RU
RADFORD
UNIVERSITY

April 17-19, 2012

21st Annual

Undergraduate

Graduate

STUDENT ENGAGEMENT FORUM

Forum Coordinators:

Kaley Thacker B.S, Sarah Ferens B.A., and Devon Rice B.S.
Graduate Assistants for the Honors Academy

Niels Christensen Ph.D.
Interim Associate Director of the Honors Academy

The Forum is sponsored by:
The Radford University Honors Academy

The following individuals and offices are acknowledged for their contributions to the Forum:

Cary Sutherland, Honors Academy Administrative Assistant
Kiersten Newtoff & Meaghan Carey, Honors Academy Work Study Students
Caitlyn Foley, Teresa Clementi, Rachel Debusk, Alexandra Raker (HASO)
Sally Cox, Event Planning Manager
Carolyn Turner, RU Printing Services

Program Table of Contents

Welcome!

Welcome to the 21st Annual Undergraduate and Graduate Student Engagement Forum – Radford University's celebration of student and faculty collaborative scholarship. The Forum is a testimony to the hard work of our students and the dedication of our faculty to an educational experience grounded in collaborative scholarship. We are proud to report that student engagement is alive and well at Radford University in the laboratory, library, classroom, field, and studio. Indeed, this year's event includes over 100 oral presentations and over 175 poster presentations (from over 300 students as author or co-author). Rest assured that these presentations are only the tip of the proverbial iceberg in terms of hours of hard work.

The Forum provides concrete evidence that scholarship is contagious and, in fact, emerges from a wide variety of academic programs including study abroad, internships, service learning and a variety of campus leadership initiatives. Therefore it is the privilege that the Honors Academy plays a lead role in coordinating this event. The Honors Academy exists as an instantiation of collaborative scholarship and we are represented by the work of our graduating Highlander Scholars. Take a moment to read the abstracts of our Highlander Scholars' Capstone Projects, which are the culmination of years of collaborative work with their professors both in and outside of their majors. The professional and personal friendships that resulted from these collaborations will remain with both parties for many years to come.

The Forum could not be such a success without the time devoted by students and their faculty mentors. In addition, countless hours of behind-the-scenes work was required for an undertaking of this magnitude. First, we thank Provost Minner who has already demonstrated his appreciation for collaborative scholarly activities. Special thanks also to Ms. Carolyn Turner from Printing Services and Ms. Sally Cox from Student Events. Sally continues to excel in the daunting task of reserving the necessary rooms for the different presentations. Carolyn's patience and professionalism allowed us to prepare a most professional program. Her willingness to wait for last minute photos and abstracts is truly appreciated. Such collaborators as these are truly a gift for which we should be thankful.

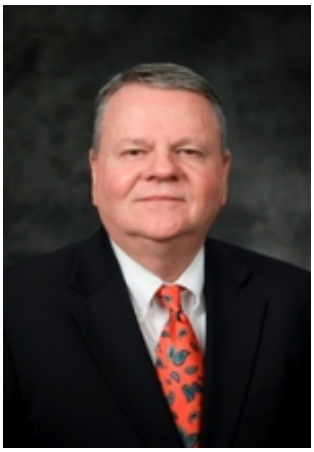
The real work supporting the Forum is performed by an amazing team of students and staff in the Honors Academy office. We thank Kaley Thacker, Devon Rice, and Sarah Ferens for their enthusiastic commitment and hard work in putting this event together. This program and the entire Forum are a success largely due to their diligence. Thanks also go out to student volunteers from our Honors Academy Student Organization (HASO) who worked at our Forum helpdesk. Finally, thanks to Cary Sutherland, Meaghan Carey, and Kiersten Newtoff who keep the Honors Academy office running while much attention and time were diverted to planning the Forum.

It is a privilege to put together these works from our campus community. Enjoy the celebration!

Dr. Niels Christensen
Interim Associate Director, Honors Academy

Dr. Joe King
Director, Honors Academy

Welcome from Provost Minner



Scholars studying the experiences of undergraduate and graduate students in American universities have identified a small number of learning experiences as the most meaningful, the most engaging, and the most important in the careers of students. Virtually all of these scholars suggest that collaborative research---students working with their professors on meaningful research---ranks among those top experiences. That is certainly not a surprise to me or my colleagues in the academy. Scholarship is nothing more or less than the search for truth in the world and I cannot imagine a more exciting learning opportunity than adding to the corpus of knowledge in a discipline that one loves.

For these reasons, it is a special privilege for me to welcome everyone to the 21st Annual Undergraduate/Graduate Student Engagement Forum. This forum features 262 presentations highlighting the work of 343 students and 92 faculty members. More than two dozen RU departments are represented in this year's forum. Special sessions are offered in gender studies, leadership, arctic geophysics, the Center for Social and Cultural Research, and from our current Quality Enhancement Plan theme; the Scholar Citizen.

Dr. Sam Minner

Provost, Radford University

Forum At-A-Glance

All Presentations Are in the Basement of Heth Hall*

Tuesday April 17

Center for Social and Cultural Research Symposia (various locations) 10:00am-4:00pm
Gender Conference (Heth 022).....1:00pm-6pm
Scholar-Citizens Symposia (Heth 018 and 019).....3:00-5:00pm
Geology Poster Session (Heth 016).....5:00-6:00pm
Beta Beta Beta Biology Conference (Heth 044 and 045).....5:00-9:00pm
Literary Symposium I (Heth 018).....5:30-7:00pm

Wednesday April 18

Design and Marketing Poster Session (Heth 044) 9:00-10:00am
Center for Social and Cultural Research Symposia (various locations) 9:00am-4:00pm
Anthropological Sciences Symposium (Heth 016)..... 10:00am-11:15am
Multidisciplinary Symposium I (Heth 019)..... 11:00am-12:00pm
James Joyce Round Table (Heth 018) 1:00-2:00pm
Multidisciplinary Poster Session (Heth 014) 3:00-3:50pm
Psychology Symposium (Heth 018)..... 4:00-5:00pm
Psychology Poster Sessions I and II (Heth 014).....4:00-6:00pm
Chemistry Poster Session and Social (Heth 043) 5:00-7:00pm
Chemistry Speaker (Heth 018).....5:15-5:30pm
Multidisciplinary Session II (Heth 019) 5:00-6:00pm
Beta Beta Beta Biology Conference (Heth 044) 5:00-9:00pm
Anthropological Sciences Poster Session (Heth 016) 5:00-5:45pm
Arctic Geophysics and Educational Outreach (Heth 016).....6:00-8:00pm
Radio Astronomy Symposium (Heth 016)..... 8:00-9:00pm

Thursday April 19

Literary Symposium II (Heth 045) 11:00am-12:00pm
Leadership Poster Session (Heth 016) 11:00am-12:15pm
CORE102 Poster Session – Issues in Higher Education (Heth 044) 11:00am-3:00pm
Center for Social and Cultural Research Open House (2nd Floor Russell Hall) 12:00-2:00pm
CORE102 Poster Session I – Brave New Worlds: Issues in the Dystopia (Heth 016)..... 12:30-1:30pm
Information Technology Symposium (Heth 018) 1:45-3:00pm
Science and Religion Debates (Heth 019).....2:00-3:15pm
Multidisciplinary Symposium III (Heth 045) 2:00-2:30pm
Scholar-Citizens and CSCR Symposium II (Heth 045) 3:00-4:00pm
CORE102 Poster Session II – Brave New Worlds: Issues in the Dystopia (Heth 044) 3:45-4:45pm
Multidisciplinary Symposium IV (Heth 018).....5:00-6:00pm
Multidisciplinary Symposium on Business and Economics (Heth 019) 5:00-6:05pm
Art and Design Symposium (Heth 045) 5:00-6:30pm

*The CSCR Open House is on the 2nd floor of Russell Hall.

Ingrid Baker

CAPSTONE MENTOR: RICK VAN NOY, ENGLISH

A History of the Hidden Discrimination in the Censorship of Literature

As early as 360 BCE, as evidenced in Plato's "Republic," there has been considerable concern over how much freedom an individual should be allowed in order to express him or herself. When the United States officially formed in the 18th century, our forefathers were careful to address these concerns. The First Amendment to the Constitution reads:
"Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievance." Why was this issue more important than, say, the Right to Bear Arms (Amendment II) or the Powers of the States and People (Amendment X)? The answer lies within a complex progression of sociological, political, and psychological thought, which neither ceases to change, nor ceases to be influenced by dominant ideological forces. Numerous books are banned or challenged in schools and libraries each year for various reasons. By analyzing the role of censorship in modern-day arenas, it is clear that this practice can serve as a discriminating force directed against several groups of people, including women and minorities. What does this mean for individuals, educators, and politicians? What does this mean for American culture as a whole? This project is aimed at discovering the hidden discrimination in the practice of censorship and how it affects the world and our understanding of the Constitution.

Christal Benton

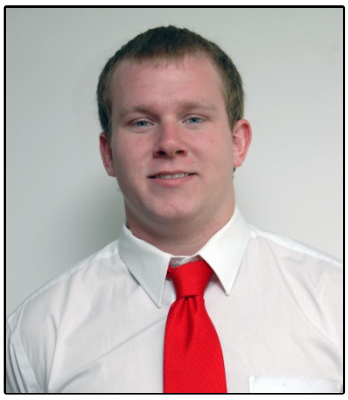
CAPSTONE MENTOR: MARGARET HREZO, POLITICAL SCIENCE

"Banking Like an American": A Contribution to the Social Justice of the Hispanic/Latino Immigrant-Refugee Community.

The purpose of this project is to bring an acute awareness to a topic in society that is hardly discussed in a collegiate setting; Hispanic and Latino Refugee and Immigration acclimation to American culture and society. While the initial idea was to explore a variety of avenues, as it is very easy to do with so many aspects from to choose; including both health care and education, it became clear as my research developed further that there exists a topic often unexplored. There is an aspect of "the American Way" that at least 85% percent of the members living in the Hispanic/Latino refugee community are often times ignorant of, oblivious to, or perhaps even afraid to approach- American banking and finances.
To complete the project, the overall aim is to find a method in which it is possible to make new Hispanic and Latino immigrant communities how to "Bank like an American". This includes the primary financial skills such as how to write a check, what a checking and savings account is and how the work, what is necessary to have a checking and savings account and the like. Eventually we can begin to explain more in depth topics to older members; such as defining the terms; investment, credit, bond, and stock. We can explain how to utilize these tools and how they can work toward their benefit as they begin their new lives as American citizens. Because the project is as grandiose as it appears, the most guaranteed way to see the idea prosper is to ensure both longevity and interest. The first project goal is to prepare some financial information for Spanish newcomers in the form of a pamphlet or booklet and to discuss the information with Radford City Social Services in the hopes that they will begin to hand them out to their Spanish-speaking clientele. The next project goal would be to present these ideas to the Radford University community. In conjunction with Radford University's Hispanic Society, I will host a fair which celebrates and highlights Hispanic culture, but will also be exhibiting these pamphlets and discussing student interest regarding whether or not something similar to this endeavor could be useful to their own communities or hometowns. A large percentage of the research compiled will include interviews, testimonials with naive Spanish citizens and their families, representatives from large government agencies and others who represent the Hispanic and Latino community.

Nikalas Burton

Capstone mentor: Michael Aamodt, Psychology

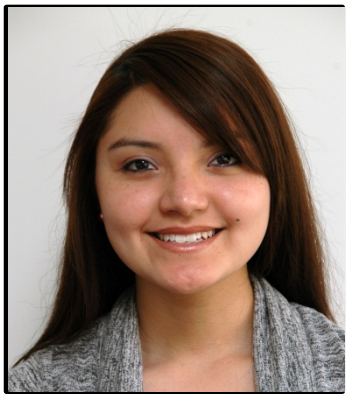


New Look at Serial Killers

In recent years, there has been a growing body of literature discussing serial killers. The studies range in a wide variety of aspects from why the serial killers kill to how they kill. This study investigates two factors that few researchers have examined: Serial killer occupation and education. Occupation will be compared to the serial killer's motive and education will be compared to the length between their first and last killing. The first step in the research process was to add additional occupation and education information to the Radford Serial Killer Database. Next, individual occupations were coded into broad occupational groups so that they could be compared to the six major groups of motives of killing. Some of those occupations considered, but not limited to, customer service, military, science, sales, and health care professionals. Education was coded into years attended school which was compared to length of killing spree in years. Upon extensive examination of the database it was fond that there was not a significant relationship between the reason why serial killers kill and their occupation during the killings. It was also discovered that there was no relation between education level and the length of their killing spree. This brings a new area of research in the literature of serial killers it was an exploratory thesis. The research used convenience samples which could have caused limitation to the research. It is hoped that this research will spark a new body of research for these serial killer characteristics.

Blanca Castaneda

Capstone mentor: Sharla Cooper, School of Nursing



Labor Pushing Techniques

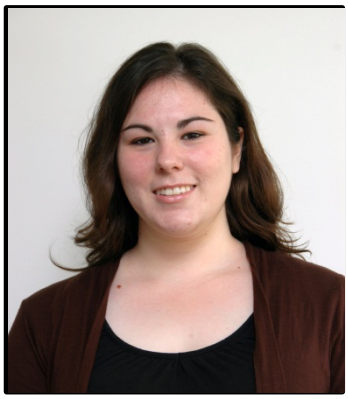
The second stage of labor is considered the "pushing" stage of the labor process. The main goal of this stage is to achieve the expulsion of the fetus through pushing. The pushing techniques that have been utilized throughout history include direct, uncoached spontaneous and delayed pushing. Until the late 1990's, scientific evidence for the use of these methods was not questioned. During this time, midwives began to advocate for evidence-based practice which lead to experimental studies that revealed several risks and benefits for each pushing method. These discoveries have raised inquiry among health professionals regarding the pushing method that provides the best outcomes for patients. In an effort to address this concern, I researched the risks and benefits of each pushing technique and produced a paper in which I determined which technique provides the best outcomes depending on the circumstances of the "pushing" stage.

Through extensive research in evidenced-based literature, I found that direct pushing works best during labors in which there is fetal or maternal distress, abnormal fetal presentations, limited time to complete the "pushing" stage and usage of epidural or magnesium sulfate. Uncoached spontaneous and delayed pushing techniques work best for labors of normal presentations, no maternal or fetal distress and no time limits on the "pushing" stage. They are also great for none-medicated births and for women who need minimal coaching through the "pushing's stage.

Throughout the research, it was evident that further investigation is needed to explore the risks and benefits of each method to a greater extent. This will lead to more conclusive recommendations and better health care to women in the future. While then, health care professionals must use the data available to choose the pushing method that best addresses the patient's needs during the "pushing" stage.

Rachel Cohen

CAPSTONE MENTOR: KAREN FRANCL, BIOLOGY



Veterinary Rehabilitation: Small Animal Application

Veterinary rehabilitation is a complementary medical practice used in conjunction with primary veterinary care. Within small animal medicine, rehabilitation applies different methods to treat injury or illness, decrease pain, and restore function to patients. Such techniques are most often used for patients that have recently undergone surgery, are affected by chronic diseases or ailments, in need of pain regulation, or require weight management. During the research process, focus has been directed towards the application of common methods of rehabilitation including, hydrotherapy, physical exercises and manual therapy, acupuncture, and electrotherapy. Furthermore, this research follows three canine patient case studies over the course of their rehabilitation using different methods of rehabilitative application. Two case studies show the completion of rehabilitation for post-surgical patients, undergoing separate approaches to applied care. The third case study documents the application and effects of hydrotherapy on patient mobility following ruptured spinal disc surgery.

Amy Corbin

CAPSTONE MENTOR: MARGARET SPROULE, EXERCISE, SPORT AND HEALTH EDUCATION

Senior'Cise: A Study of Exercise Among Older Adults

Understanding the factors about what keeps men and women of retired age (60+) exercising is beneficial to maximizing their overall health. Some of these factors may include: the types of exercises they do, how often they exercise, reasons they started to exercise, and motivational or logistical factors that help them continue to exercise. A literature review will be conducted about gender differences in exercise behavior. Thirty surveys will be administered to physically active and sedentary volunteers that will assess why they do or do not exercise, with the intent of finding ways to help improve exercise initiation and adherence. Routine exercise is vital for a healthy, balanced lifestyle that will boost this demographics' quality of life, independence and overall health. It is vital to understand the differences between men and women whilst they complete exercises in order to specially tailor exercise programs and maximize their potential benefits.

Carlin Crisanti

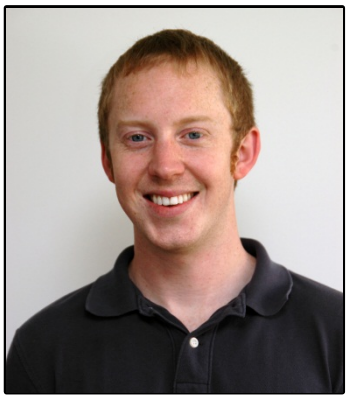
CAPSTONE MENTOR: A.C. WAGGAMAN, POLITICAL SCIENCE

Politics and Dystopias: The Predicting Power of Dystopian Fiction

The objective of my project is to examine various depictions of dystopian worlds in classic literature and determine their relevance in a 21st century world. Certain "dystopian" themes, behaviors, societal perceptions, etc. will be analyzed in a contemporary context. The dystopian indicators will be compared with the current state of the United States as depicted by secondary sources and conclusions will be drawn.

Collin Dougherty

Capstone mentor: A.C. Waggaman, Political Science

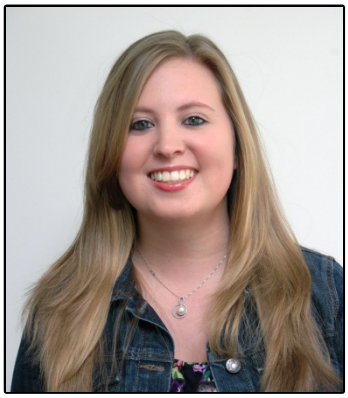


Globalization's Impact upon National Sovereignty

The purpose of this research project is to elucidate a contemporary problem within the global economy: where exactly national sovereignty fits in a world so focused upon globalization. The first step of this research is to analyze Dani Rodrik's The Globalization Paradox. Rodrik identifies a peculiar "trilemma," from which he questions whether the current path of hyper-globalization is able to uphold respect for the sovereignty of individual nations. Following the analysis of Rodrik's work, the paper shall utilize reviews on Rodrik's work from both economists and political scientists. Their reviews will validate Rodrik's observations on the current state of globalization in respect to national sovereignty, and will support the position of this paper. Finally, the paper will utilize empirical data that portrays the conflicting nature of hyper-globalization and national sovereignty, in order to demonstrate the necessity of the issue at hand. The conclusion will contain my final observation on hyper-globalization's implication on national sovereignty, and a suggestion as to what must be done to maintain respect for individual national sovereignty.

Erin Fowler

Capstone mentor: Georgia Hammond, Biology



Verifying the Presence of Arsenic Resistance Genes and DNA Sequencing in Bacteria Isolated from an Arsenic Mine

Arsenic is a toxic metalloid and known carcinogen that can contaminate headwater streams and affect human as well as ecological health. Macroinvertebrates and some plant species are negatively impacted by the presence of arsenic, but some bacteria are capable of manipulating arsenic in the environment to their advantage. Arsenate (AsV) and arsenite (AsIII) are the two most common forms of arsenic found in the environment. There is no dedicated uptake system of arsenic for bacterial cells as arsenic is not required for proper cell function. However, arsenate is structurally similar to phosphate and enters the cell via phosphate transporters. Arsenite, the more toxic form, is capable of entering the cell via a number of membrane transporters. Once inside, arsenate is capable of interfering with ATP synthase and arsenite inactivates proteins. In order to cope, bacterial species have several arsenic resistance genes: arsC, arrA, and aoxAB . arsC encodes arsenate reductase, which reduces arsenate to arsente. arrA encodes an efflux pump in the membrane which can eliminate arsenite out of the cell into the environment. aoxAB genes encode a protein complex which oxidizes arsenite into arsenate. This pathway can be metabolically beneficial as it provides he bacterial cell with electron donors and acceptors, giving the bacteria the potential to oxidize organic compounds and gain energy from the process. Identifying bacteria (via the 16S small subunit ribosomal gene) that possess these genes is important in understanding how they contribute to regulating toxic forms of arsenic in the environment, which can negatively impact other organisms.

Casey French (Fall 2012 Graduate)

Capstone mentor: David Sallee, Exercise, Sport and Health Education

A Case Study: The Effects of Iron Man Triathlon Training on the Middle Aged Athlete

A triathlon is a multi- sport event involving swimming, cycling and running. An Iron Man triathlon is one of the most gruesome of triathlons with a combined mileage of 140.6 miles. This research is an in-depth look into the physiological and psychological effects of training on a middle aged athlete competing in his first Iron Man competition. This research will be looking into the exercise physiology involved in participating in an Iron Man triathlon, as well as components of training needed to successfully complete an Iron Man. This will involve a look into exercise programs and injury prevention. Also, a look into psychological factors as the athlete pushes his body to its limits.

Danielle Goad

Capstone mentors: Jennifer Juul and Carl Lefko, Theatre

A Funny Thing Happened on the Way to Designing Props

This project was a study of the script A Funny Thing Happened on the Way to the Forum and collaboration between the student, multiple professors and multiple peers. The result of this collaboration was the development of properties for the 2012 Radford University production of the show. Many different items had to be found, altered or created. The largest portion of the project was a bust that began with a clay sculpture of an actresses face and was finished using multiple mediums and techniques. This project is a true testament to the necessity within the theatre world to study literature, history and to develop communications with professors and peers.

Bussy Gower

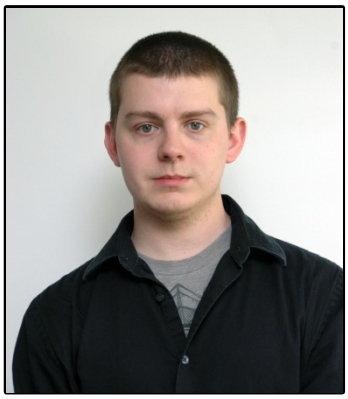
Capstone mentor: Jennifer Juul, Theatre

Unquiet

Unquiet is one woman show written and arranged by Bussy Gower showcasing a lengthy research on early 20th century vaudeville style theatre. Through her research, Gower has created the character of Ellie Stephens, a young girl from a small town in Georgia who hopes for nothing more than to make it big in the world of Vaudeville. Gower will present the song and dance scene of the courageous and "unquiet" women of one of the past's most popular entertainment forms. The show also consists of many self written monologues highlighting life in the early 1900's as well as the lives of several female Vaudeville stars. Unquiet is an allusion to the struggles and triumphs of women in show business in the 1900's as well as a rise and tragic decline of Vaudeville itself. The research will be compiled into a script/director's book. Gower hopes to add to and continue to perform Unquiet throughout her acting career as the entire script is self-written and all musical selections are public domain.

