-Welcome from the-

DIRECTOR OF UNDERGRADUATE RESEARCH AND CREATIVE WORKS

Welcome to the 3rd High Point University Research and Creativity Symposium (High-PURCS). High Point University is an institution which fosters intellectual and creative scholarship through student engagement and student-faculty collaboration. Our students do significant work mentored by faculty and regularly share their intellectual and creative contributions in their disciplines at professional national and regional conferences. However, High-PURCS is an opportunity for students to showcase their work here on campus so HPU students, faculty, and staff can witness our students’ professional development and gain a glimpse of tomorrow’s future leaders, artists, scientists, teachers and scholars. At this 3rd symposium, we have 132 students mentored by 58 faculty from 22 departments showcasing 103 presentations. Our students’ achievement is a reflection of HPU’s holistic learning approach and the dedication of its caring faculty. Thank you for being part of the 2015 High Point University Research and Creativity Symposium.

Dr. Joanne Altman
Director, Undergraduate Research and Creative Works
1:00-1:20 p.m.  Welcome, Opening Remarks, & Awards
Phillips Hall Room 120

1:30-2:30 p.m.  Oral Session I and Theatre & Dance
Phillips Hall

2:30-3:30 p.m.  Oral Session II and Dance Performances
Phillips Hall

3:30-4:15 p.m.  Oral Session III
Phillips Hall 2nd Floor

3:30-5:00 p.m.  Poster Session and Art Exhibit with Reception
Slane Basketball Court
## ORAL PRESENTATION SCHEDULE

1:00-1:20 p.m. Opening Remarks from Dr. Dennis Carroll and Awards- Phillips Hall, Room 120

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Room 215</th>
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<tbody>
<tr>
<td>1:30-1:45</td>
<td>Victoria Franklin</td>
<td>Tierney Loughran</td>
<td>Andrea Baellow</td>
<td>Karaina Callahan</td>
<td>Sally Gray</td>
<td>Rosemary Dunning</td>
<td>Jessica Pikowski</td>
<td>Summer Kiesel, Caleb Redslab</td>
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<tr>
<td>1:50-2:05</td>
<td>Mackenzie Fisher, Callie Klinkmueller</td>
<td>Benjamin May</td>
<td>Katherine Van Wert</td>
<td>Christina Burchette</td>
<td>Emily Harris</td>
<td>Kylie Foster</td>
<td>Britton Nagy</td>
<td>Rachel Abel, Ashton Kirby, Danielle Criss, Zoey Chittick, Madison Bryan, Peyton Senning,</td>
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<tr>
<td>2:10-2:25</td>
<td>Hans Lang, Alicia Hines</td>
<td>Andrea Perreault</td>
<td>Emma Zuk</td>
<td>Tayla Curran</td>
<td>Justin Cummings</td>
<td>Gallagher Foxworthy</td>
<td>Danielle Criss, Zoey Chittick</td>
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**Session 2**

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<tbody>
<tr>
<td>2:30-2:45</td>
<td>Mary Pruitt, Taylor Daniel</td>
<td>Reza Moghtaderi Esfahani, Thomas Douglas</td>
<td>Jacob Brooks</td>
<td>Celia Glenn, Meghan Brown (YOTA)</td>
<td>Lindsey Anuzis</td>
<td>Bryce Howe</td>
<td>Alex Mills</td>
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<td>2:50-3:05</td>
<td>Danielle Lauterborn, Crosby Sensibaugh</td>
<td>Nicholas Zayatz, David Naylor</td>
<td>Paige Ward</td>
<td>Becky Irons</td>
<td>Amanda Szymanski</td>
<td>Taylor McAuliffe</td>
<td>Mayeesa Mitchell</td>
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<td>3:10-3:25</td>
<td>Catherine Bakewell, Anna Simeonides</td>
<td>Amy King</td>
<td>Jessica Peña</td>
<td>Peyton Senning, Jordan Perkins, Madison Bryan, Sandra Ball, Amy Sladek, Savannah Benedict, Patricia Regius, Madeleine Casadonte</td>
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**Session 3**

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<td>3:30-3:45</td>
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<td>Michelle North</td>
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<td>3:45-4:00</td>
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<td>Sarah Taylor</td>
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<td>4:00-4:15</td>
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<td>Alicia Miller</td>
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3:30-5:00 p.m. Posters & Art Exhibit with Reception- Slane Basketball Court
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<th>Space</th>
<th>Presenter(s)</th>
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<td></td>
<td>Brea Hampton</td>
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<td>1</td>
<td>Aaron Smith</td>
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<td>2</td>
<td>Julia Zautke</td>
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<td>3</td>
<td>Andrew Bosio</td>
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<td>Matthew Sayger</td>
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<td>5</td>
<td>Laura Dion</td>
<td>Criminal Justice</td>
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<td>6</td>
<td>Kiera Johnston</td>
<td>Education</td>
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<td>7</td>
<td>Lindsay Owen</td>
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<td>8</td>
<td>Lauren Folsom &amp; Katherine Mastropiero</td>
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<td>9</td>
<td>Robert Rivera, Paul Freda &amp; Perry Morris</td>
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<td>10</td>
<td>Laura Dailey</td>
<td>Home Furnishings</td>
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<td>11</td>
<td>Noah Coates, Sarah Berkowitz &amp; Danny Calleo</td>
<td>English</td>
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<td>12</td>
<td>Allison Arpante</td>
<td>Physical Therapy</td>
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<td>13</td>
<td>Kaitlyn Wright</td>
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<td>Lauren Terry</td>
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<td>Colleen Mulrey</td>
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<td>16</td>
<td>Jeffrey Berwager</td>
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<td>17</td>
<td>Jamie Schnuck</td>
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<td>Kathryn Farina</td>
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<td>19</td>
<td>Allie Zambito</td>
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<td>Christina Giusto</td>
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<td>Rachel Thiets</td>
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<td>Ashley Quinn Hagen</td>
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<td>Hallie Stidham</td>
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<td>Amiras Simeonides</td>
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<td>Eugene Filik</td>
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<td>27</td>
<td>Jerod Oakes</td>
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<td>28</td>
<td>Katelyn Long</td>
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<td>29</td>
<td>Lindsey Anuzis, Julianna Adams &amp; Nicole Bayeur</td>
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<td>Craig Schneid</td>
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<td>Rachel Gilroy</td>
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<td>Alexandra Mauch</td>
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<td>34</td>
<td>Madelyn Bagwell &amp; Kendall Fallon</td>
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<td>35</td>
<td>Rodrigo Catalan-Hurtado</td>
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<td>36</td>
<td>Christopher Wagner &amp; Gina Botsko</td>
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<td>37</td>
<td>Alex DeSimone</td>
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<td>38</td>
<td>Matthew Gill, Alexander Hicks &amp; Paul MacCarty</td>
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<td>Gabrielle Hayes</td>
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<td>Tyler Wilson, Norbeth Dzotefe, Richard Gregory &amp; Josiah Howard</td>
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<td>Sean Ireland &amp; Harold Coley</td>
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<td>42</td>
<td>Calla Telzrow</td>
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<td>43</td>
<td>Loren Safille</td>
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<td>44</td>
<td>Tayla Curran</td>
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**ART EXHIBITS**

