Redshift with Advanced Imaging from a VLT**
- Presenter: Samuel Hone
- Faculty Sponsor: Dr. Krishna Mukherjee

**Chirped Pulse Amplification**
- Presenters: Melanie Hook and Wyatt Rosenberger
- Faculty Sponsor: Dr. Krishna Mukherjee

**Globular Cluster Metallicity Impact on Galaxy Formation**
- Presenter: Morgan Morrison
- Faculty Sponsor: Dr. Krishna Mukherjee

**The Mystery of the Corona**
- Presenter: Rebecca Parry
- Faculty Sponsor: Dr. Krishna Mukherjee

**The Search for Dark Matter**
- Presenter: Wyatt Rosenberger
- Faculty Sponsor: Dr. Krishna Mukherjee

**How Termite Mounds Can Improve Engineering Research**
- Presenter: Panyapit Uareksit
- Faculty Sponsor: Dr. Krishna Mukherjee

**First Stars**
- Presenter: Chase Wilkerson
- Faculty Sponsor: Dr. Krishna Mukherjee
### Psychology

**Depression Symptoms are Associated with Electroencephalography**  
*Alpha Power in College Students*  
Presenter: Amanda Bruscemi  
Faculty Sponsor: Dr. Jennifer Willford

**Suicidal Thoughts, Insomnia and Social Support Predict Depression in PTSD in Young Adults**  
Presenters: Emily Goldinger, Alexis Cadwallader, Collin Darby and Kelsey Armer  
Faculty Sponsor: Dr. Jennifer Willford

**Masculinity and Femininity: Testing Associations with Sex Segregation and Sexual Orientation**  
Presenters: Kourtney Kotvas, Emily Dodge and Cassandra Oleksak  
Faculty Sponsor: Dr. Emily Keener

**What's in a Name or Pronoun? An Examination of the Effects of Gender Inclusive Pronouns on Memory**  
Presenters: Kourtney Kotvas and Shawna Skoczynski  
Faculty Sponsor: Dr. Emily Keener

**Conditioning of a Novel Food in the Terrestrial Hermit Crab (Coenobite clypeatus)**  
Presenter: Mia Radevski  
Faculty Sponsor: Dr. Beth Ann Rice

**The Prevalence of Depressive Symptoms in College Students**  
Presenter: Morgan Sabatini  
Faculty Sponsor: Dr. Jennifer Willford

**Observations of Collaborative Learning in a Museum Setting**  
Presenters: Kandis Shamblin, Cherice Jackson, Megan Kausmeyer, Cassie Oleksak, Sydney Kresconko, Meredith Willard, Darian Humer, Holly Stiller, Lois Page and BayLee Lehr  
Faculty Sponsors: Dr. Elizabeth Boerger, Dr. Emily Keener and Dr. Catherine Massey

**The Role of Gender, Sexual Orientation and Relationship Context on Emerging Adults' Endorsement of Agentic Conflict-Management Strategies**  
Presenters: Shawna Skoczynski and Kourtney Kotvas  
Faculty Sponsor: Dr. Emily Keener

**The Relationship Between Locus of Control, Social Support and Mental Toughness on Perceptions of Sport Success**  
Presenters: Patrick Spaulding and Khyren Ross  
Faculty Sponsor: Dr. Catherine Massey

**Does Feminism Look Good on Me?: An Examination of Types of Feminism, Body Image and Disordered Eating**  
Presenters: Alison Williams and Chloe Dauer  
Faculty Sponsors: Dr. Jennifer McGraw and Dr. Emily Keener

**Frontal Brain Volume Asymmetry: A Neurobiological Marker of Prenatal Tobacco Exposure in Young Adults**  
Presenter: Jenna Simon  
Faculty Sponsor: Dr. Jennifer Willford

**The Associations between Marijuana Use, Life Satisfaction and Stress in College Students is Moderated by Gender**  
Presenter: Shelby Bruggeman  
Faculty Sponsor: Dr. Jennifer Willford

### School of Business

**Using the Theory of Reasoned Action to Understand First Generation College Students’ Intent to Major in Accounting**  
Presenters: Nathan Endres, Cassidy Davis, Ralph Delio Jr. and Zachary Gallaher  
Faculty Sponsor: Dr. Edward Scott

### School of Physical Therapy

**Do Cranial Synchondroses Influence Basicranial Angulation and Facial Orientation?**  
Presenter: Rebecca Reynolds  
Faculty Sponsor: Dr. Timothy Smith

### Secondary Education/Foundations of Education

**Exploration and Literature Review: EV3 Designing and Programming for Elementary Classroom**  
Presenter: Jessica Bauer  
Faculty Sponsor: Dr. Junko Yamamoto

### Special Education

**The Need for Clean Water in the Dominican Republic**  
Presenter: Nicole Auen  
Faculty Sponsor: Dr. Jeremy Lynch