Nick Hagood

CAPSTONE MENTOR: JEFF PITTGES, INFORMATION TECHNOLOGY

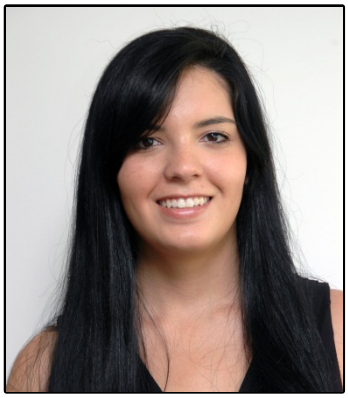


Web and Database Application Development: UGCCRC Document Upload System

"This capstone project will combine both of my departmental concentrations of software engineering and database – I will be pulling together the various skills of producing an entire system (software engineering) by developing an application in PHP (web programming) and tying it all together with an Oracle backend (database). This project will also provide a valuable real-world experience testing my knowledge of the information technology security certificate I am working towards as well. The project will result in an online application for the submission of proposals to the UGCCRC (Undergraduate Curriculum and Catalog Review Committee). By tying together all the various aspects I have studied so far in the computer science discipline, this project will give me the opportunity to produce a full-scale system that the university will be able to utilize. This project will give hands-on experience for the skills I have learned so far in my field, and as well as experience combining these skills into a working, valuable product. This project goes above and beyond required curriculum material by requiring a high level of cross-concentration development, without the assistance of software development team members focused on various programming aspects. This presentation will involve a short site demonstration as well as a brief explanation on how my goals and objectives were achieved, how the project actually ties together various information technology skill sets, and how this project has a strong educational component that relates directly to my studies in the computer science discipline."

Brittani Hammond

CAPSTONE MENTOR: JOAN DICKINSON, INTERIOR DESIGN & FASHION



DOD Youth Program Functions and Youth Center Design

The Department of Defense is a specialized section of the government that has many branches of work supporting it. DOD Youth Programs, housed in Youth Activity Centers, are located on military bases and serve to support children and families of DOD civilians and military. While the research covered in this project can be applied to any Youth Activity Center, the project bases its findings and results on one specifically located in Dahlgren, Virginia. The first step in this study is to survey the faculty, staff, and parents from the existing Youth Activity Center to identify specific program strengths and weaknesses. Those findings along with additional research will be used to put together a proposal for a new Youth Center for the Dahlgren location. This presentation will walk the viewer through the design process to inform in detail how a project to this scale would progress.

Christine Hargraves

Capstone mentor: John O'Connor, Art

Emotions of Color

When doing design its important to incorporate the right colors so that the art work can relate to the viewer. But why is color so important? I studied the different ways in which colors affect the viewer on emotional levels. I used this information to study how these emotional responses can be used to help communicate the intended message for a given design. I did research on color and design theories as well as performed an experiment using the "Adobe Kuler" website. I then used the information I gathered to create a website for a nonprofit group: The Baptist Collegiate Ministry at Radford University. As a further illustration of my research I designed 3 alternative sites that use completely different color schemes to show the importance of using the right colors.

Kaila Higuchi

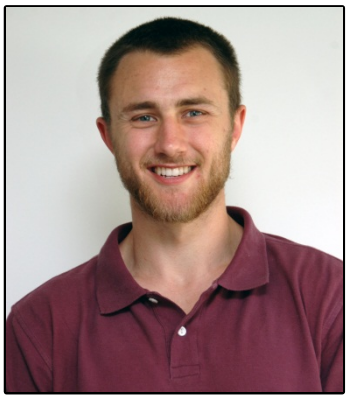
Capstone mentor: Dr. Lauren S. Flora, Communication Sciences and Disorders
Dr. Kenneth M. Cox, Communication Sciences and Disorders

Investigation of a Self-Hearing Application for Apple iPad® Technology

Hearing screening applications, available on for download on smart devices, have the potential to allow for sophisticated testing techniques and production of reliable results as compared to clinical diagnostic audiometric evaluations. Due to the lack of experimental research investigating the reliability of these apps, this study assessed the validity and user satisfaction of an Apple iPad® application to determine if the results from the application corresponded to clinical pure-tone audiograms. In addition, this study explored the implications of the results for both the consumer and the practicing audiologist. Fourteen participants (range 21-64 years) with varying degrees of hearing loss, not exceeding 70 dB HL, were recruited for this study. Additionally, a survey was administered to determine user perception of the application with regards to hearing health care. A single factor ANOVA ($p < .05$) revealed no statistically significant differences between the diagnostic audiogram and self-hearing screening application assessment measures. Overall, the iPad® application produced audiometric threshold data comparable to a diagnostic evaluation. Administration errors were identified and are discussed. Examination of responses from the user satisfaction survey indicated that consumers may not only perceive the results as valid, but may also run the risk of subjectively viewing the results as less significant than may actually be the case. The findings from the survey support the need for consumer education regarding implications of self-assessment measures as well as the need for “apps” to produce reliable and valid results.

Benjamin Housley

Capstone mentor: David Sallee, Exercise, Sport and Health Education

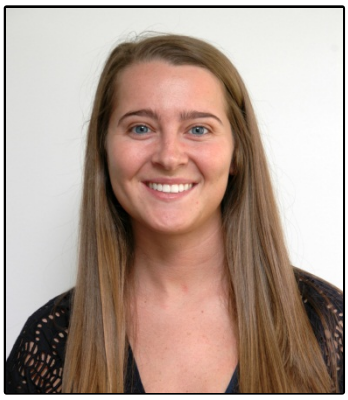


The Effect of Martial Arts on Lowering Blood Pressure and Heart Rate in Adults

The Effect of Martial Arts on Lowering Blood Pressure and Heart Rate in Adults. The purpose of this study was to determine whether martial arts is an acceptable form of exercise that will improve resting heart rate and blood pressure in adults that have been practicing martial arts for at least one year. 18 adult subjects (mean age: 35.00 standard deviation: 15.07 9 males and 9 females) were used in this study. Subjects were divided into master or beginner groups depending on how long they participated in martial arts. A master was defined as anyone that participated in martial arts consistently for a year or longer (10 masters) and a beginner was anyone that had been participating in martial arts for less than one year (8 beginners). Heart rate and blood pressure were recorded from each subject one time prior to participation in their martial arts program. The data was analyzed using a Pearson two tailed correlation test. There were no significant differences in heart rate and blood pressure between the master and beginner groups (blood pressure systolic p=0.442, blood pressure diastolic p=0.491, heart rate p=0.242). Based on these results, martial arts are not effective at improving blood pressure and heart rate in adults.

Tessah Kanter

Capstone mentor: Karen Francl, Biology



Endangered Species of the Galapagos Islands

As part of a spring break study abroad trip to the Galapagos in spring 2011, I learned about the endemic plants and animals of the islands. I developed this capstone project as a way to further my education about the Galapagos and to educate others about number of the endemic species. The goal of this project was to further research four endangered species in the Galapagos and to create a poster and flyer documenting the value of such a unique educational experience at Radford University. I researched for species from the Galapagos that are endangered: the waved albatross (Phoebastria irrorata), the giant tortoise (Geochelone nigra), the prickly pear cactus (Opuntia), and the sea cucumber (Isostichopus fuscus). In my poster I provide information on the species, why it is endangered, and how the issue is being addressed. I will also hold an information session about the Galapagos and my experiences there for students interested in the next study abroad trip to the islands.

Emily Latimer

Capstone mentor: Ann Elliott, Psychology

Childhood experiences and adult functioning in college-age women

Polyvictimization is increasingly being recognized an important way of evaluating trauma, as a condition of many experiences over a lifetime rather than as a single one-time event. Polyvictims are individuals who have been exposed to high levels of multiple types of trauma and are significantly more likely to experience both subsequent victimizations and psychological distress. However, to date, relatively few studies have examined the relationship between polyvictimization and specific psychological problems. The present research surveyed undergraduate female psychology students at Radford University in order to examine the correlations between polyvictimization, deliberate self harm, peritraumatic dissociation, and symptoms of posttraumatic stress disorder. The JVQ (Hamby, Finkelhor, Ormrod, & Turner, 2004), DSHI (Gratz, 2011), RAND (Marshall, Orlando, Jaycox, Foy, & Belzberg, 2002), and SPTSS (Capsi, Carlson, and Klein, 2007) were used to measure polyvictimization, deliberate self harm, peritraumatic dissociation, and symptoms of posttraumatic stress disorder. Data from approximately 300 participants will be presented.

Holly Lenz

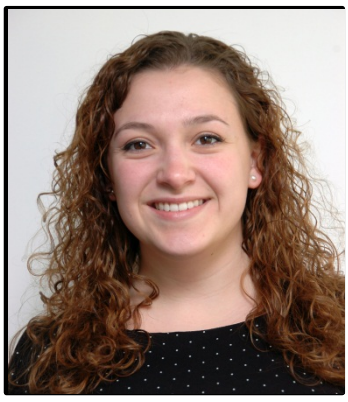
Capstone mentor: Julie Temple, Interior Design & Fashion

Ergonomic Task Chair Study

This case study was designed to determine the best ergonomic task chair for a local company located in Dublin, Virginia. We researched different manufacturer ergonomic task chairs before selecting three task chairs for the workers to survey. The three selected task chairs were selected based on their manufacturer, ergonomic functions, and price. A two page questionnaire was designed for the workers to fill out while sitting in the task chair for at least one hour. At the end of the questionnaire the workers would answer the simple question "Which chair do you like the best." Overall this questionnaire will help the local company select a new ergonomic task chair for their workers in the future. This study shows how important ergonomics are to corporate design.

Kayla Lisa

Capstone mentor: Christopher White, Music

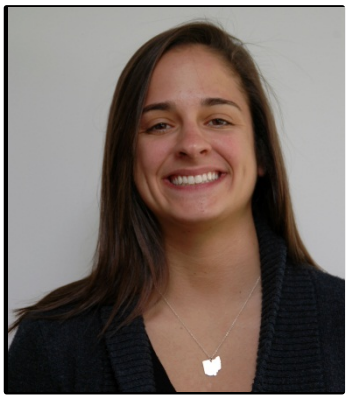


Exploring Creativity through Meaning-Making in the Arts

The purpose of my capstone project is to explore the aspects of storytelling through a piece of music. The content will include working with students, teaching music, encouraging creativity, combining music and expressive movement, exploring storytelling through music and movement, as well as the experience of a performance. This allows for creativity of those involved in the music making as well as the active listening. Students will be presented an idea based on a piece of music and will expand on it to create a story. The students will then perform a silent drama to the story. In order to discover what aspects of music create a story, other pieces will be played only for students to identify emotions or descriptors as to how the music sounds. My research in this course will include an in-depth look at the composer of the piece used, as well as using input about the adverbial components of the music from the students I work with.

Lisa Lubke

CAPSTONE MENTOR: DONNIE TICKLE, EXERCISE, SPORT AND HEALTH EDUCATION



Injury Prevention: Sport Specific Youth Workout Facilities

My presentation is two-fold. First, I will summarize the existing knowledge about the needs of youth athletes. Emerging issues for youth athletes include sport-specific training and injury prevention. Second, I will explain how research is used as a framework for building the ideal youth-oriented personal training facility.

Brianna Massie

CAPSTONE MENTOR: KIMBERLY LANE, CHEMISTRY

Comparison of Vanilla Beans of Differing Origin

Vanilla is one of the most popular flavoring agents in the world derived from the natural extract of the vanilla orchid. Due to increasing demand and increased interest in gourmet vanilla bean varieties from varying regions, the cost vanilla beans from differing geographic origins is increasingly expensive. It was the aim of this study to determine the validity of prevailing views that vanilla beans from different regions boast unique flavor profiles. Vanilla bean samples from seven geographic regions we reanalyzed by GC-MS to qualitatively determine inclusion of varying flavor components and two major components were quantified by HPLC analysis.

Allie Mills

CAPSTONE MENTOR: TARA PHELPS-DURR, BIOLOGY

The Search for Proteins That Interact with HIRA

HIRA (HISTONE REPRESSION A) is a chromatin remodeling protein that impacts development in all organisms. Severe mutations in HIRA are known to cause embryo lethality in plants and animals. Defects in HIRA can lead to problems such as DiGeorge syndrome in humans, characterized by craniofacial and heart malformations such as cleft lip/palate. In plants, HIRA is known to promote cell differentiation by turning off a group of gene known as KNOX genes, which maintain stem cell identity. In this study, bioinformatics research was performed to identify potential protein interactors of the Arabidopsis HIRA. A CPRG assay was performed to test the potential interactions. This experiment will help form a better understanding of how HIRA functions during plant development.

Brittany Moskel

Capstone mentor: Diane Hodge, School of Social Work

International Social Work: A Cross-National Exploration of the Differences in the Social Work Profession in Various Countries and How They Influence International Social Work

Many social workers do not understand the value of international social work and how the work they perform locally ultimately influences international practice. One of the main factors contributing to this ignorance is that international social work has not been clearly explained and incorporated into many of our areas of practice in the United States. This presentation will provide an explanation of international social work and elaborate as to why there is such confusion surrounding it. To provide a better understanding it will be expanded to include a cross-national exploration into how various countries practice social work and how these practices reflect on international work.

Chelsea Myers (Fall 2012 Graduate)

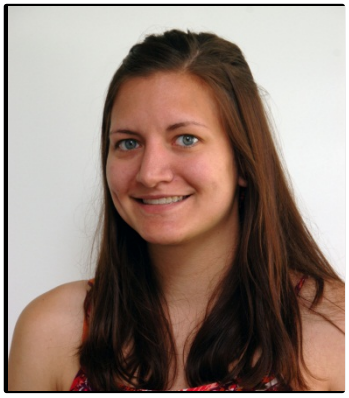
Capstone mentor: Laura Newsome, Exercise, Sport and Health Education

An Examination of Shoulder Range of Motion in High School Softball Infielders

Athletes who perform overhand throws are at an increased risk of injury due to muscle and range of motion (ROM) imbalances in their shoulders (Thomas, Swanik, Swanik, & Kelly, 2010). Previous research has suggested that the players' throwing shoulder will have a lower internal (IR) and a higher external rotation (ER) than normal values (Wily et al. 2009). This study will examine the ROM in throwing and non-throwing shoulders of high school softball infielders. Goniometer assessments of shoulder flexion, IR, and ER will be averaged for each player and position. The throwing shoulder will be compared to published norms and the non-throwing shoulder to identify if certain positions are at a higher risk of injury. Research on baseball pitchers suggests that players that throw more during a game have even greater ER and lesser IR than others. It is suspected that shortstops will show similar results due to the increase in throwing compared to second and first basemen (Axe, Windley, &Snyder-Mackler, 2002). Therefore, results of this study may be essential in tailoring strength and flexibility programs for softball infielders to lower the risk of injury.

Kiersten Newtoff

CAPSTONE MENTOR: CHRISTINE SMALL, BIOLOGY

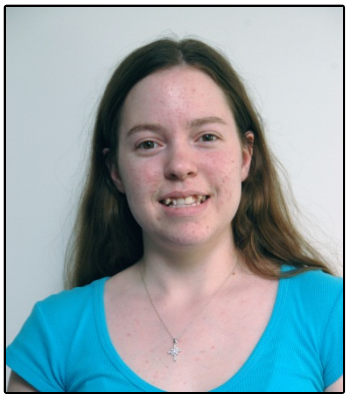


Enhancing Statistical Skills in Ecology: Quantifying Bird Feeding Behaviors

Success in graduate, medical or other post-undergraduate endeavors in the sciences requires foundations in research and experimental design. However, only recently have undergraduate biology curricula begun to stress quantitative skills needed for higher education and careers. With National Science Foundation funding, RU's Biology Department is working to enhance quantitative skills and more thoroughly integrate statistics into introductory courses so that students can effectively apply research skills t biological problems. This semester, we modified a traditional ecology lab to emphasize scientific inquiry, experimental design, and hypothesis testing. Students first were introduced to regional bird diversity using museum specimens and field observation. From this, they generated hypotheses about feeding behaviors and seed preferences related to beak size and shape. In following labs, students collected over 7,000 feeding observations on bird seed selection (millet, thistle, sunflower, suet) and feeding location (hanging feeder, ground) at campus bird feeders. Using this extensive data set, student groups selected two species for in-depth investigation by developing research questions, collecting natural history information, and conducting statistical analyses to compare feeding behaviors. This multi-week project not only emphasizes use of statistics in exploring and evaluating trends in a biological system, but urges students to explain conclusions in biological context. The experimental design and data gathered may also be reexamined in a new biological statistics course, helping to link these courses and emphasize the importance of quantitative skills in modern biological research.

Megan O'Dowd

CAPSTONE MENTOR: JUSTIN ASKINS, ENGLISH



Literary Analysis and Comparison of The Hobbit and Harry Potter and the Sorcerer's Stone

J.R.R. Tolkien and J.K. Rowling are both known for their fantasy books around the world, such as The Hobbit and Harry Potter respectively. Both authors have encouraged an interest in literature among adolescents and the film industry through these literary works. Due to the popularity of both authors, many differences and similarities can be drawn from Tolkien's Middle Earth series and Rowling's Harry Potter series. During this research process focus has been on Tolkien's The Hobbit and Rowling's Harry Potter and the Sorcerer's Stone, looking at style and character development.

Deanna Perry

Capstone mentor: Joseph Staniunas, School of Communication

Entrepreneurial journalism and nonprofit organizations

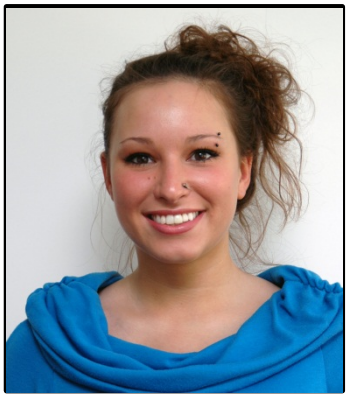
In a world of 24 hour news networks, newspapers have had a difficult time keeping up. Efforts to stay afloat are at the expense of solid, in-depth reporting. Even without the ability to keep print up to date, newspapers have reporters working around the clock to produce content for the web. The suffering art of investigative reporting needs a revival. Thanks to several nonprofit reporting teams that have popped up recently, it might just survive. For my capstone project I have taken it upon myself to find out how these organizations work and how Radford University could start one.

I will use a Powerpoint slideshow and a Wordpress account with my work on it to explain the steps I took to understand the pattern of nonprofit journalism teams partnering withuniversities and local publications to fill the need for investigative news. The Wordpress will have a mock-up of what type of information a nonprofit reporting website would need.

I will focus heavily on how Radford University could set up a nonprofitinvestigative news group. This will cover ways to get funded and how to get students involved in the effort without harming our regular student-run publications. I will also discuss the possibility of getting student's work printed in local newspapers lke the Roanoke Times. Ultimately, this presentation should be a how-to guide for starting an investigative news group that would be affiliated with our school.

Katherine Rasiak (Fall 2012 Graduate)

Capstone mentors: Tod Burke, Criminal Justice
Stephen Owen, Criminal Justice



Hand-held Biometric Technology Makes for a Handy Device

Biometrics, the scientific and technological development of automated human identification based on anatomical or behavioral (signatures, etc.) characteristics, has progressed as a significant field of study in the discipline of criminal justice. Biometric research has formed and has advanced fingerprint identification, geospatial identification (hand-print, etc.), facial recognition, and iris recognition, to name a few.

Technology that employs these methods of identification has emerged and continues to be perfected as it enters communication fields and law enforcement. One such innovation, the hand-held biometric reader, has recently come to use in law enforcement, particularly in police agencies. This technology can access identification information stored within databases. The reader is capable of direct and instant identification of individuals cataloged within the criminal (or otherwise chosen) database. Because this device is portable and retrieves information instantly, the technology is ground-breaking in the field of law enforcement.

The purpose of this paper is to examine the benefits and limitations of the hand-held biometric device as it pertains to law enforcement. The technology allows for quick identification of suspects and potentially dangerous criminals and convicts, wherever the officer may find him or herself. The technology has been improved to function in a variety of environmental settings, including complete darkness. Despite its numerous advantages, the hand-held device is also limited to certain restrictions of environmental conditions, time, space, and user safety. Research on this technology has surfaced its potential for law enforcement, specifically use by federal and local officers, and as admissible evidence in court. However, the law has yet to determine its legal limitations and corresponding law enforcement applications. This study, through and examination of the device and pertinent case rulings, explores these concepts and the questions that have arisen with this new technology.

Lauren Reinhard

CAPSTONE MENTORS: JOAN DICKINSON, INTERIOR DESIGN & FASHION
HOLLY CLINE, INTERIOR DESIGN & FASHION

URBAN SUSTAINABILITY: the ecosystem

This presentation walks viewers through a design project starting with process, moving through research, and ending with the completed solution and model of a wellness center in New York City. The project has a focus on sustainability in urban environment and shows how sustainability can be built into an alternative medicine and therapy facility
The concept of the design is derived from the inspiration of an ecosystem. It focuses on the connection between parts, and is driven by such words as relationship, togetherness, unity, connection, bond, cohesive, and blending. The idea that working together can create a sense of healing and wholeness is what primarily fuels this design. This facility becomes a place where the community can feel supported and card for in any way that is needed.

Quinn Roberts

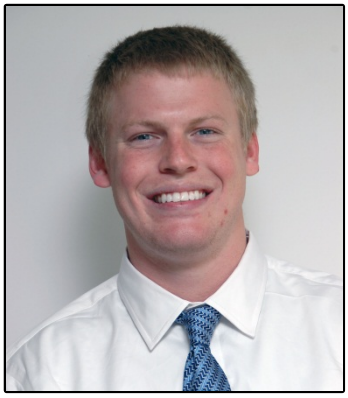
CAPSTONE MENTOR: MARK WAGSTAFF, RECREATION, PARKS AND TOURISM

Educational Theories in Adventure Education

Interactive media is a powerful educational tool that meshes well with the various teaching and learning theories that exist. This presentation focuses particularly on how interactive media is used as a teaching tool particularly in the adventure education field. More specifically, interactive media technology is an adept tool for teaching single pitch top rope management for rock climbing. Using these educational theories on interactive media, I have created an interactive website that can be used by future students to learn about the technical skills involved with single pitch top rope management for rock climbing. The website is accessible to a wide area of user skill sets and is composed of various forms of media ranging from videos, charts and text. By incorporating different interactive media learning theories, the website creates a more powerful learning medium for the user.