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<tr>
<td>46</td>
<td>Tayla Curran*</td>
<td>YOTA</td>
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<td>47</td>
<td>Leah Hoeferkamp*</td>
<td>YOTA</td>
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<td>48</td>
<td>Macaulley Quirk</td>
<td>Communications</td>
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<td>49</td>
<td>Miranda Armiger &amp; Mara Wedekind*</td>
<td>YOTA</td>
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<td>50</td>
<td>David Friedman*</td>
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<td>51</td>
<td>Emmaline Doherty &amp; Lydia Monteiro*</td>
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<td>Karaina Callahan*</td>
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<td>Ashton Hughes*</td>
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<td>54</td>
<td>Lilyana Diaz &amp; Danielle Prince*</td>
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<td>55</td>
<td>Mackenzie Allred*</td>
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<td>56</td>
<td>Alicia Miller*</td>
<td>YOTA</td>
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<td>57</td>
<td>Nelson Ngo*</td>
<td>YOTA</td>
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*Year of the Arts (YOTA) is a collaborative visual art experience that allows students to enrich their undergraduate experience by developing their skills and interests with mentorship from faculty.*
**Year of the Arts**  
**Phillips 215**

1:30-1:45  
**Irish Dance Painting Interpretations**  
Victoria Franklin  
Mentor: Mr. Scott Raynor, Art

I have created a series of large scale works on paper based on various Irish dances through a process of placing my feet in paint and performing across paper. The paintings will be a visual representation of the mood evoked by the music associated with various Irish dances.

1:50-2:05  
**Our North Carolina**  
Mackenzie Fisher and Callie Klinkmueller  
Mentor: Ms. Benita VanWinkle, Art

An out-of-stater’s portrait of the state, Our North Carolina captures the experience of being in the three regions of the state, the Coast, the Piedmont and the Mountains, through original songs and photographs.

2:10-2:25  
**Psychological Connection with Clothing Decisions**  
Hans Lang and Alicia Hines  
Mentor: Mr. Mark Brown, Art

We are studying a person’s psychological connection with colors, patterns, shapes, fabrics etc. in order to understand their fashion preferences. What makes individuals choose the certain apparel combinations that they do to represent them self? A survey will be conducted to link psychological characteristics with physical clothing appearances.

**Mathematics**  
**Phillips 216**

1:30-1:45  
**Bracing and Determining Rigidity in Grids and Shapes**  
Tierney Loughran  
Mentor: Dr. Laurie Zack, Mathematics

An application of graph theory involves using braces to determine the rigidity of a grid. That is, how many braces (diagonals) are needed in order to make the grid rigid? I will explain the findings of bracing other shapes and the ideas of the tessellation of hexagons to the plane.

1:50-2:05  
**Matroids 4 Macaulay2**  
Benjamin May  
Mentor: Dr. Lindsay Piechnik, Mathematics

The purpose of this research project was to study matroids in order to create a package for them in Macaulay2. Macaulay2 is a software system designed to aid mathematical research in algebraic geometry and commutative algebra. My work focused on approaching Matroids from a Linear Algebra perspective.

2:10-2:25  
**Dopamine in a Neuron**  
Andrea Perreault  
Mentor: Dr. Lindsay Piechnik, Mathematics

Dopamine is a tyrosine-derived neurotransmitter. It plays a part in crucial functions such as cognition, regulation, and movement. This presentation will discuss a mathematical model of differential equations that explains the types of dopamine in a single neuron and how it is converted between these types to achieve proper function.
Athletic Training
Phillips 217

1:30-1:45
Influence of Hip Strength and Range of Motion on Landing Kinematics across Maturation Groups in Youth Athletes
Andrea Baellow*, Emma Zuk, Michelle Boling, Lindsay DiStefano, Kate Pfile and Yum Nguyen
Mentor: Dr. Yum Nguyen, Athletic Training

The purpose of this study was to determine if hip strength and range of motion are associated with lower extremity kinematics. The findings suggest that in pre-pubertal athletes, hip strength has more of an influence on landing kinematics, while hip ROM has more of an influence in the post-pubertal athletes.

1:50-2:05
Influence of Static Lower Extremity Alignment on Lower Extremity Kinematics across Functional Tasks
Katherine Van Wert*, Andrea Baellow, Michelle Boling and Yum Nguyen
Mentor: Dr. Yum Nguyen, Athletic Training

The purpose of this study was to determine the relationship between static lower extremity alignment and lower extremity motion during four functional tasks. Hip external rotation range of motion was the only consistent predictor of lower extremity motion across all functional tasks and was specific to females.

2:10-2:25
Longitudinal Changes in Lower Extremity Strength and Range of Motion in Female Youth Soccer Players
Emma Zuk*, Andrea Baellow, Michelle Boling, Lindsey DiStefano, Kate Pfile and Yum Nguyen
Mentor: Dr. Yum Nguyen, Athletic Training

Risk of knee injuries in female athletes is shown to peak throughout maturation. Altered dynamic movements, stemming from hip strength and flexibility, increase this risk. Our research demonstrated that overtime, flexibility and strength increased with internal rotation and decreased with external rotation. Acknowledging these changes will help develop intervention plans.

English I
Phillips 218

1:30-1:45
“Adaptation in Theory and Practice: Gone Girl as Plural Text”
Karaina Callahan
Mentor: Dr. Matthew Carlson, English

This presentation utilizes Roland Barthes’s concepts to argue that adaptation takes a singular, seemingly fixed “work” and evolves it into plural, growing “text.” Using *Gone Girl* as a case study, I show how evolution from book to film makes the story plural, continuing its life and interpretive possibilities.

1:50-2:05
Joe Christmas and Racial Hierarchy in Faulkner’s *Light in August*
Christina Burchette
Mentor: Dr. Kirstin Squint, English

This presentation examines the protagonist Joe Christmas from William Faulkner’s work “Light in August” and how his violent death serves as a commentary on the race relations and hierarchical codes that function within the novel. Several passages will be examined with the purpose of analyzing the character and his community.

2:10-2:25
Frank the Fish: A Case Study of Interactive, Interdisciplinary Group Poetry Workshops in an Assisted Living Facility
Tayla Curran
Mentor: Ms. Allison Walker, English

Using the program *HPU LifeLines*, poetry workshops were held weekly in an assisted-living facility for three months. Collaborative poems that were produced are analyzed through the lens of the five dramas of illness, a concept proposed by scholar Arthur Frank, and contribute to the evidence that literature can improve healing.

*denotes presenting authors when non-presenting authors are listed
Education & History
Phillips 220

1:30-1:45
*Learning in Motion: The Importance of Kinesthetic Learning and Its Use in British Primary Schools v. American Elementary Schools*
Sally Gray
Mentor: Dr. Sarah Vess, Education

This study examines the use of kinesthetic learning methods in a British primary school and an American elementary school. A comparison will be made from field experiences with classroom teachers in both countries, with the help from information gathered from in depth research of kinesthetic learning and its benefits.

1:50-2:05
*Elementary School Teachers’ Perceptions towards Teaching Science*
Emily Harris* and Shirley Disseler
Mentor: Dr. Shirley Disseler, Education

In today’s technological and scientific age it is imperative that students have a thorough understanding and appreciation of science, and that begins in the elementary classroom. This paper examines how elementary teachers’ attitudes towards science affect the frequency and methods with which science is taught in their classrooms.

2:10-2:25
*Dr. Samuel Burford: An Exploration into Faculty-Student Relationships at William Penn High School*
Justin Cummings
Mentor: Dr. Paul Ringel, History

In this presentation I will explore faculty-student relationships during the late 1950s and 1960s at William Penn High School, the all black high school in High Point, North Carolina prior to desegregation. In particular, I will focus on the school’s principal, Dr. Samuel Burford, and his mentoring of William Penn students.

Modern Language I
Phillips 221

1:30-1:45
*El Gris Entre el Blanco y el Negro*
Rosemary Dunning
Mentor: Dr. Adam Winkel, Spanish

I study racial relations affected by the dictator Rafael Trujillo in the Dominican Republic by analyzing Manuel de Cabral’s poem, Compadre Mon, and other related academic sources in order to understand the profound affect that racism has had and continues to have in Dominican society. (Presentation in Spanish)

1:50-2:05
*The Political Influence of Women during the Trujillo Dictatorship*
Kylie Foster
Mentor: Dr. Adam Winkel, Spanish

This project investigates the role of women during Trujillo’s oppressive dictatorship in the Dominican Republic, through the novel En el tiempo de las mariposas, to argue that women’s political involvement was particularly influential against the regime, and in building women’s rights movements across the world. (Presentation in Spanish)

2:10-2:25
*La Revolución De Las Mariposas*
Gallagher Foxworthy
Mentor: Dr. Adam Winkel, Spanish

I am studying the portrayal of Dominican women in the book and movie, En el tiempo de las Mariposas, to show how the assassination of the three Mirabal sisters was the last straw that lead to the downfall of Rafael Trujillo’s dictatorship. (Presentation in Spanish)
Communications I
Phillips 222

1:30-1:45
Not Just a Mindless Activity: Reality Television, Perceived Realism of Television and Verbal and Relational Aggressive Behavior of Viewers
Jessica Pikowski
Mentor: Dr. Virginia McDermott, Communications

Reality television may seem harmless, but lately the industry has manipulated the content to look “real,” leading to behavior being mimicked by viewers. This study’s purpose was to assess if reality television consumption and perception of reality had an effect on verbal and relational aggressive behavior in participants.

1:50-2:05
Bastøy Prison: Creating Good Neighbors in Norway
Britton Nagy
Mentor: Dr. Linda Gretton, Communications

The phrase "prison island" conjures a dark and daunting image reinforced by Hollywood movies, Devil’s Island or Alcatraz-like destinations, and historical concepts of harsh confinement. But the prison on the island of Bastøy, just south of Oslo, Norway, tells a different story.

Oral Session II
2:30-3:30 p.m.

Year of the Arts
Phillips 215

2:30-2:45
Apiary Microcosm: Bees through the Lens of Art
Mary Elizabeth Pruitt & Taylor Carlton Daniel
Mentor: Ms. Allison Walker, English

Utilizing the strengths of our individual interdisciplinary talents, our team has created a functional artistic Apiary. It is dedicated to promoting educational understanding and provoking feelings of compassion for Apis mellifera, the honeybee. We aim to implant our apiary into the gardens of High Point University, to further our vision.

2:50-3:05
Nowhere Man
Danielle Lauterborn and Crosby Sensibaugh
Mentor: Dr. Matthew Schneider, English

The Beatles’ song “Nowhere Man” explores loneliness. The protagonist’s isolation is expressed through the video’s somber tone. Denying himself company, the Nowhere Man represents a common problem adolescents face. Our video uses art to help us understand that we aren’t alone in our struggle to decode ourselves and our world.

3:10-3:25
The Art of Chocolate
Catherine Bakewell and Anna Simeonides
Mentor: Dr. Adam Winkel, Spanish

As an artistic medium, chocolate is very closely linked with cultural identity and serves as an influential factor in people’s personal lives. With this project, we will narrate the story of chocolate and showcase its presence in a wide variety of unique, eclectic flavors.

Math & Computer Science
Phillips 216

2:30-2:45
Internet-independent iOS Platform for Classroom Use
Reza Moghtaderi Esfahani & Thomas Douglas
Mentor: Dr. Daniel Hall, Economics & Mr. Roger Shore, Computer Science and Mathematics

As part of an interdisciplinary effort over the past few years we have developed a suite of iOS applications to help students gain hands-on experience with various theoretical concepts. In our presentation, we will describe our ultimate solution and share some of the design and implementation decisions we faced.
2:50-3:05  
*Voting Anomaly Analysis, a Deeper Look*  
Nick Zayatz and David Naylor  
Mentor: Dr. Adam Graham-Squire, Mathematics  

In the Voting Theory mathematical research area, it has been proven mathematically that the Instant Runoff Voting (IRV) method violates criteria necessary for a fair vote. We have created software to compare voting systems such as Plurality, Pairwise Comparison, Borda Count, and IRV methods and check for anomalies in each.