David Rozmiarek

CAPSTONE MENTOR: PREMCHAND UPPULURI, INFORMATION TECHNOLOGY

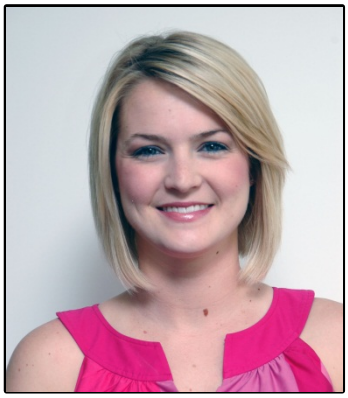


Analyzing the Security of Campus's Wireless Networks

The basis of my project will be to analyze the security of a wireless network that mimics that of a typical college campus's network. Within my wireless network I will try to duplicate the many components that one would typically find on a college campus network. I will derive what components to include based off on what is used on Radford University's campus network. This includes a mail server, a student information database, and a learning management system such as Desire to Learn (D2L). To make the network similar to the campus network, we will include multiple computers accessing the network through a wireless router. However computers are not the only ones accessing the wireless connection these days, so I will also include two smart phone devices connecting to the wireless router as well. Using the security policies that are in place at Radford University I will secure the newly created wireless network. After securing the wireless network I will use an outside computer, not on the network, to analyze the degree of security that is in place to protect the wireless network. To analyze the network effectively I will use the Open Source Security Testing Methodology Manual (OSSTMM), which is considered by security experts to be one of the most comprehensive security analysis methodologies. As a final product I will have a score to rate the wireless network's overall state of security. The rating will provide us with an understanding of how well our wireless networks are secured on campuses across America.

Shannon Slattery

CAPSTONE MENTOR: CAROLYN MATTHEWS, ENGLISH



Deciphering, Analyzing and Approaching Teaching Methods in Children's Writing that is below Developmental Expectations

The purpose of the research was to gain insight on the best methods for instructing children who are below developmental expectations in the area of writing. Research is found within this topic; however, it is not as closely studied as other learning disabilities such as dyslexia. There are a small number of cognitive neuropsychological case studies reporting successful treatment of dysgraphia. I conducted action research to explore this disability and implemented different methods while working during a six week period with a second grade student who appears to have dysgraphia. The methods I tested included those that worked on the student's fine motor control, while also those of repetition, revision, and modeling (Atwell, 1998). I then analyzed the student's response to the activities to gauge their effectiveness. As a result I learned that given the proper context, some methods may work better than others; however, the best methods are the ones that scaffold the students' learning, allowing them to reach across their zone of proximal development (Wood, 1996). The implications of this research suggest that for students with dysgraphia, an interest in the activities is essential for improvement and that constant reinforcement of the proper handwriting skills is critical.

Angelica Thompson

CAPSTONE MENTOR: KATHY MITCHELL, INTERIOR DESIGN & FASHION

Functional Active Sportswear for the Fashion Conscience Female

The active wear line that I created was based on women who like to work out and enjoy looking feminine while doing so. The ideas are based on Ultimate Frisbee gear and what would be appropriate for an Ultimate Frisbee player. I designed garments that are slimming and hide problem areas for women. The designs were also created with emphasis on the back because designs should be pleasing at every angle. I will explain the process and the materials chosen and how I sketched my designs, turned them into patters and made mock-ups. I worked to create a line that was functional for active fashion conscience women.

Rachel Turner

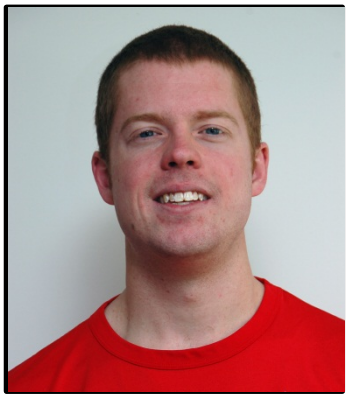
CAPSTONE MENTOR: DANIEL WOODS, ENGLISH

Writing as catharsis: Examining the works of Richard Siken and Maya Angelou and putting their practices to use

After traumatic events, many people react and deal with the outcomes in different ways. Some people turn to destructive means such as drugs, alcohol, self harm, etc. Others that can't seem to make themselves take up these habits turn to a more creative means to get over their situations such as through art or writing. If adolescents were taught to deal with their issues through these latter means rather than the more destructive outlets, perhaps they'd be more successful in dealing with their problems. As someone who chooses the more artistic route and works with young adults on a daily basis, I can say this isn't being done enough in our modern school systems. In this paper, I look at poets such as Richard Siken and Maya Angelou, both of which have used writing to talk about personal tragedies, such as death, abuse, etc. I also include a collection of poems that I've written to demonstrate how writing has helped me through the traumatic event of the passing of one of my good friends from high school this past year. As a result of looking through Siken and Angelou's works, as well as using some of their styles in order to write my own pieces, I've found that writing can be very cathartic. I've found that by using poetry to talk through and bout this event has been very helpful, especially since it's not something that I talk to others about. I hope that I'll be able to take what I learned throughout this process and apply it in my future classroom in order to help my students turn away from a destructive means of dealing with their issues and turn towards a more positive and creative outlet, such as poetry.

Nathan Turner

CAPSTONE MENTOR: MATTHEW OYOS, HISTORY



Watts Electrified: The Driving Forces Behind the 1965 Watts Riots

The Watts riots of August 1965 had a devastating impact on the Los Angeles area, leaving thirty-four people dead, over a thousand people injured, and over $40 million in damages. The riots were sparked because of mounting racial tensions between the police and Watts residents; however, these tensions were not the leading cause of the riots. Rather, the underlying causes were chiefly economic. Poor education systems, the lack of public transportation, limited health care facilities, and staggering unemployment rates were all driving forces behind the Watts eruption. The dilapidated living conditions of inner city Los Angeles particularly pushed people to their limits. My presentation is anchored in government documents such as the Kerner Report and the McCone Commission Report, as well as first-hand accounts of Los Angeles residents.

Danielle Watson

CAPSTONE MENTOR: ALLEN GORMAN, PSYCHOLOGY

An Investigation of Emotional Exhaustion and Personality

Personality and emotional exhaustion impact the workforce every day in society. Different personalities work different ways and accept things differently in the workforce. Sometimes those personalities have an effect on which employees will be more emotionally exhausted in the workforce. This study looks to see which personality has higher emotional exhaustion in the workforce. The personalities are defined as extraversion, conscientiousness, agreeableness, openness, and emotional stability. A correlation test and a one sample t-test were done to analyze the data. There was not a significant difference between the personalities and emotional exhaustion.

Fall 2012 Graduates Not Pictured

Meghan Carey
Amber Kelly
Cierra Piggott

Center for Social and Cultural Research (CSCR) Symposia

Examination of Style Tribes (Zoku) in Japanese Culture

Carlin Crisanti
Faculty Mentor: **Mary LaLone** *Sociology*

The objective of my project is to present an in depth analysis of prominent Japanese style tribes from the past three decades. Styles covered will include Lolita, ganguro, and kogal with some mention made of offshoot trends such as mori girl,b-girl/boy, ad visual kei. I will trace the origins, defining characteristics, rise to popularity, and in some cases, decline of certain style tribes in the areas of Shibuya, Harajuku, Akihabara, and Ikebukuro. Specific focus will be given to reflections of identity,social impacts, and the shifting attitudes of the youth in the resulting subcultures.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **30 minute oral presentation**
Day & Time: **Tuesday 10:00-11:00am**
Location: **Heth 018**

Video Montage about Interracial Couples

Laura Janosko
Faculty Mentor: **Carla Corroto** *Sociology*

This video and presentation will provide a sociological perspective that explicates the social construction of race and it's implications for dating. The point of this presentation is to start or perhaps continue a dialogue about attitudes and perceptions of interracial dating. According to a research journal, the majority of college students do not view interracial couples as acceptable when those partnerships move past the point of casual dating (Ross, 2005). One of the most public manifestations of race is the choice of one's partner or spouse. Comparatively, the US is among the few nations that still consider it against social norms to date and marry someone outside one's race. Only about a third of Americans viewed intermarriage as acceptable in 196. (Saulny, 2012). More recent data shows that interracial marriage in the U.S. remains unusual, but is becoming more frequent. This video investigation will explain the implications of racial inequality, and the persistence of double standards.

Session: **Scholar-Citizens and CSCR Symposium I**
Presentation Type: **Video**
Day & Time: **Tuesday 10:00-11:00am**
Location: **Heth 018**

Religion and Politics I

Ashley Quinn Aaron Troxell Emily Stike Josh Shultz Sarah Wood
Faculty Mentor: **Melinda Wagner** *Sociology*

The research project undertaken by the SOCY 421 Religious Patterns in Cultures class focused on the relationship between religion and politics. Each student studied a particular political figure's religion and politics, and pondered the connection between the two. Aaron Troxell is doing Queen Elizabeth I, Emily Stike is doing Rick Perry, Josh Shultz is doing Rick Santorum. Sarah Wood is doing Martin Luther King Jr. Ashley Quinn is doing Mitt Romney.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **1 hour presentation**
Day & Time: **Tuesday 10:00-11:00am**
Location: **Heth 016**

Religion and Politics II

Curtis Rash Ron Justice Kacy Chrisley Jesse Hall
Faculty Mentor: **Melinda Wagner** *Sociology*

The research project undertaken by the SOCY 421 Religious Patterns in Cultures class focused on the relationship between religion and politics. Each student studied a particular political figure's religion and politics, and pondered the connection between the two. Kacy is presenting on the Catholic Monarchs, Ferdinand and Isabella of Spain, who used the Catholic church to legitimize their reign and help provide diplomatic resolutions to fellow Catholic nations. Ron will be presenting information regarding Henry VIII and the church. Henry VIII is famous for his personal life having over 6 wives. The church denied him annulments, so Henry VIII decided to reform the church. Jesse's presentation will address Thomas Jefferson and his unique perception of Christianity along with his thoughts about what role religion should play in politics. Curtis will be presenting on Ron Paul. His presentation will examine how Ron Paul's religious life has influenced his campaign to be on the Republican ticket and his views of different topics.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **1 hour presentation**
Day & Time: **Tuesday 11:00-12:00am**
Location: **Heth 016**

Familial Attitudes and Union participation: A look at how perception can decrease participation.

Whitney Harrison
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Sociologists have long studied the effects of family attitudes passed down from one generation to the next. Similar to political and religious attitudes it is plausible that individuals' attitudes toward labor unions are also influenced by their perception of their family's attitudes. Although there is a considerable gap in the literature on union attitudes and participation, the most recent research indicates a definite positive correlation between perceived attitudes of the family and an individual's attitude towards unionization.

Data collected through a convenience sample provides evidence about this relationship. The sample group consisted of students attending a public university in Virginia and acquaintances via Facebook yielding 143 respondents. Respondents completed an online survey about their perceived family attitudes toward labor unions and personal attitudes toward labor unions. The survey draws upon questions from the General Social Survey, as well as questions designed by the researcher to gauge attitudes.

Preliminary results indicate a strong positive relationship of 0.936 between perceived family attitudes toward labor unions and

individual attitudes toward labor unions. Out of 143 respondents 70.3% were women, 42.4% were freshmen and the median age was 22.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 12:00-1:00pm**
Location: **Heth 016**

Technology's Influence on Students Academic Performance

Claire Paulette
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Has technology grown to the extent it may be more detrimental than beneficial for students? This study proposes that technology has developed to the point that it could become a distraction for students in the classroom as well as outside of the classroom if it is used excessively for leisure. The present study observes a student's recreational technology use and what their current grade point average to obtain information on how or if technology has become a threat to ones' studies. The information was obtained by distributing an online survey to a group of students at a public university through the convenience sampling in March 2012. One hundred and forty eight respondents participated in the study. The association between how much recreational technology the students use and their grade point average will be discussed along with suggestions for future research.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 12:00-1:00pm**
Location: **Heth 016**

The Effects Of University Size On Students Perceptions Of Police

Josh Shultz
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

This research examines how the ratio of a Universities police force to student population affects the amount of contact students have with police, and how that contact effects their overall perceptions of police officers. My research consisted of an online survey administered via Qualtrics to 100 Radford University students in March of 2012. Results of the study will be presented and suggestions for future research will be included.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 12:00-1:00pm**
Location: **Heth 016**

Gender Stereotypical Attitudes

Jessica Chandler
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

How do college-aged men and women interpret gender stereotypes? The objective of this research is to determine the differences in gender stereotypical attitudes among men and women on a college campus. In order to collect data, an online survey was create and distributed using two adapted scales measuring gender stereotypes and attitudes towards women. Nonprobability sampling was used to gather 153 responses between March 2, 2012 and March 16, 2012. Preliminary analyses show moderate levels of stereotypes from the majority of respondents. Further testing will be executed and results will be presented, including suggestions for future research.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 1:00-2:00pm**
Location: **Heth 016**

College Generational Status

Amy DuPont
Faculty Mentor: **Jeanne Mekolichick**
Sociology

Research shows that first generation college students are attending college at an increased rate. With that being said, it was important to see what barriers these students face and what can be done to help these students and other student's transition better into the college setting. The purpose of this study was to survey college students about their motivations, academic self-efficacy, barriers, and the experience with academic assistance offered on college campuses. The participants in the study consisted of 151 college students from a public university in the south. An online survey was employed to measure the variable mentioned above. The study compared First Generation College students to continuing college students. Preliminary analyses do not show any difference in college integration or academic self-efficacy among first generation college students and continuing college students. Further results will be presented and suggestions for future research will be provided.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 1:00-2:00pm**
Location: **Heth 016**

"First Time Offenders: Cocaine Possession"

Shylah Jones

Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Society often views cocaine as an upper-class drug and not subject to the negative stigmatisms of crack or other street drugs. I hypothesized that researchers have neglected to study cocaine possession because cocaine lacks other street drugs' deviant connotations. In other words, society perceives cocaine as affecting only a privileged demographic and does not degrade society as long as the drug does not reach the lower class. I created an online survey using a set of three vignettes, which depicted the lower, middle, and upper classes and assessed perceptions of social distance and criminal consequences. I distributed the survey online via Facebook and the university's network system to undergrad college students in March 2012. I used non-probability sampling, specifically convenience sampling comprising 147 respondents. Preliminary findings show that 71% of respondents were female with 33% averaging age 19, and 44% of the sampled population classified as freshman status. Further analysis of the data will be calculated and recommendations for future research will be presented.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 1:00-2:00pm**
Location: **Heth 016**

Gender Conference

Differences in student-instructor interactions: Is there a more helpful sex?

Sarah Kerper
Faculty Mentor: **Jenessa Steele** *Psychology*

The overarching goal of this research project was to assess the prosocial tendencies of teaching instructors at Radford University. By examining the role of instructors as potential bystanders to students' non-academic problems, we sought to explore the determinants and nature of helping behavior. Some key predictors examined in this study included causal attribution, self-efficacy, empathy, and perceived similarity. In addition, a review of the literature on prosocial behavior promotes gender difference in factors of help seeking, the likelihood of helping others, and the extent of help, based on both the gender of the potential helper and the person requiring assistance. For instance, founded on the social-role theory of gender, males would be expected to help in situations in which they would be deemed as chivalrous and heroic, whereas supportive females thrive in interpersonal helping situations. In the application of these findings to the student-faculty relationship, we hypothesized female instructors should be more empathetic and display greater prosocial tendencies. The study's findings, plans for future research, and implementation of the potential results in the form of faculty training and education will also be discussed.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 1:20-1:40pm**
Location: **Heth 022**

Ambivalent Sexism in the Motherhood Penalty and Hiring Discrimination

Alynn Gordon Timothy Kennedy
Faculty Mentor: **Hilary Lips** *Psychology*

Literature on the motherhood penalty and gender-based hiring discrimination illustrates that women are more likely than men to suffer disadvantages through pay allocation, hireability, and perceived job-related skills. These already prominent disadvantages are shown to be exacerbated by a woman indicating she is a parent; however, this effect has not been shown for men. Previous research focusing on these problems explains that stereotypes are the reason for such differential treatment. Unfortunately, current research does not fully explain this occurrence, as gender counter-stereotypical information fails to eradicate discrimination completely. Ambivalent sexism is proposed to be an important contributor to this problem, and its effect was tested in a paradigm in which evaluators were given identical information, save for gender and parental status. Participants were human resource managers and university students. Data are currently being analyzed to determine if gender differences exist on the Ambivalent sexism Inventory (ASI). Further, data will be analyzed to determine if participant's sexism scores influence their ratings given to an applicant's hirability, likability, competence, and salary allocation.

Session: **Gender Conference**
Presentation Type: **30 minute oral presentation**
Day & Time: **Tuesday 1:40-2:00pm**
Location: **Heth 022**

Self-Compassion and the Objectification of Women

Alysia Hoover-Thompson
Faculty Mentors: **Sarah Hastings** *Psychology*
Tracy Cohn *Psychology*
Thomas Pierce *Psychology*

Western culture is saturated with heterosexuality and the assumption that men sexualize women (Westkott, 1986). Within this sexual gazing, there exists the possibility for sexual objectification, or women being treated as just bodies. The mass media has propagated this sexual objectification through sexualized images of the female body, making these images unavoidable in the American culture (Fredrickson & Roberts, 1997). Research has indicated that an unattainable standard of women's physical beauty is hat is depicted in the media. This narrow view is often linked with a woman's sexiness and worth (APA, 2007). Fredrickson and Roberts (1997) sought to uncover why objectification occurs, with the understanding that women exist in a culture in which their bodies are looked at and evaluated. Objectification Theory "places female bodies in a sociocultural context with the aim of illuminating the lived experiences and mental health risks of girls and women who encounter sexual objectification" (p. 174). he researchers argued that sexual objectification is only one form of gender oppression, but that it may perhaps act as a catalyst for other oppressions women face. Sexual objectification is harmful to women's psychosocial health, as this form of oppression leads to increased body surveillance, body shame and decreased self-esteem. The construct of self-compassion (Neff, 2003a), and more specifically, the new concept of body or physical self-compassion (Berry, Kowalski, Ferguson, & McHugh, 2010; Magnus, owalski, & McHugh, 2010, respectively), has been found to mitigate this objectification. In addition, Szymanski and Carr (2011) called for social justice initiatives surrounding empowerment of female clients and Szymanksi et al. (2011) suggested the need for further research about women who objectify other women. Although the professional literature has addressed self-compassion and these findings suggest the positive influence of increased body self-compassion, the literature has not extended a body self-compassion induction on women who experience self-objectification and women who objectify other women. Utilizing an experimental design to address this gap in the literature, this research study will examine the effects of a self-compassion induction on both self-objectification and objectification of other women.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 2:00-2:20pm**
Location: **Heth 022**

"And Love is Fire": the Stories of Elizabeth Barrett Browning

Jed Stalker
Faculty Mentors: **Renee Dickinson** *English*
Jeff Saperstein *English*
Kathy Kelly *English*

This is a large project intended primarily as a teaching tool. It is a multifaceted text, composed of several elements. The first portion of the text is the complete text of Barrett Browning's "Sonnets from

the Portuguese," together with my annotations of those sonnets and a running commentary on the meta-story of the sequence. The second portion is a short story which condenses much biographical information about Robert Browning and Elizabeth Barrett into one reader-friendly and engaging ("o soul, we must be meek" says EBB) document. The last portion of the project is a journal-length essay in which I argue for the need to appreciate Barrett Browning as both a female and a religious writer. Also included in the project are introductions written both to the student, explaining my goals in composing of the text as well as some suggestions as to how to go about reading it, and to the teacher, explaining the pedagogical ideals that fueled the project and some thoughts as to how it might be best used in instruction.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 2:20-2:40pm**
Location: **Heth 022**

The Greatest Silence: The Rape Epidemic in the Democratic Republic of the Congo

Elly Schulte
Faculty Mentor: **Moira Baker** *English*

This research presents how the systematic use of rape as a tool of warfare during the Bosnian War received international attention. The United Nations declared rape as a crime against humanity in its aftermath. It has been utilized as a method of ethnic cleansing during instances of genocide. Rape has reached epidemic proportions in the Democratic Republic of the Congo. It is affecting such a significant portion of the population and the DRC lacks adequate resources to aid those that have been victimized ad those that are continually committing rape. The DRC is now known as 'the rape capital of the world.' This research explores how this happened and what can the international community does to aid those that survived being assaulted.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 2:40-3:00pm**
Location: **Heth 022**

Childhood experiences and adult functioning in college-aged women

Stephanie Gusler
Faculty Mentor: **Ann Elliott** *Psychology*

This study examines childhood experiences and adult functioning in college-age women. A variety of questionnaires were used to examine poly-victimization (i.e., high cumulative levels of victimization) during women's childhood and early adulthood and ho it has affected their romantic relationships, sexual experiences, psychological well being and distress, substance use, and participation in illegal activities. In the present study, The Juvenile Victimization Questionnaire (JVQ) was used to measure six types of victimization (property crime, physical assault, childhood maltreatment, peer/sibling victimization, sexual victimization, and witnessed/indirect victimization) and poly-victimization. The Trauma Symptom Inventory-2 (TSI-2) was used to measure symptoms of Post Traumatic Stress Disorder and Acute Stress Disorder that are associated with victimization. Preliminary results regarding associations between the different types of victimization and psychological distress will be reported.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 3:00-3:20pm**
Location: **Heth 022**

The effects of mountaintop removal on the mental health of central Appalachians living near surface mines

Paige Cordial
Faculty Mentor: **Ruth Riding-Malon** *Psychology*
Hilary Lips *Psychology*

Mountaintop Removal coal mining (MTR) has been linked with a number of deleterious environmental, economic, community, and physical health effects in Central Appalachia. However, researchers have yet to give much attention to the possible mental health effects of MTR on those directly affected by it. Anecdotal reports from Central Appalachians living near MTR mines suggest that mental health problems may commonly result from MTR activities. In addition, research on environmental problems with effects similar to MTR has revealed associations between environmental destruction/pollution and grief and stress responses. My paper explores the literature from several disciplines and various types of sources to produce initial hypotheses about the probable mental health effects of MTR for those who live in communities near these surface mining operations. In addition, I briefly describe my own original research on mountaintop removal and overall wellness that I am currently carrying out.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 3:30-3:50pm**
Location: **Heth 022**

Possible Powerful Selves of Undergraduate Students

Natisha Gomes Savannah Simpson
Faculty Mentor: **Hilary Lips** *Psychology*

Women continue to be underrepresented in politics and other high-ranking leadership positions in comparison to men. This study explored how participants perceived the positivity and possibility of their "possible selves" as persons with power and in tree distinct roles (editor-in-chief of a national women's/men's fashion magazine, chief executive officer, and important political leader). The study also examined the extent to which female and male respondents anticipated relationship problems in connection with these powerful roles. The researchers predicted that women would describe more reservations with respect to anticipation of relationship problems and their imagined possible selves compared to men. The relationship problems were coded by the researchers. A chi-squared analysis revealed no significant effect of gender on anticipated relationship problems for any of the specific roles. However, when women imagined themselves in the person with power and editor-in-chief positions the results aligned with the predicted direction, with more women than men anticipating relationship problems. Another chi-squared analysis showed a significant gender difference in which roles were listed as most difficult or easy to imagine, with more men listing the editor-in-chief role as most difficult to imagine, and more women listing the political leader role as most difficult to imagine.