**Physical & Health Sciences**  
Phillips 217  

2:30-2:45  
*Understanding Biological Cilia Motion through Modeling & Construction of a Biomimetic Cilia System*  
Jacob Brooks  
Mentor: Dr. Briana Fiser, Physics  

We are utilizing a computer simulation and biomimetic cilia system to better understand the effects of metachronal wave patterns of cilia on fluid flow. We will discuss the results and progress made toward application of the computational result to experimental construction of the artificial cilia array and magnet setup.

2:50-3:05  
*Sex-Differences in the Relative Distribution of Lower Extremity Sagittal Plane Moments during Landing*  
Paige Ward* and Jeffrey Taylor  
Mentor: Mr. Jeffrey Taylor, Physical Therapy  

Sex-differences in movement strategies may contribute to increased anterior cruciate ligament injury risk in female athletes. Lower extremity biomechanics were assessed using a drop vertical jump test in collegiate basketball players. Results indicate that female athletes utilize a knee dominant landing strategy compared to a hip dominant strategy in males.

**English II**  
Phillips 218  

2:30-2:45  
*Collection of Poetic Dialogue*  
Celia Glenn and Meghan Brown  
Mentor: Dr. Charmaine Cadeau, English  

Just like dialogue, poems help you understand someone else's perspective. We exchanged poems and responded to each other through verse to create a captivating book. This book explores the different ideas of life from two different people and opens the door into each other's thoughts and perspectives.

2:50-3:05  
*Religion and Sexuality in John Donne’s Poetry*  
Becky Irons  
Mentor: Dr. Laura Linker, English  

Sexuality and Religion are two topics extraordinarily entangled in John Donne’s poetics. Donne’s sexual poetry contains religious images and references as much as his religious poetry contains sexual language and imagery that borderlines sacrilegious. This project will explore the blurred lines between sexuality and religion in Donne's poetry.

3:10-3:25  
*The Melancholy Muse*  
Amy J. King  
Mentor: Dr. Laura Linker, English  

In his *Il Penseroso*, John Milton explores the Renaissance temperament of Melancholy and discusses a possible cure for it through the shared song of a congregation. He employs harmony as a metaphor for the relationships of the speaker to other men and to God.
Psychology
Phillips 220

2:30-2:45
*The Effect of Hippotherapy on Self-Esteem in Girls Who Have Been Bullied*
Lindsey Anuzis
Mentor: Dr. Joanne Altman

Hippotherapy uses horses as a therapeutic agent for individuals with physical, motor, or sensory challenges. This presentation will review the literature on hippotherapy and introduce a pilot study investigating whether the effect of riding and grooming horses can be extended to self-esteem in girls who have been bullied.

2:50-3:05
*The Effects of Doodling, Topic Interest, and Working Memory on Mind Wandering and Reading Comprehension*
Amanda Szymanski* and Kimberly Wear
Mentor: Dr. Kimberly Wear, Psychology

The current study expands on prior research examining mind wandering and comprehension by analyzing the effect of doodling on these constructs. Prior research indicates that working memory and topic interest matter when it comes to maintaining attention and understanding material, however very little exists on the construct of doodling.

Modern Language II
Phillips 221

2:30-2:45
*Las Voces Inocentes que el Gobierno de El Salvador no Oyó*
Bryce Howe
Mentor: Dr. Adam Winkel, Spanish
I study human rights violations in El Salvador as presented in the film Voces Inocentes to illustrate the failure of the El Salvadoran government to its people from 1979 until the end of the civil war in 1992. (Presentation in Spanish)

2:50-3:05
*The Blissful Fantasy of Good Defeating Evil in Pan’s Labyrinth*
Taylor McAuliffe
Mentor: Dr. Adam Winkel, Spanish
I study the portrayal of the Nationalist movement in the movie Pan’s Labyrinth in order to argue that strength and courage can only triumph in a fantasy world and that the artificial barrier between the real world and the fantasy world will eventually break down. (Presentation in Spanish)

3:10-3:25
*La Vuelta a la Patria que Nunca Fue: Inter-generational Longing in “Dreaming in Cuban”*
Jessica Peña
Mentor: Adam Winkel, Spanish
This presentation will investigate the ideological differences among the various generations of Cuban-Americans displayed in the novel Dreaming in Cuban, in order to demonstrate that the forced lack of culture placed on younger generations has created within them a thirst for a restored Cuban cultural identity. (Presentation in Spanish)
Communications
Phillips 222

2:30-2:45
Lost in Transparency: An Analysis of the Portrayal of Dominant Cultural Ideologies on ABC's Hit Program
Alex Mills
Mentor: Dr. Judy Isaksen, Communications

Drawing from feminist theorists Sonja Foss and Leslie Grinner, this paper which is based in the theoretical notion of reinscription will analyze the mediated text of Lost through the ideological lenses of race, religion, and ability.

Oral Session III
3:30-4:15 p.m.

Modern Language
Phillips 221

3:30-3:45
Child Development before the Spanish Civil War
Michelle North
Mentor: Dr. Adam Winkel, Spanish

I study child development in La lengua de las Mariposas (movie and story) in order to prove that the change in education systems in the Second Spanish Republic, before the Spanish Civil War began, encouraged children to establish their own morals and beliefs. (Presentation in Spanish)

3:45-4:00
The Hatred towards Women Following the Spanish Civil War
Sarah Taylor
Mentor: Dr. Adam Winkel, Spanish

I study the violent treatment of women in El Laberinto del Fauno in order to argue that Captain Vidal’s power in the film parallels the patriarchal dictatorship of Francisco Franco after the Spanish Civil War. (Presentation in Spanish)

4:00-4:15
Salvador Dalí: El Artista que Documentó la Mentalidad de los Españoles Durante la Guerra Civil Española
Alicia Miller
Mentor: Adam Winkel, Spanish

Despite Salvador Dalí’s intentional separation from politics, the repression during the Spanish Civil War subconsciously manifests itself in his work. This paper studies two of Dalí’s paintings to argue that his subconscious commentary provides the most accurate portrayal of the oppression experienced by many during the war. (Presentation in Spanish)
Performance Session I
Phillips 120

1:30-1:45
*Selections from the American College Theatre Festival Competition*
Summer Kiesel and Caleb Redslob
Mentor: Mr. Jay Putnam, Theatre

Summer was selected to compete in the ACTF Irene Ryan Competition this past February in Albany, GA. She and her partner Caleb presented a three-minute scene, a contrasting two-minute scene and a monologue for adjudicators and theatre professionals. Summer also advanced to the Top 16 of the Musical Theatre Intensive Competition.