Multivariate analyses of variance revealed that men were significantly more likely than women to rate both the political leader an CEO roles as both more possible for them and more positive.

Session: **Gender Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 3:50-4:10pm**
Location: **Heth 022**

Men and women in relationships: What's the difference?

Dr. Emily Keener

Dr. Keener is an alumna of the RU masters program in experimental psychology. She is now teaching psychology at Slippery Rock University.

Session: **Gender Conference**
Presentation Type: **Keynote Address**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 022**

Scholar-Citizens and CSCR Symposia

Video Montage about gender

Shylah Jones
Faculty Mentor: **Melinda Wagner** *Sociology*

I wanted to look at the socialization of gender and the effects on children; specifically looking at the clothes, toys and friends that a young child identifies with. By using qualitative methods of research, I interviewed, filmed and observed a young child's perception of male vs. female friends and interactions. I also address impact a parent(s) may have on their child's opinion and outlook of what is considered masculine and feminine. The findings are illustrated in a short movie I made as part of my Qualitative research methods class.

Session: **Scholar-Citizens and CSCR Symposium I**
Presentation Type: **Video**
Day & Time: **Tuesday 3:30-4:00pm**
Location: **Heth 018**

The Great Silence: Rape Epidemic in the Democratic Republic of the Congo

Elly Schulte
Faculty Mentor: **Moira Baker** *English*

This research presents how the systematic use of rape as a tool of warfare during the Bosnian War received international attention. The United Nations declared rape as a crime against humanity in its aftermath. It has been utilized as a method of ethnic cleansing during instances of genocide. Rape has reached epidemic proportions in the Democratic Republic of the Congo. It is affecting such a significant portion of the population and the DRC lacks adequate resources to aid those that have been victimized ad those that are continually committing rape. The DRC is now known as 'the rape capital of the world.' This research explores how this happened and what can the international community do to aid those that survived being assaulted.

Session: **Scholar-Citizens Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 4:00-4:15pm**
Location: **Heth 019**

Fueled by Fire: the Debate and Diplomacy of Women's Labor unions

Kenzie VanDerwerker
Faculty Mentor: **Lisa Baker Webster**

The theme "Debate and Diplomacy in History: Successes, Failures, and Consequences" describes my topic quite well. The debate over conditions in the factories had been an issue prior to the fire but came to the forefront after the fire and the public demanded change. The women had held a strike shortly before the fire to protest working conditions and pay but were unsuccessful in achieving their goals. The strike failed to force change. Then came the tragedy of the fire and the deaths of so many workers. That set the stage for conditions to change. Regulations were put in to place by the government and safety conditions were among the first things to be regulated. Forging a strong union and with the sympathy of the public at last, women were able to use strikes to achieve better wages and better working conditions. These strikes allowed diplomacy between factory owners and workers to occur as each side worked to create solutions. The debate over working conditions in the early 1900's ultimately as resolved in favor of the workers. While they were successful at that time, they had to continue to be vigilant in order to sustain their gains. Because they had not been successful in advocating for better working conditions, 141 factory workers lost their lives in the Triangle Shirtwaist Factory fire. As a consequence of the debate and the success of the women's labor unions, the unions became stronger, working conditions and salaries improved, and the role of women in the workplace was fortified.

Session: **Scholar-Citizens Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 4:15-4:30pm**
Location: **Heth 019**

"Stereotypes of Martial Arts"

Stephen Lesiv Shylah Jones
Faculty Mentor: **Melinda Wagner** *Sociology*

I wanted to examine how the stereotypes of martial arts were viewed by someone who has been in martial arts for a long time. Through interviews and first hand footage, I have found out that martial arts are much more than what is portrayed in movies and popular culture. It requires inner peace and mental toughness along with physical strength.

Session: **Scholar-Citizens Symposium**
Presentation Type: **30 minute video**
Day & Time: **Tuesday 4:30-5:00pm**
Location: **Heth 019**

Geology Poster Session

FIELD APPLICATION OF A PORTABLE XRF FOR ELEMENTAL ANALYSIS OF PYRITIFEROUS, MIDDLE DEVONIAN, BLACK SHALE IN SW-VIRGINIA

Jennifer All
Faculty Mentor: **Parvinder Sethi** *Geology*

The Millboro Shale is a Middle-Late Devonian formation that extends throughout Virginia, West Virginia, Tennessee, Maryland, and Pennsylvania. Due to the nature of this shale layer's accumulation, it contains an abundance of organic-carbon rich sediment which is typical of a shallow-marine depositional environment. Consisting of highly-pyritized intervals, this black shale oxidizes to produce sulfuric acid which presents a dangerous threat to the local groundwater supply.

This research proposes that the use of a Low-Sulfur Polypropylene Thin Film in conjunction with a field-portable X-ray fluorescence (XRF) instrument, used to provide instant geochemical concentrations of elements within such facies, reveals a strong, positive correlation with the more tedious and time-consuming method of sample extraction and laboratory analysis. Low-Sulfur polypropylene thin films are more sensitive to lighter elements, allowing for a more accurate and detailed analysis of black shales. The Millboro Shale is ideal for such a study due to the variability in its levels of bioturbation and mineralogy – including sulfur content.

By rappelling down a ten meter outcrop of Millboro shale in Radford, researchers analyzed samples using the portable XRF at ten-centimeter intervals with two types of thin films as well as with no thin film which were then extracted and logged for laboratory analysis. Comparisons have been made between the field data and laboratory data which will reveal the validity of the field-portable XRF, making almost-instant field analyses, which can take only two minutes, more reliable and conventional than the crush and sieve method used in the laboratory.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

PROVENANCE OF MODERN LACUSTRINE SEDIMENT, MOUNTAIN LAKE, SW VIRGINIA

James Freeman Miles Costello Marcus Jessee
Faculty Mentor: **Elizabeth McClellan** *Geology*

Mountain Lake, located in Giles County, SW Virginia, is one of only two natural lakes in Virginia, and is interpreted by some to have formed when a landslide dammed the stream known today as Pond Drain. Mountain Lake periodically drains and refills, lending itself to an unparalleled opportunity for research of modern lake sediments. In 2011 the water dropped to nearly its lowest level in many years, allowing Radford University students to extract several sediment cores for study. Five cores were taken from the lakebed at different locations along its length. For each of the cores, students created a core log, performed sieve analysis, and collected geochemical data using a handheld XRF. We have compiled the data from all five cores in order to assess variations in sediment characteristics and source across the lakebed. Mountain Lake is underlain by four distinct rock units of Ordovician and Silurian age: limestone and calcareous shale of the Martinsburg Fm., red sandstone and shale of the Juniata Fm., quartzarenite of the Tuscarora Sandstone, and hematite-cemented sandstone of the Rose Hill Fm. The variation of major and minor elements within and between the cores should reflect the relative contribution of these potential sources to the lake sediment. We fond Fe, K, Ca, Ti, Zr, Pb, and Zn to show the most significant differences in the cores. For example, the generally low abundance of Ca throughout the cores indicates a minor contribution from the Martinsburg Fm., whereas fluctuations in the amount of Fe pint toward varying input from the Juniata or Rose Hill Formations.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Mapping a rock block landslide, Mountain Lake, Giles Country, Virginia

James Freeman Ken Holmes
Faculty Mentor: **Elizabeth McClellan** *Geology*

Mountain Lake is one of the only two natural lakes in the state of Virginia. Mountain Lake was first described by Christopher Gist in 1751. Henry Sharp proposed in 1933 that the lake was created by a rock slide of Tuscarora Formation (also known as Clich) sandstone boulders damming a breached anticline that were later in filled with finer sediments. Sharp describes large boulders of the Clinch Formation located at the North end of the lake. Mapping of large Clinch boulders around the lake and in the nearby ridge and valley terrain was done by Hugh Mills for the USGS in 1987. Mills' mapping includes the southeast end of the lake; however the large boulders at the north end of the lake are unmapped. These boulders, some as large as 30 feet, have never ben accurately mapped, nor has the scarp face from which they originated. The objective of our study was to map the extent of the large rock block slide and its scarp, at the North end of the Lake, using GPS and GIS technology that was unavailable when the boulder trains were mapped by Mills in 1987.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

CLAST ANALYSIS AND SPATIAL VARIATION OF ALLUVIAL FAN CONGLOMERATES IN THE NEOPROTEROZOIC LOWER MOUNT ROGERS FORMATION, BLUE RIDGE, SW VIRGINIA

Marcus Jessee Jason Yonts Sarah Gregory
Faculty Mentor: **Elizabeth McClellan** *Geology*

The Mount Rogers Formation (MRF) in the Blue Ridge province in SW Virginia and adjacent North Carolina formed during a failed rift event involving the Rodinian supercontinent at ~ 760 Ma, that predated successful rifting at ~ 550 Ma. The MRF, which nonconormably overlies Mesoproterozoic basement (the Cranberry Gneiss), is subdivided into two distinct units. The upper MRF constitutes an eruptive center dominated by voluminous rhyolite lavas and ash flow sheets, while the lower MRF contains a bimodal basaltrhyolite volcanic sequence intermixed with alluvial fan sedimentary deposits.

The alluvial fan system is composed of arkosic conglomerates and sandstones that likely represent a progradational sequence formed during synsedimentary faulting. We analyzed the spatial variation of the sedimentary deposits to determine aerial extent, facies variation, and geometry of the alluvial fan deposits. Analytical methods include detailed outcrop mapping, point counting of conglomerates in outcrop, and data interpretation using spatial statistics. Through the implementation of this methodology three distinct subsystems are defined. Subsystem 1 is composed of matrix- to clast-supported conglomerates with matrix/clast ratio of < 1 and clast size commonly > 10 cm in diameter Conglomerates are polymict, but rhyolite clasts dominate and make up > 50 percent of the total outcrop. Subsystem 2 comprises polymict matrix-supported conglomerate with matrix/clast ratio > 1, and clasts size typically < 10 cm in diameter; rhyolite is again the dominant clast type, but makes up < 50 percent of the total outcrop. Subsystem 3 is composed of pebbly metasandstone with scattered pebble-sized clasts, predominately of vein quartz. The subsystems are interpreted to represent proximal, midfan, and distal facies, respectively, and their spatial distribution, both along and across strike, aids in reconstructing the original fan geometry.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Sonar Studies of Mountain Lake, Virginia

Jordan Kime Tanner Vaughn
Faculty Mentor: **Chester Watts** *Geology*

Mountain Lake in Pearisburg Virginia is one of two natural lakes in the state. The lake was created by a landslide forming a natural dam and first mentioned by European explorers in 1751. The lake has been draining and refilling itself for centuries n an irregular schedule from unknown causes and this is a serious deterrent to potential tourists. Our goal was to map the lake bottom in its entirety where there is water left. Just one week after our research was concluded, the lake did not have enough water left to support our research vessel.

We used a Hummingbird Search and Rescue Sonar and Cata-craft that was custom designed for research at Mountain Lake to complete several sweeps of the lake and obtained a detailed image of the lake bed. Including images of a small boat that sank in the mid-1900's. A bathymetric map was then created using computer analysis and compared to a similar map that was made from data collected in the summer of 2011 using the same methods. With the help of this information, a detailed map of the lake bottom is now available for use in future studies that could include dye-trace studies, diving reconnaissance of the drainage area and in general help scientists and resort owners analyze options for lake management.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Electrical Resistivity Survey of Mountain Lake, VA

Benjamin Perdue Jennifer All
Faculty Mentor: **Chester Watts** *Geology*

Mountain Lake, located in Giles County in SW Virginia, is one of only two natural lakes in Virginia. It is well known as the filming location for the movie Dirty Dancing and more recently for its extraordinary fluctuations in water level. The lake emptied completely during the fall of 2008 and nearly completely during the fall of 2011. The lake is hypothesized to have formed from a combination of landslide damming of a water gap on the northwest limb of a plunging anticline at the northern end of a structurally controlled basin and from possible sinkhole subsidence. In the fall of 2011, students from Radford University had the rare opportunity to study the lake bed during that period of extremely low water levels. Reconnaissance field surveys were first performed to collect photographs and to characterize four known depressions, approximately 80 feet in diameter, acting as drain holes. Electrical resistivity studies were then carried out on the dry lake bed using both a SuperSting array and an OhmMapper resitivity meter with the goal of better understanding the relationship between the lacustrine sediments, the landslide colluvium, and the underlying bedrock. These data were expected to provide insight into the subsurface flow of water at the lake. Based on the locations and characteristics of the depressions it was hypothesized that a significant amount of water is lost through the base of the natural dam. Cross sections developed from the electrical resistivity surveys suggest a complex interaction between the sandstone colluvium and the lacustrine sediments. In addition, there are distinct areas where subsurface flow appears to be diverted around colluvial blocks. Piping holes through the lake sediments that overlie the base of the dam support the idea that water loss is due to the development and growth of conduits through the natural dam.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

FELDSPAR AS A PROVENANCE INDICATOR IN METASANDSTONE OF THE LOWER MOUNT ROGERS FORMATION, SW VIRGINIA

Jason Yonts Sarah Gregory
Faculty Mentor: **Elizabeth McClellan** *Geology*

The Neoproterozoic Mount Rogers Formation (MRF) in the Blue Ridge province of SW Virginia formed during an initial, aborted rifting of the eastern Laurentian margin of Rodinia, prior to successful rifting ~200 million years later. The lower MRF rests uncomfortably on the 1.1-1.2 Ga Grenville basement (Cranberry Gneiss), and is overlain by 758 (+/- 12) Ma rhyolites of the upper MRF. The MRF was metamorphosed to lower greenschist facies during Paleozoic compressional tectonism. The lower MRF contains bimodalvolcanic rocks overlain by alluvial fan sedimentary deposits. Sedimentary protoliths in the lower MRF are predominantly conglomerate, representing the proximal fan facies, and sandstone representing the more distal facies. The sandstone of the lower MRF in poorly sorted and contains quartz, feldspar, and abundant lithic clasts. The lithic clasts predominantly derive from the Cranberry Gneiss or the lower MRF rhyolites and basalts; however, some are of uncertain origin. Our study investigates the use of felspars as provenance indicators, in order to assess the relative contributions of the different source rocks. We used thin section petrography to identify the types of K-feldspar and plagioclase present in the rhyolite, basalt, and basement granitoids, to compare with feldspars in the sandstone. The Cranberry Gneiss (CG) in the field area comprises both granitic and granodioritic varieties. Based on the Michel-Lévy method, the granitic samples of the CG contain albite, whereas the granodiorite contains andsine. Basalt of the lower MRF also contains andesine. Microcline is the dominant K-feldspar in the CG samples, as compared to altered perthitic K-feldspar in the lower MRF rhyolite. The sandstone contains both albite and andesine plagioclase , abundant mirocline K-feldspar, and lesser amounts of perthitic K-feldspar. Despite the abundance of rhyolite lithic clasts in conglomerate of the proximal

fan facies, it appears that the CG is a dominant source of feldspar in the distal sandstone, perhaps reflecting greater chemical weathering of the rhyolite. Feldspar compositions will be analyzed using the electron microprobe in order to further test our hypothesis.

Session: **Geology Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Beta Beta Beta Biology Conference

Summer Internship with the North Carolina Department of Environment and Natural Resources, Division of Coastal Management

Robert Barksdale
Faculty Mentor: **Karen Francl** *Biology*

During the summer of 2011, I completed a 10-week internship with the North Carolina Department of Environment and Natural Resources. I worked for the Division of Coastal Management, primarily focusing my efforts to the Currituck Banks National Estuarine Research Reserve. The priorities of my internship were to gain experience in wildlife conservation and reserve management, while assisting my supervisor with reserve maintenance. As an intern, my responsibilities included wildlife surveys, such as amphibian and reptile abundance, and feral horse distribution, trail maintenance, trash cleanup, and public outreach while walking the boardwalk and trails. While performing these duties I was exposed to a number of environmental issues facing the Outer Banks of north Carolina, and became educated the inner workings of government agencies and how they interact with one another. The skills I gained through this internship are directly related to those skills taught to me through the Radford University environmental biology curriculum. The skills and experiences I gained through my internship are for the continuation of my career in environmental biology. Indeed, this successful internship in 2011 recently has led to a job offer to spend a second summer working for tis agency.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

The effects of juvenile hormone modulation on metabolism in Madagascar hissing cockroaches (Gromphadorhina portentosa).

Kristan Cale Erin Dudley
Faculty Mentor: **Jason Davis** *Biology*

Studies focusing on juvenile hormone (JH), the hormone primarily responsible for maturation in most species of insects, are relatively recent and basic. Several previous findings from research done in our laboratory motivated us to examine the impact of juvenile hormone modulation on metabolic function, using Madagascar hissing cockroaches (Gromphadorhina portentosa) as a model. We split our sample population of mature cockroaches into three groups: one in which juvenile hormone was not modified, one in which juvenile hormone was functionally increased by the addition of methoprene (acts as an agonist of juvenile hormone), and one in which juvenile hormone was functionally decreased through the addition of allostatin (acts as an antagonist of juvenile hormone). We measured factors relating to an individual's metabolism, such as oxygen intake and carbon dioxide output, for any possible correlations with its weight, gender, and treatment group. We further investigated metabolic efficiency by measuring frss output and hormone constituency of frass using bomb calorimetry and examining the elemental composition of the frass using an elemental analyzer.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

"Development of a bacteria killing assay for avian plasma"

Jordan Cohen
Faculty Mentor: **Jason Davis** *Biology*

The immune system is composed of a host of structures and processes designed to combat foreign intruders. Previous research has shown that plasma has an innate ability to kill bacteria, and that this process is sensitive to a variety of extrinsic and intrinsic factors, including stress, age, gender, and species. In this project, our goal was to develop a reliable method for easily measuring the bacteriocidal capacity of plasma taken from wild birds, for use in comparison of various study conditions. Here, we will describe the measures taken to create and adjust a 96-well, spectrophotometric plasma-based bacteria killing assay (BKA), as well as present results from our pilot assays on plasma taken from starlings (Sturnus vulgaris). In addition, we describe the results of long term frozen storage on plasma viability. In previous assays, it has been found that plasma does have the ability to fend off bacteria, but after several weeks of being frozen in a -40 freezer, the plasma's capacity to kill bacteria was greatly diminished. We hypothesized that freezing the plasma in a -80 freezer would prevent its degradation. For future studies, this assay could offer insight into how the immune system works, as well as to provide a platform for studies regarding plasma and its relationship to differences in gender, environment, species, stress, and more.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Examining Arsenic Resistance in Bacteria from an Arsenic Mine

Cecilia de la Garza Hilary Miller
Faculty Mentor: **Georgia Hammond** *Biology*

Arsenic is an inorganic toxic metalloid that is found in the environment, especially in natural water systems. There are two major redox forms of arsenic that can be found in contaminated water systems, arsenate and arsenite. Both forms are toxic to living cells. When present in a bacterial cell, the genes for arsenate reductase (known as arsC and arrA) can reduce arsenate to arsenite. Another gene involved in arsenic resistance is arsenite oxidase or aoxAB This gene allows for arsenite to be oxidized to rsenate. These genes, in combination with one another, allow for bacteria that

express them to have a metabolic advantage of being able to couple reduction and oxidation reactions of arsenic with energy metabolism. Our main purpose for research was to test for the presence of arsenic resistance genes from sediment samples from the Brinton Arsenic Mine in Floyd County. Our particular sampling site had extremely high levels of arsenic relative to other sampling sites at the mine. By isolating genomic DNA we were able to use PCR and gel electrophoresis to identity specific arsenic resistance genes. Bacterial metabolism of arsenic with these resistance genes has a significant impact of the distribution of arsenic in the environment.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Amino acid differences in the prohibitin protein between dengue virus vectors and nonvectors

Kimberly Filcek Amanda Robinson
Faculty Mentor: **Justin Anderson** *Biology*

Dengue virus is an arthropod-borne virus that causes dengue fever, dengue hemorrhagic fever, and dengue shock syndrome in tropical areas of the world. Although an arthropod virus receptor has not yet been identified for dengue, there is strong evidence to support that it may be the prohibitin protein. Using PCR and 3' RACE, we sequenced the prohibitin gene from Ochlerotatus japonicus and Ochlerotatus triseriatus mosquitoes and aligned them with other known prohibitin gene sequences. Compared to Aedes egypti, we found 99% similarity between both Oc. triseriatus and Oc. japonicus prohibitin sequences. Implications for transmission will be discussed.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Crystal-Producing Cells in Petioles of Deciduous Leaves

John Huth
Faculty Mentor: **Gary Cote** *Biology*

Microscopic intracellular crystals of calcium oxalate are produced throughout the plant kingdom. It has often been proposed that these crystals defend against herbivory, but other roles have also been suggested, including the possibility that they sequeser calcium from cell walls during controlled breakdown of plant tissues. One case of such controlled breakdown involving cell wall changes is the abscission – or dropping – of ripe fruits, spent flowers and autumn leaves. During abscission a layer of cells with weakened cell walls is formed at the point where the organ will detach. Calcium oxalate crystals have been extensively studied in leaf blades of a large diversity of plants, but there have been only few reports of crystals in petioles. We collected abscised autumn leaves from 16 species of deciduous trees, and prepared cleared specimens of both leaves and petioles. Using brightfield and polarization microscopy, we examined the region adjacent to the abscission zone of the petioles for the presence of crystals. When crystals were found we documented their morphology and abundance. Species differed in the presence and shape of petiolar crystals. We will continue this study by examining the petioles of young spring leaves and mature summer leaves of the same species.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Ultrastructure of Calcium Oxalate Crystals from Dieffenbachia seguine (Araceae)