1:50-2:05
*Damages*
Rachel Abel, Ashton Kirby, Danielle Criss, Zoey Chittick, Madison Bryan and Peyton Senning
Mentor: Ms. Lindsey Howie, Dance

*Damages* was set by guest artist Shannon Bramham over a four day period in November on students Rachel Abel, Madison Bryan, Zoey Chittick, Danielle Criss, Ashton Kirby, and Peyton Senning. They were selected to present this dance at the American College Dance Association Conference in March of 2015. The work deals with themes surrounding isolationism and conformity.

2:10-2:25
*You Are Me, and We Are You*
Danielle Criss and Zoey Chittick
Mentor: Ms. Lindsey Howie, Dance

*You Are Me, and We Are You* is a contemporary dance work that explores themes surrounding the following quote, "They only see us from the outside. Our differences don't make us different". Choreographer Danielle Criss uses her passion for inspiring others to pursue social activism through the arts.

Performance Session II
Phillips 120

2:30-2:45
*Finding Me*
Amanda Rossi
Mentor: Ms. Lindsey Howie, Dance

This contemporary dance work attempts to answer the question of how art is related to identity. By exploring past historical modern dance pioneers, I have embarked on a journey to discovery my own identity as an artist and cultivate my choreographic voice.

2:50-3:05
*Transforming Self*
Madison Bryan and Ashton Kirby
Mentor: Ms. Lindsey Howie, Dance

*Transforming Self* examines “self-talk.” Negative self-talk may cause you to compare yourself to another without awareness that they have their own struggles too. With support from one another and by redirecting one’s thoughts, you become unified in confidence, can develop a healthy self-concept and are free to be yourself.

3:10-3:25
*Into the Light*
Peyton Senning, Jordan Perkins, Madison Bryan, Sandra Ball, Amy Sladek, Savannah Benedict, Patricia Regius and Madeleine Casadonte
Mentor: Ms. Lindsey Howie, Dance

This dance will focus on how bullying affects victims and their world. The results of a simple push, an evil look can make lives spin. We hope to send a message to the audience that intolerance is unacceptable. These victims and their worlds must emerge from darkness into the light.
**POSTER PRESENTATIONS**

Slane Basketball Court • 3:30pm-5:00pm

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**Biochemistry**

(1) *Analyzing the HIV-1 Genome for Putative Tat-SF1 Binding Sites*

Brea K. Hampton* and Heather Miller  
Mentor: Dr. Heather Miller, Biochemistry

HIV-1 uses numerous human proteins to aid in successful viral replication. One of these host factors is Tat-specific factor 1 (Tat-SF1). This human protein is hypothesized to alter the splicing of HIV-1. Therefore, we are testing for a Tat-SF1: HIV RNA interaction using RNA immunoprecipitations.

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(2) *Loss of ATM Activates Rac1 and Alters Cell Migration*

Aaron Smith*, Michaela Rikard and Melissa Srougi  
Mentor: Dr. Melissa Srougi, Biochemistry

Ataxia-telangiectasia mutated (ATM) is a serine-threonine kinase important in cellular stress responses. Rac1, a GTPase, also plays important regulatory roles within the cell. However, the relationship between ATM and Rac1 has not been extensively studied. Thus, we sought to determine the consequences of activated Rac1 in cells lacking ATM.

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(3) *Tat-SF1's Role in Insulin Signaling*

Julia Zautcke  
Mentor: Dr. Heather Miller, Biochemistry

Tat-specific factor 1 (Tat-SF1) is a human transcription-splicing factor that has been proposed to stimulate gene expression of many genes, especially those in the insulin signaling pathway. To explore this connection, we compared glucose uptake in both control and Tat-SF1 depleted HeLa cells in culture.

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**Chemistry**

(4) *The Thermodynamic Properties of Recyclable Materials*

Andrew Bosio*, M. Todd Knippenberg and Christopher Fowler  
Mentor: Dr. M. Todd Knippenberg, Chemistry

The research conducted in this study focuses on the effects of UV-B light exposure on the thermodynamic properties of recyclables, such as plastic bags. It has required more energy to force the sample to go from the solid state to the liquid state.

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(5) *Heating Rate Comparison of Polymers*

Matthew Sayger* and M. Todd Knippenberg  
Mentor: Dr. M. Todd Knippenberg, Chemistry

This research investigates energy needed to melt polymers using different heating rates. Varying rates of heating a polymer are measured in an effort to determine if there is a difference in measured enthalpy of fusion. Upon examination of collected data there is a trend that too high of a heating rate may deviate from acceptable literature values of enthalpy of fusion.

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**Criminal Justice**

(6) *The Federal Prosecution of Eleanor McDonald in 1791*

Laura Dion* and R. Scott Ingram  
Mentor: Dr. R. Scott Ingram, Criminal Justice

The 1791 federal prosecution of Eleanor McDonald for stealing jewelry on a passenger ship was an early federal criminal case. This poster explores the ambiguities of federal criminal jurisdiction, a topic controversial today and then. What made this routine matter a federal case and what does this say about differences between federal and state criminal justice?
(7) Collaboration at Wood Farm Primary School  
Kiera Johnston  
Mentor: Dr. Sarah Vess, Education

Collaboration is the process of general and special educators working together and sharing roles and responsibilities for student learning (Wiggins & Damore, 2009). This presentation covers how collaboration is interpreted and implied in the education setting and explores the use of collaboration in the setting an English Primary School.

(8) Autism Spectrum Disorder: A Comparison between the United States and United Kingdom  
Lindsay Owen  
Mentor: Dr. Sarah Vess, Education

Autism is the fastest growing developmental disability in the world (Autism Speaks). A comparison of the educational services received by students with Autism in the United States and the United Kingdom will be presented based on classroom observations and interviews of school personnel.

(9) Understanding Dyslexia in Higher Education; A Comparative Study  
Lauren Folsom and Katherine Mastropiero  
Mentor: Dr. Sarah Vess, Education

This project is a comparative study of accommodations for dyslexia in postsecondary education in the United States and Great Britain. Data will be presented from a review of programs at two universities. Information presented will include: laws, the application process, services, prevalence among students, and opinions concerning dyslexia.

(10) Teaching Basketball Free Throws: Wii vs. Traditional Method  
Robert Rivera*, Paul Freda*, Perry Morris*, Linda Hinkle and Martha Bell  
Mentor: Dr. Martha Bell, Physical Education

This presentation focuses on a study comparing the Wii to traditional method for teaching free throws. It used a pre-test/post-test design, four 3rd grade classes, and 20 minutes of instruction within three 40-minute classes. The presentation includes information about the study and suggestions for successful teaching with the Wii.

(11) “The Redford Rocker” Chair Design  
Laura Dailey  
Mentor: Mr. Brandon Jones, Interior Design

My goal was to design and build a functional and beautiful rocking chair. The design process began with inspirational images, creating sketches of my own, and turning them into scaled drawings using AutoCAD. A final prototype will be made by breaking the form into smaller components and assembling them.

(12) Narrative Medicine in Action  
Noah Coates, Sarah Berkowitz and Danny Calleo  
Mentor: Ms. Allison Walker, English

Narrative medicine is a revolutionary technique designed to improve the healthcare-patient relationship in our ever advancing healthcare system. Through the use of narrative creating, patients experience incredible physical, emotional, and mental improvements including a reduction in blood pressure, heart rate, and chronic pain, an improved mood, cognitive function, and hope.
Physical Therapy

(13) Effects of Cutting Direction on In-Cleat Toe Dorsiflexion during Unanticipated Backpedal Cutting in Football Players
Allison Arpante*, Andrea Baellow, Kaitlyn Wright, Kevin Ford, Yum Nguyen, and Jeffrey Taylor
Mentor: Dr. Kevin Ford, Physical Therapy

First metatarsophalangeal joint sprain is a debilitating injury in football players. Maneuvers that increase the risk of MTP joint sprains involve deceleration followed by unanticipated changes in direction. The purpose of this study was to utilize novel in-cleat measurement techniques to compare toe dorsiflexion during unanticipated crossover and side-step cutting.

(14) Effects of Toe Flexor Strength on Forefoot Loading during Unanticipated Side-Step Cutting in Football Players
Kaitlyn Wright*, Allison Arpante, Andrea Baellow, Yum Nguyen, Jeffrey Taylor, and Kevin Ford
Mentor: Dr. Kevin Ford, Physical Therapy

Foot loading may relate to increased risk of fifth metatarsal fractures. Intrinsic foot strength may mediate the distribution of foot loading during athletic maneuvers. Whether increases in intrinsic foot strength directly influences foot loading during athletic tasks is unknown. Understanding this relationship may help identify injury risk in football players.

(15) Does Intrinsic Foot Strength Affect Plantar Forces On The Hallux During A Basketball-Specific Task?
Lauren Terry
Mentor: Mr. Jeffrey Taylor, Physical Therapy

The association between intrinsic foot strength and plantar loading is relatively unknown. This study analyzed the extent to which strength affects plantar forces on the hallux during a single-leg heel lift in collegiate basketball players. Results indicate that intrinsic foot strength is unrelated to plantar forces during this task.

(16) The Relationship between Hip Extensor Strength, Jump Height and External Hip Flexion Moments during Jumping
Colleen Mulrey*, Kevin R. Ford, Yum Nguyen, Eric Hegedus and Jeffrey Taylor
Mentor: Mr. Jeffrey Taylor, Physical Therapy

This study aimed to identify the relationship between maximum jump height, external hip flexion moments, and hip extensor strength during a one-step countermovement jump. While jump height and hip flexion moments were strongly correlated, no significant relationships were identified.

(17) A One-step Countermovement Jump Elicits Asymmetrical Distribution of Lower Extremity Joint Moments in Female Athletes
Jeffrey Berwager*, Kevin Ford, Yum Nguyen, Eric Hegedus and Jeffrey Taylor
Mentor: Mr. Jeffrey Taylor, Physical Therapy

The extent to which asymmetrical movements affect the relative force production at the hip, knee and ankle is not well understood. A one-step countermovement jump was used to analyze lower extremity moments in female basketball players. Results indicate that larger moments are generated in the knee of the leading leg.

Exercise Science

(18) Effect of Caffeine on Postural Stability
Jamie Schnuck* and Kyle Sunderland
Mentor: Dr. Kyle Sunderland, Exercise Science

Caffeine is a neuro stimulant that increases muscle firing rates and is commonly found in pre-workout supplements. Injury risk has been shown to relate to a decrease in balance ability and our purpose was to determine if caffeine has a negative effect on balance due to the neuroexcitability it causes.
(19) Influence of Unweighting on Muscle Oxygenation and VO2 during Running on a Lower-Body Positive-Pressure Treadmill
Kathryn Farina*, Allie Zambito and James Smoliga
Mentors: Dr. James Smoliga, Physiology & Dr. Kyle Sunderland, Exercise Science

The purpose of this study was to describe the relationship between tissue oxygenation in muscle and the volume of oxygen consumed when running with differing body weight support on a lower-body-positive-pressure-treadmill. The results show that VO2 and tissue oxygenation change at different rates for varying body weight support.

Physiology

(20) Relationship between Near-Infrared Spectroscopy Parameters and Physiologic Intensity during Incremental Speed Treadmill Running
Allie Zambito*, Kathryn Farina and James Smoliga
Mentor: Dr. James M. Smoliga, Physiology

Changes in muscle oxygenation during running at different intensities can illuminate physiological mechanisms affecting aerobic fitness. Measurements of muscle oxygenation during treadmill running (n=5) revealed linear relationships between normalized VO2 and normalized tissue saturation index, oxygenated, and deoxygenated hemoglobin (p≤0.010). Physiological mechanisms active across altered running conditions warrants further evaluation.

(21) Clinical Utility of Resveratrol – For Who and How Much?
Christina Giusto*, James Smoliga and Ole Vang
Mentor: Dr. James Smoliga, Physiology

The purpose of this study was to collect expert opinions from individuals active in the resveratrol community regarding clinical use and recommended dosage. An interactive online survey was developed and electronically delivered to a listserv of individuals who published in the resveratrol field and/or have expressed interest in the series of resveratrol conferences.

(22) Repeatability of Intrabreath Measurements of Lung Diffusion Capacity and Cardiac Output during Various Cycling Intensities
Rachel Thiets* and James Smoliga
Mentor: Dr. James Smoliga, Physiology

Lung diffusion capacity for carbon monoxide and cardiac output can be measured during exercise using an intrabreath slow exhalation method. However, this maneuver may be difficult to perform and reproducibility remains largely unexplored. Our purpose: to determine the reproducibility and precision of intrabreath measurements during stationary cycling at various intensities.