Brian Ingram
Faculty Mentor: **Gary Cote** *Biology*

Numerous plants, especially in the family Araceae, have idioblast cells which produce crystals of calcium oxalate. Various hypotheses of the function of these crystals include protection from herbivores, mechanical support, mineral balance, and waste sequstration. Multiple types of crystals have been cataloged with the observation of light microscopy from all parts of the aroid Dieffenbachia seguine (Coté, 2009, American Journal of Botany). The ultrastructure of the most common types of crystals in different parts of plants has been studied by scanning electron microscopy (SEM), but, to our knowledge, there has not been a comparative study of the ultrastructure of crystals from all parts of the same plant. Therefore, we are utilizing SEM to study the diverse crystals found throughout Dieffenbachia seguine. We use a mortar and pestle to break up the cell walls of the plant, and then using a dissecting microscope we remove all the debris from the crystals. We have tried several washes to clean the crystals f organic material, including sodium hydroxide, acetic acid, Triton X-100, and sodium dodecyl sulfate (SDS). Another procedure we use is fracturing pressed parts of the plant by placing a section between two pieces of carbon tape and then pulling the pieces of tape apart. Once specimens are dry, we spudder-coat them with a thin layer of gold, which improves the SEM image. Our goal is to obtain multiple images of clean crystals from all parts of Dieffenbachia seguine to gain more knowledge of their ultrastructure so we can be able to understand their function better.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Endangered Species of the Galapagos Islands

Tessah Kanter
Faculty Mentor: **Karen Francl** *Biology*

As part of a spring break study abroad trip to the Galapagos in spring 2011, I learned about the endemic plants and animals of the islands. I developed this capstone project as a way to further my education about the Galapagos and to educate others about number of the endemic species. The goal of this project was to further research four endangered species in the Galapagos and to create a poster and flyer documenting the value of such a unique educational experience at Radford University. I researched for species from the Galapagos that are endangered: the waved albatross (Phoebastria irrorata), the giant tortoise (Geochelone nigra), the prickly pear cactus (Opuntia), and the sea cucumber (Isostichopus fuscus). In my poster I provide information on the species, why it is endangered, and how the issue is being addressed. I will also hold an information session about the Galapagos and my experiences there for students interested in the next study abroad trip to the islands.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**

Location: **Heth 045**

Brucellosis

Cassandra Leiter
Faculty Mentor: **Georgia Hammond** *Biology*

Brucella, a gram-negative bacterium, causes one of the world's most common re-emerging zoonotic diseases (Brucellosis) with more than 500,000 human cases annually. Although a vaccine was developed in 1981- it only works for animals. Brucella species is therefore considered a category B pathogen by the CDC and has potential as a bioweapon. Although the first Brucella strains were recognized over 120 years ago, not much is known about how this bacterium persists in host cells. Modes of transportation such as direct contact with blood, placenta, fetuses, uterine secretions, including urine, and contaminated raw animal products including raw milk and meats are most common. Increasing awareness of such mechanisms of transfer coupled with decrease in anima infection has been proven to lower occurrence in human populations. Although there are nine species of Brucella recognized as infectious, only four of these cause disease in humans; the most common species being Brucella melitensis which mostly affects free-range goats and sheep. Many other animal species are also affected, especially farm-raised stock, ranging from horses, cattle, swine, buffalo, moose, camels, dogs and rodents.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Developing a Method to Identify Members of the Genus Bacillus

Mark Lubeskie
Faculty Mentor: **Georgia Hammond** *Biology*

Endospores form in gram-positive bacteria such as members of the genus Bacillus. Small acid-soluble proteins also known as SASPs are involved in endospore formation. SASPs protect DNA from a wide variety of detrimental processes including: UV light, heat, desiccation, high pressures, disinfectants, as well as acids and bases. Bacteria were collected from the Brinton Arsenic Mine in Floyd County. These environmental bacteria are not easily identifiable by standard methods and we are working on a technique that could be used to specifically identify members of the genus Bacillus. We looked for a marker gene that will allow us to identify Bacillus species against other bacteria including other endospore forming bacteria such as members of the genus Clostridium After isolating DNA from our unknown bacteria we then used primers for a SASP gene found only in the genus Bacillus in polymerase chain reaction (PCR). Amplification of our marker gene in any unknown bacterium should correlate with the fact that the unknown bacterium in a member of Bacillus.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

An Interactive Online Identification Key to Wildflowers of Wildwood Park, Radford, VA

Kiersten Newtoff
Faculty Mentors: **Gary Coté** *Biology*
Christine Small *Biology*

Outdoor activities such as hiking, bird watching, and viewing wildflowers enhance public awareness of biological communities and foster appreciation for natural areas. This appreciation often increases with the ability to recognize and name species seen. however, most professional wildflower identification keys use terminology unfamiliar to people without a background in botany. Thus, simplified guides designed specifically for localized areas and that use layman's terms are needed. We created an online identification key for the over 400 species of wildflowers found in Wildwood Park, a ~20 ha public natural area in Radford, VA. This key is available on the Wildwood Park website (http://www.radfordpl.org/wildwood/index.html). We made this key user-friendly by reducing technical terminology, reducing the number of species to only those found in the Park, and providing easily recognizable color photographs. This key features simple choices, beginning with flower color, followed by choices such as the number of petals, shape of the flower and shape of flower clusters. All terminology is defined using familiar language and descriptive photographs. Once a flower has been tentatively identified, a link takes the user to a detailed description of the plant and its known locations in the park. Although designed specifically for Wildwood Park, the key is useable in backyards and other local parks. The key's simple design and online accessibility introduces newer technologies to wildflower identification such as supporting the use of smart devices in the field or by capturing pictures to be identified at home.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Hippocampal and hypothalamic aromatase expression in tibetan songbirds of varying aggression.

Tara Paterson
Faculty Mentor: **Jason Davis** *Biology*

Three species of Tibetan songbird – the native rufous-necked snowfinch (Montifringilla ruficollis) and white-rumped snowfinch (Montifringilla taczanowskii), as well as the invasive Eurasian tree sparrow (Passer montanus) – have previously been shown to display different behavior in regards to aggression within and between the species. The white-rumped snowfinch, for example, is shown to be the most aggressive of the three and exhibits aggressive behaviors not only towards other birds but between both exes of its own species, and is unwilling to make use of human settlements. In contrast, the Eurasian tree sparrow is quite gregarious and is often found in and around human settlements as well as in the vicinity of other birds. The aim of this study waste see what might be the neurological basis for this difference in behavior by looking at aromatase expression in areas of the brain related to such behaviors. Aromatase is an enzyme responsible for converting testosterone into estradiol, which is shown to be important in aggressive and sexual behaviors in many vertebrate species. Brains from each species of bird were collected and stained for aromatase, and analyzed for stain

density in the hippocampus, paraventricular nucleus, and preoptic area.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Determining what DNA sequences control gene expression of HIRA during development

Raymond Simpson
Faculty Mentor: **Tara Phelps-Durr** *Biology*

HIRA is a chromatin remodeling protein shown to affect development in many organisms including Arabidopsis. We want to determine which regions of the promoter affect HIRA gene expression by making and analyzing different length constructs of the promoter To analyze HIRA gene expression, the 3.5 Kb promoter has been fused with the GUS reporter gene which will visually show where the HIRA gene is being expressed in Arabidopsis development. We have cloned four constructs into the TOPO vector and all have been successfully swapped into the GUS reporter vector (pKGWFS7) and these constructs are 1000 bp , 1500 bp, 2000 bp, and 3500 bp regions. These constructs will be transformed into Agrobacterium. We will dip the plants into the Agrobacterium, which will allow us to analyze HIRA gene expression in each of the transgenic plants. Based on the results, further research will determine if specific sites within the promoter affect HIRA gene expression.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Development of Molecular Tools to Distinguish Species and Lineages with Echinostome Parasites

Josh Wittenberg
Faculty Mentor: **Bob Sheehy** *Biology*

The ability to distinguish between different taxa, along with different lineages within a specific taxon, is a valuable tool while researching the genetic diversity of parasites among their hosts. The genetic diversity of a parasitic population is thought to affect the parasite's ability to infect its host, presenting the question as to why this is. Through the use of molecular tools, this study focuses on creating an assay that allows for the distinction between a range of different Echinostome specie and different lineages within the Echinostoma trivolvis species. The basis of this assay will consist of a course, "species determining" and fine, "lineage determining" polymerase chain reaction, using specific primers that were designed to amplify a section of Echinostome DNA and restriction enzymes, which will cut the amplified DNA at different lengths depending on which species or lineage is present. With the development of this assay, there is hoped to be a reasonably fast, fairly inexpensive test that can be used throughout the research of Echinostoma trivolvis pertaining to the genetic diversity of these parasites throughout their various hosts.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Dwarf gecko (Sphaerodactylus macrolepis) morphology and its potential importance for mediating physiological stress in a semi-arid, sub-tropical climate.

Robert Barksdale
Faculty Mentor: **Jeremy Woijdak** *Biology*

The dwarf gecko, Sphaerodactylus macrolepis, of the U.S. Virgin Islands is among the smallest terrestrial vertebrates in the world. These geckos live in semi-arid conditions where mechanisms for control of water loss and heat gain are very important. The mall body sizes of Sphaerodactylus spp. mandate very high surface area to volume ratios, thus exacerbating potential rates of water loss and heat gain. Some past work has suggested behavioral mechanisms by which dwarf geckoes reduce water loss and heat gain, including nocturnal habits and use of dense leaf litter to avoid direct exposure to the tropical sun. This study aims to investigate whether Sphaerodactylus macrolepis may exhibit morphological adaptations to reduce their surface area to volume ratio, in particular a thickening and shortening of the body, tail and limbs relative to other small lizard taxa. By using digital photography of animals from the field, and image analysis software, I quantified the morphology of dwarf geckoes from the USVI.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 6:45-7:00pm**
Location: **Heth 044**

Stop on Red: Stimulus color influences neophobic behavior in house sparrows (Passer domesticus)

Laken Cooper
Faculty Mentor: **Jason Davis** *Biology*

Animals must evaluate novel stimuli in order to determine whether the benefits of approaching outweigh the risks, however there is a fine line between being curious and being cautious. Objects have many different features that either attract or repulse organisms. Color is a strong cue as to the safeness of an object, as it may relate to sexual features, food sources and alarming situations. Here we describe two experiments developed to test the exact effects of differently colored stimuli on food approach behavior in captive housed wild house sparrows (Passer domesticus). Knowing that the color red often has an important role in wild environments, we predicted that subjects would show a delay in approaching red items when compared to other colors. Previous studies have suggested that male songbirds may be more aggressive when it comes to foraging behaviors, leading to our second assumption that they may approach food items faster than females. As predicted, our results show that house sparrows exhibit a deceased preference for red items, and that while males and females both avoid the color red; males approach food almost twice as fast as do females, regardless of the color of stimuli. We discuss the possible evolutionary and physiological underpinnings of these findings, and their relevance to wild environments.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 7:00-7:15pm**

Location: **Heth 044**

Potential allelopathic effects and demography of gumbo limbo (Bursera simaruba) on St. John, U.S. Virgin Islands

Catherine McKenzie Erica Palmquist
Faculty Mentors: **Christine Small** *Biology*
Jeremy Wojdak *Biology*

Bursera simaruba (Burseraceae), also known as gumbo limbo or turpentine tree, grow in dry tropical and subtropical forests. Bursera simaruba has rapid growth and a high tolerance for drought and salinity. Resins from the tree have many medicinal uses, is ominated chemically by terpenoids, and has insect repellant and antibiotic properties. Our study was conducted to determine whether resins produced by B. simaruba have chemical inhibition on surrounding tree growth and spatial distribution. Thirty-five B.simaruba trees were selected and mapped using GPS, along with paired control trees. Control trees were within ±1.5 cm of B. simaruba DBH, where possible. Spatial distributions of trees around each B. simaruba and control were determined by selecting 10 nearest-neighbor trees >2 cm DBH and recording DBH and distance from the focal tree for each. Our findings suggest that B. simaruba does not have allelopathic effects on surrounding trees. Distance to neighbors, diameter of B. simaruba and paired control trees also were not statistically different. However, B. simaruba and paired trees were found to have larger diameters than surrounding trees, and a positive correlation between DBH and nearest-neighbor distance. We also observed a lack of B. simaruba seedlings or saplings, suggests that little regeneration is occurring in this species. It appears that many B. simaruba trees may have established following hurricane damage or during land clearing, before or after the establishment of VINP in 1956. Based on mapping data, we are also exploring biogeographical patterns to learn more about the habitat preferences of B.simaruba.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 7:15-7:30pm**
Location: **Heth 044**

The Search for Proteins That Interact with HIRA

Allie Mills
Faculty Mentor: **Tara Phelps-Durr** *Biology*

HIRA (HISTONE REPRESSION A) is a chromatin remodeling protein that impacts development in all organisms. Severe mutations in HIRA are known to cause embryo lethality in plants and animals. Defects in HIRA can lead to problems such as DiGeorge syndrome in humans, characterized by craniofacial and heart malformations such as cleft lip/palate. In plants, HIRA is known to promote cell differentiation by turning off a group of gene known as KNOX genes, which maintain stem cell identity. In this study, bioinformatics research was performed to identify potential protein interactors of the Arabidopsis HIRA. A CPRG assay was performed to test the potential interactions. This experiment will help form a better understanding of how HIRA functions during plant development.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 7:30-7:45pm**
Location: **Heth 044**

Verifying the Presence of Arsenic Resistance Genes and DNA Sequencing in Bacteria Isolated from an Arsenic Mine

Erin Fowler
Faculty Mentor: **Georgia Hammond** *Biology*

Arsenic is a toxic metalloid and known carcinogen that can contaminate headwater streams and affect human as well as ecological health. Macroinvertebrates and some plant species are negatively impacted by the presence of arsenic, but some bacteria are capable of manipulating arsenic in the environment to their advantage. Arsenate (AsV) and arsenite (AsIII) are the two most common forms of arsenic found in the environment. There is no dedicated uptake system of arsenic for bacterial cells as arsenic is not required for proper cell function. However, arsenate is structurally similar to phosphate and enters the cell via phosphate transporters. Arsenite, the more toxic form, is capable of entering the cell via a number of membrane transporters. Once inside, arsenate is capable of interfering with ATP synthase and arsenite inactivates proteins. In order to cope, bacterial species have several arsenic resistance genes: arsC, arrA, and aoxAB . arsC encodes arsenate reductase, which reduces arsenate to arsente. arrA encodes an efflux pump in the membrane which can eliminate arsenite out of the cell into the environment. aoxAB genes encode a protein complex which oxidizes arsenite into arsenate. This pathway can be metabolically beneficial as it provides he bacterial cell with electron donors and acceptors, giving the bacteria the potential to oxidize organic compounds and gain energy from the process. Identifying bacteria (via the 16S small subunit ribosomal gene) that possess these genes is important in understanding how they contribute to regulating toxic forms of arsenic in the environment, which can negatively impact other organisms.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 8:00-8:15pm**
Location: **Heth 044**

Effects of the agave snout weevils, an introduced insect pest, on century plants in dry tropical forests of St. John, US Virgin Islands

Chelsea Richardson Patrick Moore
Faculty Mentors: **Christine Small** *Biology*
Jeremy Wojdak *Biology*

Century plants (Agave missionum; Agavaceae) are large succulent plants endemic to the U.S. Virgin Islands and Puerto Rico. They are ecologically significant in this region for various species of fauna such as birds, insects and bats that feed on the nectar of the blooms. In recent years, century plants have experienced considerable population declines due to accidental introduction of the agave snout weevil (Scyphophorus acupuntatus) from Mexico. We surveyed three areas on the island of St. John to characterize habitat requirements, abundance, and vitality of century plants. Study sites were located along hiking trails in subtropical dry forest and forest-shrubland on the remote south side of the island. At each site, 10-15 plots (10x6 m) were established ad canopy height, canopy density, soil temperature, and geographic coordinate data collected. Plant data included living and dead plant density, size of live plants, and damage rating (0 = no damage, 4 = dead). We found that sites

containing century plants had shorter and more open tree canopies than sites lacking these plants. Yawzi Point, an exposed peninsula, showed significantly greater century plant damage (mean damage = 3.1 vs. 1.6) and mortality (73.2% vs. 24.1%) than more mesic, closed canopy forest sites. Multiple regression analysis showed century plant mortality to increase on more open sites, particularly those with greater plant abundance. However, the abundance of small plants from vegetative reproduction suggests the potential for population recovery at this site.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 8:15-8:30pm**
Location: **Heth 044**

Corticosterone and parental behavior in eastern bluebirds (Sialia sialis)

Daniel Rabago Justin Bower Erin Dudley Jason Prater
Faculty Mentors: **Judith Guinan** *Biology*
Jason Davis *Biology*

Studies have demonstrated strong correlations between stress and an organism's health. We were are interested in observing its possible effects on parental care. Using eastern bluebirds (Sialia sialis) as our model, we examined the relationship between the level of corticosterone (the hormone primarily associated with the stress response) in an individual's blood and its parental behavior. We observed male-female social and feeding behaviors during incubation (egg care) and nestling (offspring care)stages. We determined the corticosterone levels from blood samples that we collected from males, females, and nestlings. We found female corticosterone levels to be correlated with male corticosterone levels in both incubation and nestling stages. We found that during the incubation stage, male corticosterone levels correlated positively with the number of times the female had to stop incubating her eggs so she could feed herself, rather than being fed by the male. While during the nestling stage, female corticosterone levels correlated positively with male feeding of the nestlings. However, the corticosterone levels of an individual did not correlate with its own rate of foraging or nestling care. Our findings indicate that stress levels within an individual can affect the parental care of its mate.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 8:30-8:45pm**
Location: **Heth 044**

Literary Symposium I

The Pen is Mightier Than the Pill: Bibliotherapy in Public Education

Rachel Turner
Faculty Mentor: **Daniel Woods** *English*

After traumatic events, many people react and deal with the outcomes in different ways. Some people turn to destructive means such as drugs, alcohol, self harm, etc. Others turn to a more creative means to get over their situations such as through art or writing. For me, poetry has been what I turn to during difficult times. This process of expressing yourself through reading and writing is called bibliotherapy. If adolescents were taught to deal with their issues through this means rather than the more destructive outlets, perhaps they'd be more successful in dealing with their problems. Many teachers in public schools seem to shy away from poetry, but it can be a great outlet for students to use in order to convey their feelings to others. In this paper, I look at poets such as Richard Siken and Maya Angelou, both of which have used writing to talk about personal tragedies, such as death, abuse, etc. I also include a collection of poems that I've written to demonstrate how writing has helped me through the traumatic event of the passing of one of my good friends from high school this past year. As a result of looking through Siken and Angelou's works, as well as using some of their styles in order to write my own pieces, I've found that writing can be very cathartic. I've found that by using poetry to talk through and about this event has been very helpful, especially since it's not something that I talk to others about. I hope that I'll be able to take what I learned throughout this process and apply it in my future classroom in order to help my students turn away from a destructive means of dealing with their issues and turn towards a more positive and creative outlet, such as poetry.

Session: **Literary Symposium I**
Presentation Type: **Poster presentation**
Day & Time: **Tuesday 5:30-6:00pm**
Location: **Heth 018**

The Swinging Bridge

Leanna Rippey
Faculty Mentor: **Donald Secreast** *English*

My Honors Capstone objectives that this project focused on were the use of grammar and style, mechanical construction, and plot development of fiction. Grammar and style was better developed by the continuous development of the series and by the use of mentor feedback on the pieces, which were provided by Dr. Secreast. Together, we compiled a set of four drafts of the story that I began with him, completed a fifth with no feedback, a small researched essay on the genre I wrote in, and the list of changes that were made from each draft. The presentation will involve an explanation of the project and an excerpt of the story. I also want to stress that this is a work in progress, which will be continued in the future to be molded into a short novel manuscript for publishing. The total project is 104 pages. The major focus was the creation process of a short fiction story and how a writer must go through a drafting process for publication. Dr. Secreast worked as my editor to provide me with feedback and knowledge of the writing styles that would make this successful. For the purposes of the Capstone though, I used the already completed drafts to complete a final version of the story. I hope to prove that creative writing does have a place and it is a skill that is to be fostered by careful attention to details and feedback, as this project demonstrates.

Session: **Literary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 6:00-6:15pm**
Location: **Heth 018**

Literary Analysis and Comparison of The Hobbit and Harry Potter and the Sorcerer's Stone

Megan O'Dowd
Faculty Mentor: **Justin Askins** *English*

J.R.R. Tolkien and J.K. Rowling are both known for their fantasy books around the world, such as The Hobbit and Harry Potter

respectively. Both authors have encouraged an interest in literature among adolescents and the film industry through these literary works. Due to the popularity of both authors, many differences and similarities can be drawn from Tolkien's Middle Earth series and Rowling's Harry Potter series. During this research process focus has been on Tolkien's The Hobbit and Rowling's Harry Potter and the Sorcerer's Stone, looking at style and character development.

Session: **Literary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 6:15-6:30pm**
Location: **Heth 018**

Rabindranath Tagore: The Literary Jewel of India

Joan Sureshkumar
Faculty Mentor: **Jolanta Wawrzycka** *English*

Over the ages, many brilliant individuals have changed history and paved the way to the present world. Many of these individuals have also been honored with the Nobel Prize. While winning this award itself is a great accomplishment, there are those that break social, racial, gender, and class boundaries – individuals who present the world in new light. One such person was Rabindranath Tagore, the first non-European to win the Nobel Prize for literature in 1913. With his sheer talent for gilded words that flowed from his soul, he captured the world in the early 1900s. During troubled times in India, his native country, his poems, stories, songs, plays, and paintings enriched the creative and literary fields. His academic influence extends beyond this time period even to this day – his words are still sung as India's and Bangladesh's national anthem, his universities still produce intellectual geniuses, and his face still graces the front of many national stamps. This presentation seeks to explore the life and works of this Jewel of India, Rabindranath Tagore, one who has forever changed the world through creativity.