History

(23) William Penn: A Day in the Life
Ashley Quinn Hagen
Mentor: Dr. Paul Ringel, History

This project walks through the day-to-day experience of students attending William Penn high school during the 1950s and 60s. It exposes the direct connection between the student’s education and opportunities alongside their obligations and daily experiences with the protests taking place at this time.
Physics

(24) Physics in Non-Inertial Reference Frames
Hallie Stidham*, Simeon Simeonides, Junjie Lao and Aaron Titus
Mentor: Dr. Aaron Titus, Physics

To explore motion in a rotating frame, we attached a camera to a rotating turntable and rolled a steel ball down a ramp and across the turntable. We collected data on the ball’s motion from one video camera in the rotating reference frame and from a second camera in the lab frame.

(25) Multi-component Chalcogenide Gradient Index Materials Research
Stephanie H. Pettit
Mentor: Dr. Theresa S. Mayer, Penn State University, Physics

Aberrations in lenses obscure images, and correcting these aberrations can be costly and difficult. To work towards a new way to correct aberrations, refractive indices of optical lenses were studied. Experiments were done to study the effect of the optical properties of materials when heated. Results showed an increase in the sample’s refractive index as the annealing temperature increased.

(26) Fabrication of a Nanofilm Capacitor for use in a Portable EKG
Amiras Simeonides*, Jarrett Lancaster and Joseph Starobin, Joint School of Nanoscience and Nanoengineering
Mentor: Dr. Aaron Titus, Physics

Methods of fabricating a thin, flexible EKG lead that can be integrated into clothing are investigated. Physical vapor deposition is used to add a thin gold film to a PDMS-coated silicon chip; the fabrication process is refined to create a surface that is sensitive to electric fields caused by cardiac myocytes.

(27) A Pulsar with a Long Orbit- The 12th Double Neutron Star System
Eugene Filik* and Brad Barlow
Mentor: Dr. Brad Barlow, Astrophysics

In May 2014, we observed the binary pulsar PSR J1930-1852 using the 0.9-meter SMARTS telescope in Chile in order to determine what its nearby companion is. We find that the companion is most likely another neutron star. This represents the 12th known double neutron star system ever found.

Communications

(28) Interface Adaption for Lemur Analysis
Jerod Oakes
Mentor: Mr. Brian Heagney, Communications

Lemurama is a mobile application designed to train non-human animals to take the Wisconsin Card Sorting Task (WCST), which is a test that measures executive function in humans. Our research dealt with designing for multiple users; interface design for non-humans, and choosing a development style and engine for this task.

Psychology

(29) A Demonstration of Learning in a Lemur
Katelyn Long* and Joanne Altman
Mentor: Dr. Joanne Altman, Undergraduate Research and Creative Works

We are testing cognitive function in a lemur using a tablet. This presentation focuses on shaping a lemur to discriminate stimuli in preparation for testing on the WCST. We will discuss learning patterns of the lemur and the trials and tribulations of teaching a non-human animal human technology.
(30) **Academic Entitlement, Motivation for Learning and Persistence on Tasks among College Students**
Lindsey Anuzis*, Julianna Adams*, Nicole Bayeur* and Kaila Tuccio
Mentor: Dr. Kirsten Li-Barber, Psychology

This study explores the relationship between academic entitlement (AE) beliefs and motivation for learning and persistence in academic tasks. Higher AE was associated with higher test anxiety, lower perceptions of intrinsic value of learning and perseverance on unattained goals.

(31) **Examining Governing Dynamic of Romantic Interest**
Craig Schneid* and Sadie Leder Elder
Mentor: Dr. Sadie Leder Elder, Psychology

The current work examines the underlying mechanisms that drive an individual's tendency to approach vs. avoid a potential romantic partner. In particular, it looks at the activation of both connection and protection goals that may compete to shape the expression of romantic interest.

(32) **Follow the Rules! Entitlement Predicts Anger about Perceived Social Norm Violations**
Christina Baity* and Christopher Lootens
Mentor: Mr. Christopher Lootens, Psychology

This study examined the role of entitlement in anger over perceived social norm violations (PSNV). A sample of 151 undergraduates responded to 34 scenarios involving PSNV and completed measures of psychological entitlement. As hypothesized, we found that entitlement predicted magnitude of anger about PSNV above and beyond other variables examined.

(33) **Effect of Weight Perception When Determining Guilt for a Crime**
Rachel Gilroy
Mentor: Dr. Kelly Curtis, Psychology

This study examines the relationship among suspect’s weight, perception of guilt, participant’s anti-fat biases, and participant’s level of self-regulating and social desirable behavior. This research also investigates whether suspect or participant gender produces different biases and aims to identify relationships between overweight suspects and undesirable characteristics related to anti-fat biases.

**Theatre**

(34) **United States Institute for Theatre Technology- Tech Olympics**
Alexandra Mauch
Mentor: Mr. Ryan Hemsoth, Theatre

While at the USITT Conference, students will be participating in the Tech Olympics. We were competing against schools with top theatre programs from all over the country in events such as costume quick change, prop changes, light hanging and focusing, knots, and others.

**Biology**

(35) **What Breed Am I? A Teaching Lab in Dog Genetics**
Madelyn Bagwell*, Kendall Fallon* and Cynthia Vigueira
Mentor: Dr. Cynthia Vigueira, Biology

We are developing a teaching lab for the Genetics course in which students amplify and sequence genetic markers in dogs to determine the dog’s breed. We are screening genetic markers that will be suitable for breed identification and compiling protocols for the teaching lab.
The Detection of the Transcription Regulator GerE in *Geobacillus stearothermophilus*

Rodrigo Catalan-Hurtado
Mentor: Dr. Dinene Crater, Biology

*Bacillus subtilis* is able to produce endospores, and GerE is essential for sporulation because it directly activates the transcription of $\kappa$-dependent genes. *Geobacillus stearothermophilus* is also able to sporulate, but it is unknown if it contains a GerE homologue. Evidence suggests that *G. stearothermophilus* contains a gene similar to *gerE*.

Comparative Genetics of Parallel De-domestication Events in Weedy Red Rice (*Oryza sativa*)
Christopher Wagner and Gina Botsko
Mentor: Dr. Patrick Vigueira and Dr. Cynthia Vigueira, Biology

Red rice is the primary factor limiting rice productivity worldwide. We characterized independent red rice de-domestication events. In addition, utilizing comparative genetics at three candidate genes we have examined what genetic changes are required for weedy rice to take hold in agro-ecosystems.

A Screen for Anti-crithidial Compounds from Bacteria in Environmental Sample
Alex DeSimone*, Nicole Wright and Patrick Vigueira
Mentor: Dr. Patrick Vigueira, Biology

*Crithidia mellificae* is a protozoan parasite of the European honey bee, *Apis mellifera* and a potential contributing factor to Colony Collapse Disorder, a phenomenon where bees abruptly die or abandon their colony. We isolated a bacterium from Oak Hollow Lake in High Point, NC that produces compounds that kill *Crithidia*.

Screening Anti-trypanosomal Compounds Against *Crithidia* Parasites
Tyler Wilson*, Norbeth Dzotefe*, Richard Gregory*, Josiah Howard* and Patrick Vigueira
Mentor: Dr. Patrick Vigueira, Biology

The European honey bee, *Apis mellifera*, is an imperative part of the global agricultural industry. *Crithidia mellificae* is a protozoan parasite of honey bees and is associated with Colony Collapse Disorder. Three human diseases are also caused by trypanosomes. We are investigating existing anti-trypanosomal compounds against *C. mellificae*.
We measured xanthophyll de-epoxidation (AZ/VAZ) in leaves with the following pigmentation patterns before and after 20 min high-light exposure: no anthocyanin (GG), adaxial anthocyanins only (RG), abaxial anthocyanins only (GR), and adaxial+abaxial anthocyanins (RR). AZ/VAZ increased in the order: RR<RG<GR<GG, indicating adaxial anthocyanins mitigate high-light stress more effectively than abaxial.

Logging schemes can result in numerous habitats that arthropods utilize. The type of logging and state of succession can result in different arthropod communities. Arthropods play integral roles in ecological balance and utilize logged areas. This project examined the effects of various logging management schemes on insect abundance and diversity.

We evaluated the effects of exposing zebrafish embryos to 3 different concentrations of 17β-estradiol (10⁻⁹, 10⁻¹⁰, 10⁻¹¹) or a control solution. Embryos were treated for 14 days before they were killed, fixed, and stained with alizarin red and alcian blue, which stain bone and cartilage, respectively. Specimens were then scored for the extent to which their embryonic skeleton had ossified.
(46) **Poetry: Art, Medicine or Service?**  
Tayla Curran  
Mentor: Ms. Allison Walker, English

This interactive anthology was designed for individuals experiencing dementia. It incorporates 4 of the major senses (sight, hearing, smell, touch) as mechanisms to more fully engage readers. The poems in the anthology originate from previous research with *HPU LifeLines*, where I facilitated poetry workshops with residents at the assisted-living facility.

(47) **Design Evolution**  
Leah Hoeferkamp  
Mentor: Mr. Scott Raynor, Art

Design Evolution explores the journey of design from basic to elaborate. The smaller pieces collaborate together to show a larger expanse of lines, colors, and shapes into one bigger piece. This theme and variation displays the relationships between different designs.

(48) **One Vision: A Guide Dog Documentary**  
Macaulley Quirk  
Mentor: Dr. James Trammell, Communications

*Dedicated to all the puppies, in particular, to the special four.*

Over a four-month period I had the pleasure of spending time with Guide Dog puppy raisers; I got to tell their story. The story about how they raise these puppies to provide someone else the freedom to live.

(49) **Rooted in Society**  
Miranda Armiger and Mara Wedekind  
Mentor: Mr. R. Bruce Shores, Art

By creating four mixed media canvases depicting a tree, we’ve represented how individuals fit into society. The tree represents both society as a whole and the place and influence of individuals within an ever-growing, complex civilization. We’ve established how the individual and society influence each other through artistic identity.

(50) **The Limitless Fold**  
David Friedman*, Tyler Lee, Zach Zanft, Hogan Dyer and Zach Hepp  
Mentor: Janis Dougherty, Graphic Design

Origami is an art form that is underrepresented and our challenge is to create a work of art that embodies its’ beauty and essence. The piece will be a geometric installation consisting of multiple paper sculptures in a constructed box that creates a full sensory experience for the viewer.

(51) **Friends through the Lens: Photography and Personal Identity**  
Emmaline Doherty and Lydia Monteiro  
Mentor: Dr. Cherl Harrison, Art

At first glance, the central focus of college may seem to be higher education, but we all know that future maids of honor, godparents, and best friends are found here too! This project uses film and digital photography to highlight the impact of college friendships on our personal identities.
(52) *A Collaborative Performance*
Karaina Callahan
Mentor: Mr. Edward Simpson, Theatre

As young creative thinkers heading out into the world, we hear of the struggle for success on a daily basis in this economy where stability is encouraged over passion. My play explores the idea of what it really means to succeed as an artist in the modern world.

(53) *Pottery Pursuit*
Ashton Hughes
Mentor: Mr. Mark Brown, Art

I wanted to be able to express myself like I did in high school, through pottery, but along the way continue to learn and improve as an artist. I am working to complete approximately one piece per week and keep a journal from each time I go into the studio to observe my improvement.

(54) *A Thousand Cranes for Change*
Lilyana Diaz and Danielle Prince
Mentor: Mr. Mark Foster, Music

This art sculpture reflects Japanese lore and history, while also bringing awareness to childhood cancer and the impact that we as a society can make to end it with cooperation and teamwork.

(55) *Modern Technology Meets Letterpress*
Mackenzie Allred
Mentor: Mr. Matthew Emerson, Theatre

The focus of this project is to combine modern and antique technology by designing and printing 3D letters to use in a 130-year old printing press. 3D printing could be a way to combine the antiquated practice of moveable type with its modern counterpart.

(56) *Studio Potter Entrepreneur*
Alicia Miller
Mentor: Mr. Mark Brown, Art

As a Studio Art major, my goal is to establish myself as a studio potter upon graduation. In order to be a successful entrepreneur I research ceramic construction techniques, studio layout, ceramic construction techniques and marketing strategies to commence my career while creating an initial body of work to exhibit.

(57) *Paper City*
Nelson Ngo
Mentor: Ms. Benita VanWinkle, Art

For my project, I am building Roberts Hall out of origami paper. I will make it using more than 5,000 pieces of paper. An institution is built by a lot of people. If this institution, High Point University, is represented by Roberts Hall, all the small triangles are the students.
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