Session: **Literary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Tuesday 6:30-6:45pm**
Location: **Heth 018**

Design and Marketing Poster Session

DOD Youth Program Functions and Youth Center Design

Brittani Hammond
Faculty Mentor: **Joan Dickinson** *Interior Design & Fashion*

The Department of Defense is a specialized section of the government that has many branches of work supporting it. DOD Youth Programs, housed in Youth Activity Centers, are located on military bases and serve to support children and families of DOD civilians and military. While the research covered in this project can be applied to any Youth Activity Center, the project bases its findings and results on one specifically located in Dahlgren, Virginia. The first step in this study is to survey the faculty, staff, and parents from the existing Youth Activity Center to identify specific program strengths and weaknesses. Those findings along with additional research will be used to put together a proposal for a new Youth Center for the Dahlgren location. This presentation will walk the viewer through the design process to inform in detail how a project to this scale would progress.

Session: **Design and Marketing Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

The New Face of Advertising: The role of social media in small business marketing communication

Anthony Hartless
Faculty Mentor: **Leigh Anne Kelley**
Communication

The purpose of this study was to learn about the effectiveness of social media, specifically Facebook, in the marketing communication function. The study included an analysis of the content and frequency of facebook posts by three independent restaurants in the Radford area. This poster session and oral presentation will discuss findings of this study, including how audience makeup, frequency, different content categories, and two-way communication influence the effectiveness of social media in small business promotion.

Session: **Design and Marketing Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

Ergonomic Task Chair Study

Holly Lenz
Faculty Mentor: **Julie Temple** *Interior Design & Fashion*

This case study was designed to determine the best ergonomic task chair for a local company located in Dublin, Virginia. We researched different manufacturer ergonomic task chairs before selecting three task chairs for the workers to survey. The three selected task chairs were selected based on their manufacturer, ergonomic functions, and price. A two page questionnaire was designed for the workers to fill out while sitting in the task chair for at least one hour. At the end of the questionnaire the workers would answer the simple question "Which chair do you like the best." Overall this questionnaire will help the local company select a new ergonomic task chair for their workers in the future. This study shows how important ergonomics are to corporate design.

Session: **Design and Marketing Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

URBAN SUSTAINABILITY: the ecosystem

Lauren Reinhard
Faculty Mentors: **Joan Dickinson** *Interior Design & Fashion*
Holly Cline *Interior Design & Fashion*

This presentation walks viewers through a design project starting with process, moving through research, and ending with the completed solution and model of a wellness center in New York City. The project has a focus on sustainability in urban environment and shows how sustainability can be built into an alternative medicine and therapy facility. The concept of the design is derived from the inspiration of an ecosystem. It focuses on the connection between parts, and is driven by such words as relationship, togetherness, unity, connection, bond, cohesive, and blending. The idea that working together can create a sense of healing and wholeness is what primarily fuels this design. This facility becomes a place where the community can feel supported and card for in any way that is needed.

Session: **Design and Marketing Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

Center for Social and Cultural Research (CSCR) Symposia

Religion and Politics III

Astin Altenburg LaTeeka Gray Kyler Barton Mary Dickerson
Faculty Mentor: **Melinda Wagner** *Sociology*

The research project undertaken by the SOCY 421 Religious Patterns in Cultures class focused on the relationship between religion and politics. Each student studied a particular political figure's religion and politics, and pondered the connection between the two.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **1 hour presentation**
Day & Time: **Wednesday 9:00-10:00am**
Location: **Heth 016**

Religion and Politics IV

Shannon Doyle Caroline Musumarra Emily Kreider Steven Rowley Rita Saban
Faculty Mentor: **Melinda Wagner** *Sociology*

The research project undertaken by the SOCY 421 Religious Patterns in Cultures class focused on the relationship between religion and politics. Each student studied a particular political figure's religion and politics, and pondered the connection between the two. Emily Kreider will be discussing Pope Urban II, Steven Rowley will be discussing Robert E. Lee, Rita Saiban will be discussing Joseph Stalin, Shannon Doyle will be discussing Saddam Hussein and Caroline Musumarra will be concluding the presentation by discussing Ali Khameni.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **1 hour presentation**
Day & Time: **Wednesday 10:00-11:00am**
Location: **Heth 016**

Religion and Politics V

Matthew Reed Josh Jones Matt Hogsett George Reutter Ian Hostetler
Faculty Mentor: **Melinda Wagner** *Sociology*

The research project undertaken by the SOCY 421 Religious Patterns in Cultures class focused on the relationship between religion and politics. Each student studied a particular political figure's religion and politics, and pondered the connection between the two. This session will talk about three possible Presidential candidates and two past United States Presidents. Matt Hogsett will be discussing Newt Gingrich's views, Ian Hostetler will be discussing Rick Perry's views, Josh Jones will be discussing President Obama's views, Matt Reed will be discussing Ronald Regan's views, and George Reutter will be discussing John F. Kennedy.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **1 hour presentation**
Day & Time: **Wednesday 11:00-12:00pm**
Location: **Heth 016**

Musical Preferences, Consumption, and the Internet

Mary Dickerson
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Two very distinct arguments within the sociological literature address how individuals develop musical preferences through cultural consumption. The first argument, a cultural capital perspective, views music as a social artifact that individuals employ a cultural marker to distinguish themselves from others. The second argument, an ecological perspective, views music as a cultural form that consumes people. Though these perspectives differ considerably on a conceptual and theoretical level, the literature supporting both perspectives share one important similarity, namely neither addresses the role of the internet in music preferences and consumption. The existing sociological literature under theorizes the potentially important role of the internet in cultural consumption, especially with regard to music and preferences. The main objective of this study is to examine the role of internet usage in determining musical preferences, specifically using the three websites Facebook, iTunes, and YouTube. The inclusion of internet usage in explanations of music preferences generates varying hypotheses depending on whether the user is an abstainer, localizer, or omnivore. The sample consists of 129 individuals from the university student body population and logistic regression is used to analyze the data. There is some support for the various hypotheses. One finding is that if users are specifically using the internet to expand music preferences, it increases the odds of having a strong preference for a genre of music regardless of how the specific sites are used. If individuals are using the internet to gain new knowledge, the odds of being unfamiliar with a genre decrease, but does not strengthen preferences. These results suggest that the internet does play a role in gaining musical preferences, but it all depends on the type of user the individual is pertaining to music.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 1:00pm-2:00pm**
Location: **Heth 016**

Mountaintop Removal- Perceptions

Kyler Barton
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Why do some individuals perceive mountaintop removal as harmful to the public health? I propose that the more people perceive mountaintop removal effects public health, the higher the degree of perceived negative impact, and the higher the perceived negative impact, the higher the degree of negative public opinion of mountaintop removal. I analyzed perceptions of the effects of public health in conjunction with mountaintop removal using a non-probability sample of 100 college students from an accredited public university in southwest Virginia. Data was collected through online surveys throughought March of 2012. Results will be discussed and future directions for research will be provided.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 1:00-2:00pm**
Location: **Heth 016**

Health and Religion Research Project

Laura Janosko David Pidcock Amanda Strokus
Faculty Mentors: **Melinda Wagner** *Sociology*
Melissa Grim *Exercise, Sport and Health Education*

Though there is a growing body of research illustrating a positive correlation between religious engagement and health, the mechanism behind this relationship is not well understood. Most studies investigating this link have focused on parishioners and specific religious affiliations, with few being conducted in Appalachian communities. The purpose of this exploratory qualitative study is to investigate the role of religious beliefs and the teachings of religious leaders on health beliefs, health behavior, and health decision-making. Interviews with 10-15 religious leaders from Protestant denominations in Appalachia are being conducted (and recorded), transcribed, and analyzed. Religious affiliations will be compared to see what similarities and differences were found in the responses of religious leaders in regard to causes of illness/injury, personal responsibility for health, End Times beliefs and how they

relate to health, and beliefs about treatment and recovery from an illness or injury.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **1 hour oral presentation**
Day & Time: **Wednesday 1:00-2:00pm**
Location: **Heth 019**

Death Attitudes and Alcohol Consumption on a College Campus

Curtis Rash
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Death attitudes and amount of alcohol consumption are two variables that have typically been measured independently of each other. The study examines the relationship between death attitudes and the amount of alcohol consumption among college students. I propose that there is a positive correlation between the amount of alcohol consumption and the three positive death attitudes and a negative correlation between the amount of alcohol consumption and the two negative death attitudes. To test this, I used convenient sample of 65 students from a rural university in Virginia, gathering data from an online survey. Preliminary analyses find negative correlations with the amount of alcohol consumed and both the positive and negative death attitudes. Implication discussed.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 1:00-2:00pm**
Location: **Heth 016**

Acceptance of Homophobic Vernacular by American College Students

Cameron Bennett-Hattan
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

The use of homophobic vernacular seems to be on the rise among American college students. . Most research into the subject ignores the apparent change in vernacular on a generational basis; the aim of this survey was to measure the level of acceptance shown towards the use of homophobic language among American college students. This online survey was constructed to determine whether correlations exist between the amount of acceptance one shows towards homophobic language and the probability that they will activity use homophobic language, also the more an individual uses a homophobic vernacular the less likely it will be that the individual views the language as homophobic. A convenience sample generated 93 respondents consisting of mostly heterosexual freshman woman. Results will be discussed.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 2:00-3:00pm**
Location: **Heth 016**

Determining the Role of the Internet in Healthcare

Matt Propst
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

How will the emergence of using internet healthcare technologies affect patient perceptions of healthcare? We sought to answer this question along with gathering information on patient perceptions of the doctor-patient relationship and quality of care. Using a sample of participants that visited a student health center at a mid-size university in Southwest Virginia, we gathered 114 paper surveys in March 2012. Results will be presented and suggestions for future research suggested.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 2:00-3:00pm**
Location: **Heth 016**

The Relationship between Self-esteem and Body Image

Erica Rivera
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

The purpose of this study is to assess the relationship between self-esteem and body image. We predicted that there is a relationship with lower self-esteem and a lack of physically activity which would result in a negative view of one's body. One hundred students from a public university in the south were surveyed using Qualtrics online survey software. Results will be discussed and future directions for research will be proposed.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 2:00-3:00pm**
Location: **Heth 016**

Sexuality within the African American Church

Shanell Herbert
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

Presently, one of the most prominent agendas supported by the African American Church is anti-homosexuality. Researchers document that African American Church membership and affiliation promote negative attitudes towards homosexual behavior within the African American community. While many may argue that the African American community should display empathy towards the homosexual movement because of the parallels to the civil rights movement, research has shown that blacks tend to view homosexuality as always wrong and immoral behavior (Valera and Taylor, 2011). Driven by a sense of hypermasculinity, the Black Church equates homosexuality with weakness and femininity (Ward, 2005). This study conceptualizes the production of homophobia in the African American community as resulting from the religious experience encountered within the Black Church coupled with the frequency of the individual's attendance and participation of various religious functions and activities and how strongly the individual's identity is rooted in the Black Church. Specifically, the current investigation examines homophobia in African American Black Church members. I posit that the heterosexual values imparted on Black Church members results in the development of homophobia in these individuals, thus creating barriers to AIDS/HIV prevention, positive self- image, and social stigmas. I employed a purposive sampling technique to specifically target 127 members of various African American Churches in the surrounding geographic area of Southwest Virginia during March 2012. Results will be discussed.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 3:00-4:00pm**
Location: **Heth 016**

Factors of stress amoungst college students

Joshua Judd
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

College students experience stress yet manage that stress in different ways. This project sought to examine how college students manage various kinds of stress. Knowledge about these findings will help university officials assist students. Using an online survey, data was gathered from 81 college students attending a public university in the south. Preliminary results indicate that students felt more stress with class related situations rather than other factors when attending the university. Suggestions for future research discussed.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 3:00-4:00pm**
Location: **Heth 016**

Society's Influence on Sexual Identity

Jeremy Mobley
Faculty Mentor: **Jeanne Mekolichick** *Sociology*

The present research is an analysis of the influence multiple social institutions have on adolescent sexual identity development. The majority of previously conducted research seeks to explain sexual identity development through the influence of only one social institution, particularly the mother and father figures (family). In order to account for the explanation provided by these researchers, guardians, peers, educational systems, and religion are each being analyzed individually and collectively (as society itself) to provide an exploratory analysis of adolescent sexual identity. An online survey was sent to undergraduate males, 18 and older, using convenience and snowball sampling. Overall, a total of 60 participants fully completed the survey with more than 10 percent of responses being categorized as gay. Results are first compared based on sexuality and other demographic information and then compared based on the individual social variables. After running preliminary statistics, the data suggests that guardians hold some of the most influential power of the social structures being analyzed. Further conclusions provided are intended to lay out a more comprehensive approach to understanding society's influence on adolescent sexual identity for future scholars.

Session: **Center for Social and Cultural Research Symposia**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 3:00-4:00pm**
Location: **Heth 016**

Anthropological Sciences Symposium

International Human Rights Investigations and the utility of Forensic Anthropology

Elly Schulte
Faculty Mentor: **Donna Boyd** *Anthropological Sciences*

This research presents a brief history of international human rights violations investigations dating back to the First World War. A primary focus is on the role the UN has played post-WWII in establishing international law. It also discusses the establishment of the International Criminal Court to create an international judicial body. The utilization of forensic anthropology in international forensic investigations and the necessity for forensic anthropologists' expertise in these investigations especially with incidents of mass graves.

Session: **Anthropological Sciences Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 10:00-10:15am**
Location: **Heth 018**

Fingerprints: Are They Identical?

Kristoffer Peterson
Faculty Mentor: **Donna Boyd** *Anthropological Sciences*

The objective of this study is to assess the uniqueness of fingerprints in criminal investigations. Fingerprints are routinely used in criminal convictions based on the supposed " uniqueness" of everyone's print In reality, many problems exist in fingerprint identification, including inadequate sample sizes, sample incompleteness, and lack of an agreed-upon, standardized fingerprinting methodology. This study examines these problems as well as the claim of "uniqueness" of everyone's fingerprint. Major types, classifications, and characteristics of fingerprint patterns will be discussed and claims for the "uniqueness" of each person's print evaluated.

Session: **Anthropological Sciences Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 10:15-10:30am**
Location: **Heth 018**

Identifying the Unidentifiable: An Analysis of Cold Cases

Michelle Whitman
Faculty Mentor: **Donna Boyd** *Anthropological Sciences*

According to the National Missing and Unidentified Persons System (NamUs), there are 10,100 missing persons currently in the United States, 2754 (27.26%) of which are still closed cases. At the same time, there are 8,892 sets of unidentified remains; 597(6.71%) of these are closed (cold) cases. These numbers have declined since 1993, possibly due to advances in research and technology, according to

US Department of Justice. Recent improvements in research and technology need to be applied to the reanalysis of closed cases of unidentified remains to determine if their identity can now be revealed. This study has been performed to express the inefficiencies in the organization and archiving of cold cases. Through first hand analysis of cold cases, it has been recognized that over time, these cases become commingled, disheveled, neglected, and forgotten. A forensic analysis of human remains unidentified from Central Virginia and curated as a cold case at the Virginia Office of the Chief Medical Examiner s used to illustrate the many difficulties and limitations involved in solving cold cases.

Session: **Anthropological Sciences Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 10:30-10:45am**
Location: **Heth 018**

Defining Peri-mortem Trauma: The necessity for defined post-mortem stages in the Criminal Justice system

Danielle Fenimore
Faculty Mentor: **Donna Boyd** *Anthropological Sciences*

The need to define the perimortem interval is based within the legal application of forensic anthropology. In the context of medicolegal investigations, a forensic anthropologist's role is primarily to develop a biological profile leading to a positive dentification of the individual and to assess all trauma sustained to the remains, information which can support a medical examiner or coroner's determination of the cause of death. It is when the case moves to the court room that the strict definition of perimortem trauma becomes crucial. Currently, the interval is defined by the physiology of the bone (the moisture content, lack of healing, and the fracture patterns) and is misleading to the court in the fact that there is a set interval, with a well-defined beginning and end. This creates a legal necessity to understand whether the ante-, peri-, and postmortem stages of trauma are set intervals or are actually just observed phenomena along a less-defined timeline.

Session: **Anthropological Sciences Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 10:45-11:00am**
Location: **Heth 018**

Multidisciplinary Symposium I

The Benefits of a High Academic Standard for Collegiate Student-Athletes

Anita Puerto
Faculty Mentor: **Kevin Ayers** *Exercise, Sport and Health Education*

It is my belief that collegiate athletes should be held to a strong academic standard. These students are highlighted for their athletic contributions, and are therefore admired by their peers. However, the term "student-athlete" creates the illusion that these men and women are students first and athletes second. This opinion paper will present reasons as to why student-athletes at a collegiate level should be held to a high academic standard. The National Collegiate Athletic Association has set and rewired the academic standards for these students many times over the last few decades, but has still not created an atmosphere where they are students first. Research shows that student-athletes have higher GPA's than their fellow classmates at similar academic levels. However, the GPA requirements for those students wishing to participate in athletics are lower than they should be, and therefore diminishing the importance of their academics. When student-athletes receive sport scholarships their education should come first. A poor performance academically could result in that student-athlete losing both the sport and the opportunity for a higher education. High standards would be beneficial not only to the student-athletes themselves but also to their peers, the school they represent, and the future career path those students choose to take after college. Sports used to be purely entertainment, with no score-keeping and no monetary compensation. Today they are used as entertainment but also communication, social relocation, and national or international representation. From a very young age, some children look up to athletes from all different arenas of the sport industry. It is my opinion that they should not only see skill and physical ability but a strong, valued educational background.

Session: **Multidisciplinary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 11:00-11:15am**
Location: **Heth 019**

International Social Work: A Cross-National Exploration of the Differences in the Social Work Profession in Various Countries and How They Influence International Social Work

Brittany Moskel
Faculty Mentor: **Diane Hodge** *School of Social Work*

Many social workers do not understand the value of international social work and how the work they perform locally ultimately influences international practice. One of the main factors contributing to this ignorance is that international social work has not been clearly explained and incorporated into many of our areas of practice in the United States. This presentation will provide an explanation of international social work and elaborate as to why there is such confusion surrounding it. To provide a better

understanding it will be expanded to include a cross-national exploration into how various countries practice social work and how these practices reflect on international work.

Session: **Multidisciplinary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 11:15-11:30am**
Location: **Heth 019**

How does studying abroad affect students at Radford University?

Virginia Acquino
Faculty Mentor: **I-Ping Fu** *Chinese*

Study abroad programs for college undergraduate students in the United States have existed for many years. However, the effects of studying abroad can vary from student to student. This research will uncover the student populations who are interested in studying abroad and the reasons behind their motivations. It will also examine how studying abroad influences the student both academically and personally. Both qualitative and quantitative methods will be implemented. An emphasis will be made on the trend of students studying abroad in Radford University in the context of other universities in the United States.

Session: **Multidisciplinary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 11:30-11:45am**
Location: **Heth 019**

Hand-held Biometric Technology Makes for a Handy Device

Katherine Rasiak
Faculty Mentors: **Tod Burke** *Criminal Justice*
Stephen Owen *Criminal Justice*

Biometrics, the scientific and technological development of automated human identification based on anatomical or behavioral (signatures, etc.) characteristics, has progressed as a significant field of study in the discipline of criminal justice. Biometric research has formed and has advanced fingerprint identification, geospatial identification (hand-print, etc.), facial recognition, and iris recognition, to name a few.

Technology that employs these methods of identification has emerged and continues to be perfected as it enters communication fields and law enforcement. One such innovation, the hand-held biometric reader, has recently come to use in law enforcement, particularly in police agencies. This technology can access identification information stored within databases. The reader is capable of direct and instant identification of individuals cataloged within the criminal (or otherwise chosen) database. Because this device is portable and retrieves information instantly, the technology is ground-breaking in the field of law enforcement.

The purpose of this paper is to examine the benefits and limitations of the hand-held biometric device as it pertains to law enforcement. The technology allows for quick identification of suspects and potentially dangerous criminals and convicts, wherever the officer may find him or herself. The technology has been improved to function in a variety of environmental settings, including complete darkness. Despite its numerous advantages, the hand-held device is also limited to certain restrictions of environmental conditions, time, space, and user safety. Research on this technology has surfaced its potential for law enforcement, specifically use by federal and local officers, and as admissible evidence in court. However, the law has yet to determine its legal limitations and corresponding law enforcement applications. This study, through and examination of the device and pertinent case rulings, explores these concepts and the questions that have arisen with this new technology.

Session: **Multidisciplinary Symposium I**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday11:45am-12:00noon**
Location: **Heth 019**

James Joyce Roundtable

The Difficulties of Interpretation, of Scholarship, and of Accepting Joyce: A Round-table Discussion of First-time Readings/Reactions/Receptions of James Joyce's Ulysses

Katherine LaRosa Claire Hall Jay Rimmer Christopher Bradbury
Faculty Mentor: **Jolanta Wawrzycka** *English*

James Joyce's Ulysses presents the first-time reader with many challenges. This round-table panel discussing Joyce's Ulysses will address the problems first-time readers are likely to encounter when first encountering the novel. These problems include comprehension issues regarding the textual challenges posed, for instance, by Joyce's stream of consciousness as well as comprehension challenges regarding Joyce's narrative styles reflected in syntax and arrangement of content. A first time reader is further challenged by Joyce's use of background and historical information including Irish history, Shakespeare, history of English literature/stylistics, religious doctrines (mainly Catholicism), Irish/Dublin culture at the turn of the 20th century, etc. These different challenges encountered when first reading Ulysses greatly impact the reception of the novel by readers, the reception of the novel by the literary community, and, most importantly for this discussion, the reception of the novel by college students entering into the field of English scholarship.

Each panelists of this round table will present a 5 minute expose of their own personal experiences with Ulysses which will then be followed by a round-table discussion of the novel. Each panelist will explore his/her own personal and/or visceral responses to the novel including likes, dislikes, disturbing moments, funny moments in the text, etc. We will further be posing the question as a group: If you got hooked on Ulysses, why did this happen? if not, what prevented this from happening? We will further be discussing the approaches one can take with a text like Ulysses, and the reception of the text by general audiences to academic audiences. This round-table will offer differing perspectives on the perception of literature, in this case specifically Ulysses, but it will further offer differing perspectives on the perception of literary scholarship by first-time literature scholars, English graduate students, and the academic world at large.

Session: **James Joyce Roundtable**
Presentation Type: **Round-Table**
Day & Time: **Wednesday 1:00-2:00pm**
Location: **Heth 018**

Multidisciplinary Poster Session

Disability Awareness

Emily Blodgett
Faculty Mentor: **Kenna Colley** *Teacher Education and Leadership*

The education system has changed drastically throughout history. Looking in to the future, technology and media will only increase, causing the education system to change just as much. No longer only special education teachers work with students with disabilities, but also general education teachers are having these individuals in their classroom, too. More and more schools are moving into inclusive classrooms and teachers need to be prepared to work not only with students with disabilities but also with toes who may be in general education classes. Individuals with disabilities are having much more impact in their own lives and the direction of their own futures. They are being included in their individualized education plans and offered transition planning for after high school. By researching the past, we can discover the paths that have improved education and the paths that put education on the decline. To learn the lessons by studying the records of the past we can transform the lessons of the future of elementary education. I will do a meta-analysis on the history of the education and the education of students with disabilities. After learning the lessons of the past, I will propose a pathway to transform the future of the elementary education classroom.

Session: **Multidisciplinary Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Senior'Cise: A Study of Exercise Among Older Adults

Amy Corbin
Faculty Mentor: **Margaret Sproule** *Exercise, Sport and Health Education*

Understanding the factors about what keeps men and women of retired age (60+) exercising is beneficial to maximizing their overall health. Some of these factors may include: the types of exercises they do, how often they exercise, reasons they started to exercise, and motivational or logistical factors that help them continue to exercise. A literature review will be conducted about gender differences in exercise behavior. Thirty surveys will be administered to physically active and sedentary volunteers that will assess why they do or do not exercise, with the intent of finding ways to help improve exercise initiation and adherence. Routine exercise is vital for a healthy, balanced lifestyle that will boost this demographics' quality of life, independence and overall health. It is vital to understand the differences between men and women whilst they complete exercises in order to specially tailor exercise programs and maximize their potential benefits.

Session: **Multidisciplinary Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

The Effect of Martial Arts on Lowering Blood Pressure and Heart Rate in Adults

Benjamin Housely
Faculty Mentor: **David Sallee** *Exercise, Sport and Health Education*

The Effect of Martial Arts on Lowering Blood Pressure and Heart Rate in Adults. The purpose of this study was to determine whether martial arts is an acceptable form of exercise that will improve resting heart rate and blood pressure in adults that have been practicing martial arts for at least one year. 18 adult subjects (mean age: 35.00 standard deviation: 15.07 9 males and 9 females) were used in this study. Subjects were divided into master or beginner groups depending on how long they participated in martial arts. A master was defined as anyone that participated in martial arts consistently for a year or longer (10 masters) and a beginner was anyone that had been participating in martial arts for less than one year (8 beginners). Heart rate and blood pressure were recorded from each subject one time prior to participation in their martial arts program. The data was analyzed using a Pearson two tailed correlation test. There were no significant differences in heart rate and blood pressure between the master and beginner groups (blood pressure systolic p=0.442, blood pressure diastolic p=0.491, heart rate p=0.242). Based on these results, martial arts are not effective at improving blood pressure and heart rate in adults.

Session: **Multidisciplinary Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Friendship Development among International Students from Africa

Oratile Malapile
Faculty Mentor: **Shuo Yao** *Communication*

According to Institute of International Education, in 2010/2011, the number of international students in the U.S. increased to a record high of 723, 277 students, a 32% increase since 2000/2001. The expanding numbers of international students invite scholars to examine intercultural contact, different communication styles, and adaptation process. Many research has shown building intercultural relationships has positive outcomes in facilitating international students' adjustment to the new environment (e.., Bochner, 1982; Zimmermann, 1995). The majority of those studies have focused on the friendship formation between international students and host country students (e.g., Kudo & Simkin, 2003); rarely research examined the other types of friendship formaton among international students. However, Nesdale, Simkin, Sang, Burker, and Fraser (1995) noticed that most of international students only had superficial contact with the locals; similarly, McKinley, Pattison, and Gross (1996) found that international students made majority of close friends with their co-nationals or those who shared similar linguistic background. Those findings suggest that friendship formation with other international students, especially those from the same country, plays a more important and maybe different role in international students' adaptation process than the friendships with the host country students. Despite its significance in understanding and helping international students' adaptation, our knowledge in forming those relationships is rudimentary. In the current research, we examine three types of friendships formation based on Bochner's (1997) categorization: First, friendships with co-nationals—the friendship formation with the international students who come from the same country or share similar linguistic background; second, friendships with multi-nationals—the friendship

formation with the international students who neither come from the same country nor share similar linguistic background; third, friendships with people in the host country. Using convenient sampling, nine African graduate students were interviewed for their friendship formation experiences. The interviews revealed that process and the function of forming each type of friendships are different and international students interpret the meanings associated with different types of friendships vary dramatically.

Session: **Multidisciplinary Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Analyzing the Security of Campus's Wireless Networks

David Rozmiarek
Faculty Mentor: **Premchand Uppuluri** *Information Technology*

The basis of my project will be to analyze the security of a wireless network that mimics that of a typical college campus's network. Within my wireless network I will try to duplicate the many components that one would typically find on a college campus network. I will derive what components to include based off on what is used on Radford University's campus network. This includes a mail server, a student information database, and a learning management system such as Desire to Learn (D2L). To make the network similar to the campus network, we will include multiple computers accessing the network through a wireless router. However computers are not the only ones accessing the wireless connection these days, so I will also include two smart phone devices connecting to the wireless router as well. Using the security policies that are in place at Radford University I will secure the newly created wireless network. After securing the wireless network I will use an outside computer, not on the network, to analyze the degree of security that is in place to protect the wireless network. To analyze the network effectively I will use the Open Source Security Testing Methodology Manual (OSSTMM), which is considered by security experts to be one of the most comprehensive security analysis methodologies. As a final product I will have a score to rate the wireless network's overall state of security. The rating will provide us with an understanding of how well our wireless networks are secured on campuses across America.

Session: **Multidisciplinary Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Digital forensic analysis of a remote computer without requiring physical access

Thomas St.Clair
Faculty Mentor: **Prem Uppuluri** *Information Technology*

Traditionally, digital forensics tools and techniques have fallen prey to one constraint: in order to conduct an investigation on a suspect computer, a forensic examiner either requires physical access or a user account on the computer. With this research we propose a method for conducting digital forensics investigations remotely using a benevolent computer virus. Although computer viruses are traditionally thought of as malicious, benevolent viruses use the propagation technology for useful purposes (Fred Cohen & Associates, 1991). These programs do no harm and are highly restricted. Unlike a traditional virus designed for malicious purposes to spread from system to system in an uncontrolled manner, we intend to design a virus to specifically target a suspect's computer, and install forensic software on the system without arousing suspicion. Our proposed methodology is to first conduct a literature review of previous studies involving the use of benevolent computer viruses, especially those involving topics similar in nature to digital forensics. We will then develop a mechanism to gather forensic data remotely. Specifically, we will investigate forensic tools with small footprints, such as key loggers, for their viability as virus payloads. A control and command center will be implemented to allow a forensic examiner remote control over the evidence gathering process. We also plan to design a protocol by which the virus launching software is updated with the latest zero-day exploits. Through this research we hope to further the study of remote digital forensics by completing a prototype of the benevolent virus with a forensic payload. The ability to conduct forensics remotely helps prevent situations in which physical access to a system is either impossible or impractical, thereby increasing the likelihood that a digital forensics investigation may be held.

Session: **Multidisciplinary Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Chemistry Poster Session and Speaker

Computational Evidence for the Effect of Chlorine as a Catalyst for Fullerene Formation

Chris Pregot
Faculty Mentor: **Timothy Fuhrer** *Chemistry*

We have modeled several derivatives of the polycyclic aromatic hydrocarbon C18H10 using the Gaussian 03 computational modeling software to determine the effect of replacing particular hydrogen atoms with chlorine atoms on the energy of pentagon closure. Pentagon closure is the key to the beginning of fullerene formation. Since chlorine is known by organic chemists as an ortha para director, it may serve as a catalyst to the pentagon ring closure if chlorine atoms are placed at the proper positions. Computational results show that replacing any hydrogen atom with a chlorine atom on C18H10, except the meta position to the pentagon closure site, increased the favorability of pentagon closure. Placing a chlorine atom at the meta position decreased the favorability of pentagon closure. The same calculations are being run with fluorine to see if the size of the atom has an effect on the favorability of pentagon closure.

Session: **Chemistry Speaker Session**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 5:15-5:30pm**
Location: **Heth 018**

Chemical Analysis of Pesticide Residue on Fruit using Gas Chromatography-Mass Spectroscopy

Robert Cacciola
Faculty Mentor: **Cindy Burkhardt** *Chemistry*

Pesticides are commonly used on fruit and vegetables to prevent pests from damaging the crop. Pesticide residue on produce is a health concern due to their carcinogenic effects. For this reason, the use of pesticides is regulated individually by both state and country. Imported fruits are required by the Environmental Protection Agency to be tested for banned substances prior to distribution. The chemical identity of pesticides on fruit was investigated in this study. Various washing techniques were compared in their effectiveness to remove pesticides from the peel. Pesticides were extracted from the fruit by saturating them in ethyl acetate and were analyzed using gas chromatography-mass spectroscopy.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

The synthesis and screening of triazole-containing GABA reuptake inhibitors for the potential use as antiepileptic drugs.

Kristan Cale Nima Hami Travis Hayes Jessica Mawdsley Dylan McDaniel
Faculty Mentor: **Christopher Monceaux** *Chemistry*

Epileptic seizures are linked with an imbalance of excitatory and inhibitory neurotransmission. The inhibitory neurotransmission mechanism is regulated by the neurotransmitter 4-aminobutryic acid (GABA). Inhibition of GABA transport proteins (GATs), which are responsible for the reuptake the GABA neurotransmitter from the synaptic cleft has been proven to ameliorate the effects of an imbalance of inhibitory neurotransmission, a foundation of antiepileptic drugs (AEDs) such as the FDA-approved AED Tiagabie (Gabitril®). Currently there are four known subtypes of GATs known: GAT1, BGT-1, GAT2, and GAT3. These four subtypes have different pharmacological roles and differ in their locations within the central nervous system (CNS). A majority of GABA transport inhibitors as well as the FDA-approved AED Tiagabine are known to inhibit the GAT1. Surprisingly, there is a limited knowledge of what therapeutic relevance inhibition of the other three transporter subtypes—often referred to as the non-GAT1 transporters, BGT-1, GAT2, and GAT3—may yield. We will present methods in which to synthesize and screen potential inhibitors of GABA transport with a large portion of our focus being dedicated to finding potent inhibitors of non-GAT1 inhibitors that may lead to a new class of CNS drugs. Since the pharmacological role of the non-GAT1 inhibitors is not fully understood, our candidate CNS-active drugs may not only have application in AEDs, but in other disorders attributed to an imbalance of GABA in the synaptic left such as but not limited to anxiety and depression, neuropathic pain, cognitive impairment, and Alzheimer's disease.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Flame Retardants In Plasticized Polyvinyl Chloride

Theodore Canterbury
Faculty Mentor: **Cindy Burkhardt** *Chemistry*

Polyvinyl chloride (PVC) is one of the most widely used plastics in the world. PVC is used to make shower curtains, seat covers, electric wire insulation and even clothing. Neat polyvinyl chloride has excellent flame resistance because it contains 57% chlorine by mass. To make flexible PVC, highly flammable plasticizers are added to the material, which cause the final product to have poor flame resistance. Antimony oxide, originally used as a white pigment, was found to react with the chlorine in PVC t form antimony chloride, an excellent flame retardant. The addition of bromine compounds further increases the flame resistance due to the formation of antimony bromide. The increasing cost and health risks of antimony and bromine flame retardants have related a need for safer, more economical alternatives. Tertiary-butylphenyl diphenyl phosphate esters offer the possibility of a lower cost alternative which can be used as a replacement for phthalate plasticizers without the neurotoxicity associated with other triaryl phosphates (Johannsen,1977). Flammability testing was carried out by measuring the limiting oxygen index, the lowest ratio of oxygen to nitrogen in which the plastic sustains combustion. Limiting oxygen index (LOI) of formulations containing mixtures of standard flame retardants were tested with and without phosphate ester to determine if any synergy or antagonism exists. Although an antagonism was not observed among the group, the combination of antimony oxide with phosphate ester resulted in a lower LOI than expected. The limiting oxygen index increased with increasing phosphate ester concentration; one of the highest LOI resulted from the complete replacement of phthalate plasticizer with the tertiary-butylphenyl diphenyl phosphate.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

The Effect of Flame Retardants on Limiting Oxygen Index

Steven Doan
Faculty Mentor: **Cindy Burkhardt** *Chemistry*

Polyvinyl chloride (PVC) is one of the most widely used plastics because of its chemical and physical properties. PVC is naturally self-extinguishing, but in the manufacturing process additives are incorporated to make PVC useful in plastic objects. The additives being incorporated are flammable, so flame retardants must be added. In this study, two flame retardants were used simultaneously to determine if it has an antagonistic or synergistic effect. The two flame retardants used were antimony trioxide and tert- butylphenyl phosphate. The antimony trioxide reacts with hydrogen chloride, formed upon combustion of the PVC material, in the vapor phase to form antimony trichloride which acts as a free radical trap to inhibit fire propagation. Antimony trioxde also promotes the formation of char on the material being burned to decrease the amount of gases formed.

The limiting oxygen index (LOI) is the minimum amount of oxygen in an oxygen and nitrogen mixture required to sustain a flame on a particular material. A material with an LOI greater than 22 % is considered self-extinguishing and materials with an LOI less than 21 % are flammable. Formulations were prepared with varying ratios of antimony oxide to tert- butylphenyl phosphate. LOI measurements

were determined for the formulations. The prepared formulations were all considered self-extinguishing and the ratio of flame retardants did have an effect on the LOI.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

The effects of ternary complex formation with iron(II) chelators in the reduction of ferrioxamine B, Vitamin C, hydrogen peroxide, and bipyridine in growing e. coli cells

Anthony Eid Michelle McDonald
Faculty Mentor: **Joseph Wirgau** *Chemistry*

Transfusional iron overload is a potentially deadly condition resulting from genetic disorders where the patient cannot produce functioning red blood cells, such as in the disorder ?-thalassemia. Elevated levels of iron in the blood lead to heart, liver and pancreatic damage and eventual organ failure. Iron overload is most commonly treated with the drug Desferal®, the mesylate salt of desferrioxamine B. The drug is not orally active and requires the patient to be treated via subcutaneous infusions for up to 60 hours per week. This is time consuming, painful and expensive, with many reported side-effects. Our previous work demonstrated in vitro that the iron complex of Desferal® is redox stable in the presence of biological reducing agents such as vitamin C, but the complex becomes redox active in the presence of iron(II) binding ligands such as bipyridine. This study extends the work in vivo, analyzing the effect of iron, desferrioxamine B, hydrogen peroxide, vitamin C and bipyridine on the initial growth rates of e. coli cells.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Useful carbon nano-materials produced through dehydration of crude glycerol from biodiesel production

Dennis Godward
Faculty Mentor: **Francis Webster** *Chemistry*

Interest in alternative fuels has increased dramatically in recent years due to the rising cost and environmental concerns related to fossil fuels. Biodiesel represents a non-toxic, carbon-neutral fuel that can partially reduce dependence on petroleum based fuels. Concerns exist, however, related to the fate of the large quantity of crude glycerol produced in the transesterification of vegetable oils. Approximately 10% of the original oil ends up as crude glycerol which amounted to over 1 million metric tons in 2008. With this ever increasing surplus of crude glycerol, many research efforts have centered on novel methods to better utilize this product, but much of it is now simply incinerated due to the purification costs required to remove the spent catalyst, water, methanol and fatty acids. In this work, we address the challenge of producing a value-added product from crude glycerol by using it as a feedstock to synthesis a humic acid-like carbon material for catalysis and water purification. Using a one-pot reactor, carbon nanoparticles were synthesized in minutes using only glycerol and sulfuric acid at moderate temperatures ranging from 100 - 2000C. Characterization of the resulting material included a wide variety of techniques including ion exchange capacity, infrared spectroscopy, x-ray photoelectron spectroscopy, thermal gravimetric analysis and scanning electron microscopy. Results revealed a highly functionalized carbon material with a surface chemistry that includes phenolic, carboxylic acid and catalytic sulfonic acid groups (total acidity of 6-10 meq/g). The carbon was shown to have a have excellent catalytic properties that rivaled commercial catalysts for the esterification of fatty acids. This material was also evaluated as an adsorbent for both metal and organic dye contaminants in water and showed a high affinity for both (> 40 mg/g Cu2+ ; > 350 mg/g methylene blue).

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Functionalized carbon materials prepared by ultrasonic spray carbonization of sucrose using sulfuric acid

Tyler Harclerode
Faculty Mentor: **Francis Webster** *Chemistry*

Spray pyrolysis is a recent materials synthesis technique where a solution containing a desired precursor chemical is nebulized into droplets that serve as spherical micro-reactors. These droplets are then pyrolyzed at high temperatures and novel spherical materials produced through simple thermal decomposition. This technique has been used to produce metal oxides, micron sized porous SiO_2 materials, and nano-structured carbon spheres. Commercial applications of porous carbon particles are found in air and water treatment and purification plants, gas separation techniques, and pollutant remediation. However, these carbon materials are usually made from coal and other limited natural resources, and alternative sugar based carbon reagents could be used as a viable replacement. In this work, a novel, solid acid based carbon material will be generated from aerosolized sugar solutions. Deionized water will act as a transfer media between a sealed vessel containing the carbon precursor and the high frequency ultrasonic transducer. The aerosolized reagent, a 0.5M sucrose solution, was transferred at a flow rate of 0.5 L/min into a custom reactor vessel containing sulfuric acid at moderate temperatures (100-200°C). The reactor temperature was varied to study the effects of evaporated sulfuric acid particles and their ability to react with the precursor particles in the vapor phase rather than mix with the liquid acid. The particles were then bubbled through deionized water to collect the carbon material which was then dialyzed and freeze dried. The advantages of this technique over liquid dehydration schemes was evaluated and the resulting carbon materials characterized using a wide variety of techniques including infrared spectroscopy, thermal gravimetric analysis (TGA), scanning electron spectroscopy (SEM), and x-ray photoelectron spectroscopy (XPS).

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

The synthesis of novel magnetic iron-carbon nano composites for the adsorption of metal ions from solution.

Travis Hayes
Faculty Mentor: **Francis Webster** *Chemistry*

The treatment of contaminates in surface, ground, and wastewater is an area of extensive research. Heavy metals make their way into environmental waters by various means including erosion of natural deposits, discharge from industrial factories, corrosion of pipes, and runoff from waste materials. Metals including arsenic, cadmium, chromium, copper, and lead among others are detrimental to the environment and are a serious health threat to humans. This investigation focuses on the synthesis of a of magnetic iron-carbon composite for the removal of heavy metals from aqueous solution. The carbon was derived from the acid dehydration of renewable sugar based precursor molecules and magnetic composites were easily formed from a hydrothermal reaction of Fe2+ and Fe3+ chloride solutions mixed with this carbon. The reaction required only moderately elevated temperatures (800C) and basic conditions (pH = 10). The composite material was characterized using scanning electron microscopy (SEM), thermo-gravimetric analysis (TGA), x-ray photoelectron spectroscopy (XPS), and surface area analysis. Studies were conducted to determine the adsorption isotherms for several metals, the effect of solution pH was evaluated, and the kinetics of metal ion adsorption was studied. Desorption studies were also performed to investigate the reusability of this novel material.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Synthesis of Functionalized Carbon Materials Through the Hydrothermal Carbonization of Fructose

Timothy Hemingway
Faculty Mentor: **Francis Webster** *Chemistry*

The synthesis of carbon nano-materials with specific dimensions has been the subject of many research investigations and these materials have been used in a number of important applications including drug delivery, catalysis, adsorption, and electrochemistry. The expected demand for these materials has also introduced a need for cheap precursors and simple synthetic methods. In this work, the synthesis of a multifunctional carbonaceous material was performed through the dehydration of an aqueous fructose solution under conditions of moderate temperature (~1000C) and pressure (~45 psi). No additional chemicals were needed except for the nitrogen gas used to pressurize the reactor (Parr micro reactor). The product was characterized using an array of techniques including attenuated total reflection infrared spectroscopy (ATR), scanning electron microscopy (SEM), thermo-gravimetric analysis (TGA) and x-ray photoelectron spectroscopy (XPS). Surface area analysis and pore size distribution were also determined and the material was tested as a possible adsorbent for organic dye contaminants.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Comparison of Vanilla Beans of Differing Origin

Brianna Massie
Faculty Mentor: **Kimberly Lane** *Chemistry*

Vanilla is one of the most popular flavoring agents in the world derived from the natural extract of the vanilla orchid. Due to increasing demand and increased interest in gourmet vanilla bean varieties from varying regions, the cost vanilla beans from differing geographic origins is increasingly expensive. It was the aim of this study to determine the validity of prevailing views that vanilla beans from different regions boast unique flavor profiles. Vanilla bean samples from seven geographic regions we reanalyzed by GC-MS to qualitatively determine inclusion of varying flavor components and two major components were quantified by HPLC analysis.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

The synthesis of novel magnetic iron-carbon nano-composites for the adsorption of cationic dyes from solution.

Jacob Miller
Faculty Mentor: **Francis Webster** *Chemistry*

With the large industrial use of synthetic organic dyes today, an ever increasing amount of these chemicals are released into environmental waters. These dyes are evident at small concentrations which is aesthetically unpleasing, and concerns about dye toxicity to marine wildlife and humans is a growing problem. Dyes in wastewater are often difficult to remove due to their inert properties and low concentrations, and methods to test the adsorption properties of various solid materials are the subject of a wide range of recent research efforts. In this work, a magnetic iron-carbon nano-composite was synthesized for the removal of cationic organic dyes. The composite material could be easily synthesized using a glycerol derived carbon material and a mixture of ferric and ferrous chlorides in aqueous solution. The composite was characterized using scanning electron microscopy (SEM), thermogravimetric analysis (TGA), x-ray photoelectron spectroscopy (XPS), and surface area analysis. The kinetics and thermodynamics of adsorption were investigated and the adsorption was found to occur relatively rapidly (< 24hrs) and a good fit to Langmuir isotherm was found with a maximum equilibrium adsorption of over 250mg/g. Other factors including the method of composite preparation, method of drying prior to adsorption, and methods to desorb the dye were also evaluated.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Qualitative Organic Analysis: Identification of an Unknown Compound Benzyl Alcohol

Chris Pregot
Faculty Mentor: **Christine Hermann** *Chemistry*

Qualitative Organic Analysis is a Chemistry elective that was offered in spring of 2012. Each student was given eight unknowns to identify. The unknowns were either solids or liquids. A clear unknown organic liquid was characterized using carbon-13 NMR, roton NMR, COSY, HETCOR, and IR. Solubility, boiling point, and even something as simple as the odor was taken into account and recorded. By interpreting all of the data and compiling it into a report, as well as

further classification test for confirmation, the unknown compound was determined to be Benzyl Alcohol. A 4-Nitrobenzoate derivative was synthesized, and a melting point was observed, thus confirming the compound's identity.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Layer-by-Layer (LbL) assembly of multilayer films made from chitosan and a synthetic humic acid-like polyelectrolyte

Craig Slate
Faculty Mentor: **Francis Webster** *Chemistry*

Electrostatic layer-by-layer (LbL) self-assembly of multilayer films is a technique based on the alternate adsorption of oppositely charged polyelectrolytes in solution. This technique has been the focus of a wide range of research investigations and has been used to synthesize novel coatings, electronics devices, bioreactors, and drug delivery systems. In this work, multilayered films were produced via layer-by-layer self-assembly using glycerol derived negatively charged carbon nano-particles and positively charged chitosan. Multi-layer films were assembled on quartz slides by the alternating adsorption of humic acid-like carbon from a1000 ppm colloidal suspension and chitosan from a 1000 ppm solution. Multilayer films were prepared at a fixed pH of 4.0 to ensure the proper charge of each layer and the ionic strength was varied and seen to dramatically alter the thickness of the adsorbed layers. The adsorption progress was monitored by uv-visible spectroscopy and the assembled multi-layers were characterized by a number of techniques including uv-visible spectroscopy, infrared spectroscopy, x-ray photoelectron spectroscopy (XPS), and scanning electron microscopy (SEM).

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Determination of Hexavalent Chromium in Toys by using UV/Vis Spectrometry

Janay Starckey
Faculty Mentor: **Cindy Burkhardt** *Chemistry*

Toy safety is a joint responsibility among private, state, and federal groups that have been organized to monitor toy safety. Toys that are manufactured in or imported into the USA must comply with the Child Safety Protection Act. Any products that do not meet the requirements will be removed from the market. The European standard EN71 is an organized group affiliated with the European Union that specifies safety requirements for toys internationally. Any toys manufactured and sold in the European Union must comply with their standards before being sold within their country or imported to the US. Some toys contain heavy metal and other toxic chemicals such as arsenic, lead, mercury, and chromium. Chromium is a chemical element that comes in the form of a lustrous hard metal that was once commonly used in toys. This chemical element is found in several different forms such as Cr (III) and Cr (VI). Cr (III) is considered a vital nutrient for the body; however, Cr (VI) is toxic and carcinogenic to the body. Various child and pet toys were analyzed for chromium content. Extensive solution preparation was followed including extracting possible chromium metals from various samples with hydrochloric acid then colorimetric determination of hexavalent chromium using 1 5-diphenylcarbazide reagent.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Extraction of Metals by Leaves

Lewhy Via
Faculty Mentor: **Cindy Burkhardt** *Chemistry*

This research was conducted to determine if leaves will absorb metals out of a solution for the possibility of environmental applications. Using the leaves to clean up contaminated sites is also a form of phytoremediation. Metals in the environment can be harmful to plants as well as to humans. Unlike organic contaminants, metals cannot be degraded. The removal of toxic metals from the environment can be very costly if done by excavation. As an alternative the leaves can be used to help reduce the cost a well as it being an environmental friendly cleanup alternative. This is the least harmful method to extract the metals from the environment as it is using natural occurring organisms. Also, this can be useful for industries because the valuable metals can possible be recovered and re-used.

This research used an aquarium to simulate the aqueous environment setting. Two types of leaves were individually studied for their ability to uptake metals. Zinc was the specific metal of interest. The data clearly shows that the leaves are extracting the metals from the solution. Also, the majority of the metals are being extracted within the first day of being in contact with the leaves.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Mutagenesis of the active site and subunit interfaces in bacterial ?-glucuronidase

Brittany Wike
Faculty Mentor: **Kimberly Lane** *Chemistry*

? -glucuronidase is an enzyme that cleaves off a glucuronide sugar from a variety of substrate molecules. This activity is associated with the severe side effects of CPT-11 cancer chemotherapy. Side effects include diarrhea, which can lead to severe dehydration. The focus of our studies is to understand the oligomeric state of the enzyme by making mutations in the subunit interfaces, and to look at the enzyme activity through selective mutagenesis of the active site. Single site mutations have been create in the enzyme from the Escherichia coli bacterium. These mutants (along with wild-type enzyme) will be characterized in activity assays, structural stability assays, and isothermal titration calorimetry (ITC). The ITC data will be used to characterize the thermodynamics of the active site binding and oligomerization of ?-glucuronidase. This study has an application in treatments of a variety of diseases, including certain types of cancers and a metabolic disorder known as Sly syndrome.

Session: **Chemistry Poster Session**
Presentation Type: **Poster presentation**

Day & Time: **Wednesday 5:00-7:00pm**
Location: **Heth 043**

Psychology Symposium

The Impact of Gender, Academic Performance, and Work Absorption on Job Satisfaction

Derek Wiseley
Faculty Mentor: **Charles Gorman** *Psychology*

This speech pertains to an individual research project in an industrial organizational research course. The goal of this study was to view gender, GPA, and work absorption as determinants of job satisfaction. The sample consisted of 252 college students from one university in the south- western region of Virginia. There were 60 male participants and 191 female participants. The survey was distributed using the Qualtrics survey maker, and the SONA research participation system. The survey that was constructed was self-report. All of the hypotheses were supported. Gender was not significantly related to job satisfaction, while GPA and work absorption were positively related to job satisfaction. This speech also includes the strengths and weaknesses of the study, and also the possible implications and future direction of research.

Session: **Psychology Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 4:00-4:15pm**
Location: **Heth 018**

Advantage of Bilingualism When Performing a Cognitive Task (Stroop Test)

Jeffrey Kinder
Faculty Mentor: **Pamela Jackson** *Psychology*

People are migrating, and mingling across international borders for political, economic, educational, or religious reasons, at ever increasing rates. Thus, bilingualism, which is having and using two or more languages in everyday life, is more common today than ever. Studying a second language is believed to improve grades on Math, English, even SAT exams. There is research supporting a bilingual advantage in performance of nonlinguistic cognitive tasks (e.g., Bailystok, Klein, Craik, & Viswanathan, 2004).For this study subjects were recruited, with an emphasis on bilingual ability, from the population at Radford University. Participants completed a questionnaire to establish language experience and then identified as either monolingual, or bilingual. Next was the performance of a computerized color-word Stroop Test, which recorded reaction time (RT) in milliseconds. Mean RT for the two groups was compared to see if there was a difference, or advantage, for bilinguals. This study was done as a class research exercise, with a limited time frame to seek out, schedule, and test subjects who met the definition of bilingual. This limitation hindered gaining a large enough sample group of bilinguals to equal the number of monolinguals who participated. Although a class project, it should be continued in the near future, collecting data from enough bilingual subjects to merit a more complete analysis. There are approximately sixty international exchange students enrolled at Radford University, and undoubtedly a percentage of the general student population is bilingual as well. These remarkable individuals add flavor to the mix that is Radford University. But, do they have a bilingual advantage over the rest of us?

Session: **Psychology Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 4:15-4:30pm**
Location: **Heth 018**

Neuroscience, Psychopharmacology, and Patient Presentation

Richard Bindewald
Faculty Mentor: **Jeffrey Chase** *Psychology*

This study was conducted at Southern Virginia Mental Health Institute (SVMHI) in Danville, Virginia during the summer of 2011. A primary goal was to incorporate the theories of neuroscience in understanding patient presentation, especially related to the use of psychotropic medications in actual clinical practice in a state in-patient psychiatric facility. To help illustrate diagnostic and treatment issues regarding the clinical presentation of selected disorders and the complexities of psychopharmacologic treatment, selected observations made during the independent study will be noted. Observations were viewed from the perspective of diagnostic criteria. The practical and therapeutic processes for choosing the most beneficial medication for patients with a variety of mental illnesses were speculated and noted. Although patients presented with various diagnoses, the diagnoses is who these individual are, but, how they present to society. Individuals with mental illness on psychotropic medications should be educated related to diagnosis, what can be expected in taking medications and not taking medications prescribed to ameliorate symptoms of mental illness. In-patient treatment should allow the individual to be in a safe environment whereby they can be observed, medication prescribed, structure for living offered, counsel and educational classes available, and a caring, respectful attitude from the hospital staff who care for them while hospitalized realized. The most rewarding piece of the equation is the outcome: seeing a patient who enters the facility in severe need of help in distinguishing between what is reality and not-reality making a one-hundred and eighty degree turn to sanity and normal function.

Session: **Psychology Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 4:30-4:45pm**
Location: **Heth 018**

Childhood experiences and adult functioning in college-age women

Emily Latimer
Faculty Mentor: **Ann Elliott** *Psychology*

Polyvictimization is increasingly being recognized an important way of evaluating trauma, as a condition of many experiences over a lifetime rather than as a single one-time event. Polyvictims are individuals who have been exposed to high levels of multiple types of trauma and are significantly more likely to experience both subsequent victimizations and psychological distress. However, to date, relatively few studies have examined the relationship between polyvictimization and specific psychological problems. The present research surveyed undergraduate female psychology students at Radford University in order to examine the correlations between polyvictimization, deliberate self harm, peritraumatic dissociation, and symptoms of posttraumatic stress disorder. The JVQ (Hamby, Finkelhor, Ormrod, & Turner, 2004), DSHI (Gratz, 2011), RAND (Marshall, Orlando, Jaycox, Foy, & Belzberg, 2002), and SPTSS (Capsi,

Carlson, and Klein, 2007) were used to measure polyvictimization, deliberate self harm, peritraumatic dissociation, and symptoms of posttraumatic stress disorder. Data from approximately 300 participants will be presented.

Session: **Psychology Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 4:45-5:00pm**
Location: **Heth 018**

Psychology Poster Session I

New Look at Serial Killers

Nikalas Burton
Faculty Mentor: **Michael Aamodt** *Psychology*

In recent years, there has been a growing body of literature discussing serial killers. The studies range in a wide variety of aspects from why the serial killers kill to how they kill. This study investigates two factors that few researchers have examined: Serial killer occupation and education. Occupation will be compared to the serial killer's motive and education will be compared to the length between their first and last killing. The first step in the research process was to add additional occupation and education information to the Radford Serial Killer Database. Next, individual occupations were coded into broad occupational groups so that they could be compared to the six major groups of motives of killing. Some of those occupations considered, but not limited to, customer service, military, science, sales, and health care professionals. Education was coded into years attended school which was compared to length of killing spree in years. Upon extensive examination of the database it was fond that there was not a significant relationship between the reason why serial killers kill and their occupation during the killings. It was also discovered that there was no relation between education level and the length of their killing spree. This brings a new area of research in the literature of serial killers it was an exploratory thesis. The research used convenience samples which could have caused limitation to the research. It is hoped that this research will spark a new body of research for these serial killer characteristics.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Metaregulation: A New Approach to Understanding Self-Regulatory Success

Krystina Dillard Brittany Eckard Sarah Corregan
Faculty Mentor: **P. Niels Christensen** *Psychology*

Self-regulation is a process that forces individuals to choose between immediate temptation and adherence to long-term goals. Repeated exposure to these often conflicting choices can be effortful and in turn lead to an increased risk of self-regulatory failure (Muraven & Baumeister, 2000). The current research investigates "met regulation," which is individual differences in the use of strategies designed to circumvent reliance on only self-regulatory resources. A pilot questionnaire of metaregulatory behaviors was developed by the authors and completed by 209 undergraduates. Exploratory factor analysis yielded two types of strategies: capacity and motivation. Capacity strategies reduce reliance on effortful self-regulation by increasing the automaticity of goal-relevant behaviors and avoiding exposure to temptations. Motivation strategies are intended to bolster effort on goal-relevant tasks when temptations are present. Regression analyses revealed that metaregulatory capacity – but not motivation ? moderated risk factors for high body mass index (BMI; $t = -3.17$, $p = .002$) and a low freshman GPA ($t = -2.27$, $p = .026$). Specifically, low metaregulators had a positive association between age and BMI, whereas high metaregulators did not get heavier with age. Similarly, low metaregulators were at greater risk than high metaregulators for transferring poor academic performance from high school to college. Both of these effects were found above and beyond the contribution of trait self-regulation. The preset research opens a new avenue for understanding success in achieving long-term goals: Metaregulators structure their lives so that they do not rely only on self-control for resisting temptations.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Women's Relationship Attitudes

Jamie Esworthy Shane Wilson Pamela Harkins
Faculty Mentor: **Jeff Aspelmeier** *Psychology*

The study examines the interaction between relationship goals (IV: long term commitment vs. short term socializing) and information type (IV: social status, physical attractiveness, and personality; assessed using a survey) when predicting the amount of information women seek about potential dating partners (DV). One-hundred and twenty female undergraduate college students were randomly assigned to either long term commitment or short term socializing relationship goals conditions. In an online study, participants were presented with a hypothetical online dating website that presented information about 10 potential dating partners. For each partner, participants were given three sets of graphs that provided information about each man's personality, physical attractiveness, and socioeconomic status). The amount of time participants looked at each type of information was recorded. . It was expected that participants who were put into the group looking for a long-term commitment would spend more time evaluating the potential partners' social status as opposed to their physical appearance and personality. Also, participants looking for a short term socializing relationship were expected to spend more time evaluating physical appearance rather than social stats or personality.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

POST-INJURY ADMINISTRATION OF CERIUM OXIDE NANOPARTICLES IMPROVES FUNCTIONAL OUTCOME FOLLOWING MODERATE TRAUMATIC BRAIN INJURY

Hilary Hicks Amanda Adams Kimberly Crawford Jenna Hoosier
Faculty Mentor: **Mark Whiting** *Psychology*

Traumatic brain injuries (TBI) can have severe impacts on cognitive and behavioral functioning partly due to an excessive release of free radicals triggered by the initial injury. Endogenous antioxidants are

overwhelmed after a TBI, so reducing the activity of free radicals remains a significant focus of TBI research. Compared to traditional antioxidants that are limited by poor brain penetration and require repeated administration, cerium oxide nanoparticles (CeONP) efficiently reach injured areas and are regenerative free radical scavengers, thus requiring minimal dosing. Past research has shown that pretreatment with CeONP is neuroprotective in an in vitro model of TBI. The purpose of this experiment was to investigate the functional benefits of postinjury administration of CeONP in an in vivo model of TBI. Long-Evans rats were administered a moderate TBI using lateral fluid percussion or were sham injured. Thirty minutes following injury, rats received a single intravenous injection of CeONP or vehicle at a dose of either .5 µg/g or .05 µg/g. Motor function was investigated on post-injury days 1—5 using the beam balance task, and cognitive function was measured using the Morris Water Maze on days 11—15. Results from these assessments suggest that injured rats dosed with .5 µg/g of CeONP learned the water maze faster than sham animals and had superior search strategies in the earlier days of testing. This indicates that CeONP may be an effective treatment for TBI-induced behavioral impairment and that the therapeutic window of CeONP is at least 30 minutes post-injury.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Self Denigration or Social Disengagement? Responses to High-Identifying Members of Other Ethnic Groups

Sarah Kerper
Faculty Mentor: **P. Niels Christensen** *Psychology*

The actor-partner interdependence model (APIM) was used to examine how one's own ethnic identification – and one's interaction partners' ethnic identification – predicted reactions to group discussions. Twenty-six discussion groups included two embers from the ethnic majority (European Americans) and two members from an ethnic minority (African-, Asian-, or Latino Americans). Analyses revealed ethnic identification had positive relationships with one's own outcomes, including higher self-esteem and group attraction. However, higher ethnic identification resulted in negative outcomes for one's cross-group interaction partners. When majority members had higher levels of ethnic identification, minority members responded with lower self-esteem (= -1.44, t= 2.14). Similarly, majority members responded to highly identifying ethnic minority members with lower attraction to the group (b = -1.54, t= 2.43). The ethnic identification of outgroup members was unrelated to group attraction of minority group members and the self-esteem of majority group members.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

A Regression-Based Meta-Analysis of Hypertension and Cardiovascular Responsivity

Maribel Street
Faculty Mentor: **Thomas Pierce** *Psychology*

Research on hypertension, or high blood pressure, is important because it represents a risk factor for conditions such as heart disease and stroke. The combination of significant risks associated with hypertension and the high prevalence of hypertension n the population has led to a great deal of research on its causes and treatment. The current student examines cardiovascular reactivity to stress as a risk factor for development of hypertension. Cardiovascular reactivity represents exaggerated increases in blood pressure when a person is placed in a stressful or challenging situation. This study will present analyses on data obtained from multiple published studies. In this meta-analysis mean increases in systolic and diastolic blood pressure from basely to stress for people with a diagnosis of hypertension will be compared to increases in blood pressure for people with normal blood pressure. Specifically, a regression equation will be obtained predicting mean change scores for groups with high blood pressure from mean change scores for groups with normal blood pressure. The results will be used to determine whether groups differences in cardiovascular reactivity are more likely to be observed when the stressor is relatively mild or when the situation is highly stressful.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Childhood Experiences and Adult Functioning in College-Age Women

Keara Washington
Faculty Mentor: **Ann Elliott** *Psychology*

In this study, the relationship between childhood poly-victimization and risky behaviors during adulthood will be examined. Approximately 300, undergraduate women ages 18-23, attending a mid-sized public university. The women were asked to complete a battery of questionnaires using Qualtrics, an online data collection survey. Three measures were used to determine the relationship between poly-victimization and risky behaviors. The Juvenile Victimization Questionnaire measures 6 different types of victimization (sexual, peer sibling, witness/indirect, physical assault, property crime, and child maltreatment) experienced during childhood and adulthood. The National Survey of Adolescents measures delinquency, substance use and violent acts, the National Youth Survey measures substance use and delinquency along with intimate partner violence. Preliminary results suggest a significant relationship between poly-victimization and risky behaviors such as delinquency, substance use, violent acts and intimate partner violence.

Session: **Psychology Poster Session I**
Presentation Type: **Poster Presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Self-Compassion and Male Survivors of Childhood Sexual Abuse

Leeann Webb Dominique Boone
Faculty Mentor: **Tracy Cohn** *Psychology*

Male survivors of childhood sexual abuse (CSA) face many gender specific issues that can lead to long term maladjustment and detrimental psychological symptoms (Aosved, & Long, 2011; Cutajar, Mullen, Ogloff, Thomas, Wells, & Spataro, 2010; Fergussion, Bodn, & Horwood, 2008;Hunter, 2008; Kia-Keating, Sorsoli, & Grossman, 2010). The purpose of this study was to assess previous research

concerning male survivors of CSA, determine the long term impact of their experiences, and investigate possible befits of incorporating self-compassionate training in therapy for these survivors. Past research on self-compassion has shown to be effective treatment for trauma survivors, increasing positive regard and coping strategies (Gilbert, & Proctor, 2006; Holls-Walker, & Colisimo, 2011;Neff, 2009; Neff, Rude & Kirkpatrick, 2007; Neff, 2003; Raes, Neff, & Van Gucht, 2011; Raque-Bogdan, Ericson, Jackson, Martin, & Bryan, 2011; Thompson & Waltz, 2008; Van Dam, Sheppard, Forysth, & Earlywine Wright, Crawford, & De Castillo, 2009). Therefore, it could be a useful clinical therapeutic tool to aid in the recovery of male survivors of CSA.

Session: **Psychology Poster Session I**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Psychology Poster Session II

The Effect of Personality Factors on Academic Achievement

Victoria Abohasen
Faculty Mentor: **Jeffrey Aspelmeier** *Psychology*

This project tested whether participants who report higher levels of aggression, assessed using the Buss-Perry Aggression Questionnaire, will have poorer academic performance. Attachment and social support, assessed using the IPPA-R and College Student Social Support Scale, were used as a mediator to explain the relationship between aggression and academic achievement. The information was obtained by distributing an online survey to approximately 120 students at a public university through a convenience sample. It is expected that higher reported levels of aggression will be associated with poorer academic performance. Attachment and social support are expected to explain the relationship between aggression and academic achievement.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Understanding Meta-Regulation and Habit Control

Krystina Dillard Angela D'Angelo
Faculty Mentor: **P. Niels Christensen** *Psychology*

Abstract

Scientists and the public are increasingly concerned about health problems associated with our limited ability to self-regulate temptations (e.g., over-eating, substance abuse). Recent research has postulated that some people "meta-regulate" by structuring their lives to reduce exposure to temptations. The purpose of the experiment was to investigate whether such meta-regulators are better at inhibiting habitual response. In this experiment, approximately 60 undergraduate students were asked to complete a questionnaire about meta-regulation, and self control. Next the participants completed a habit induction task. Participants read pairs of words aloud from a computer screen, some of which were frequently paired whereas others were infrequently paired. Thus, participants formed a habitual response to the frequent word associations. In the second phase of the experiment participants were tested on their ability to inhibit some of the habitual responses formed in the first phase. It was hypothesized that those participants with higher self- reported meta-regulation would have more success in inhibiting responses than those with lower meta-regulation.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Spectral Analyses of Behavioral Time-Series Predicts ADHD Symptoms

Philip Frum Sarah Rimmer Maribel Street
Faculty Mentor: **Thomas Pierce** *Psychology*

A person with deficits in attention such as ADHD will have variable responses in their estimates of time. However, particular sequences of their estimates display a pattern of variability known as 1/f noise or "pink noise". This is a pattern that arises from a power density function that is inversely proportional to its frequency. In 1/f noise, longer cycles of responding are evident to a greater degree in a time series than shorter cycles. A pattern where every frequency of estimation is observed to approximately the same degree is called "white noise". The purpose of this study is to examine the pattern of responses generated by referred to participant estimations of time and working memory to confirm from previous studies if they are significantly different from white noise.

136 participants' data were collected using the Sternberg Working Memory task and a Time Estimation task on Superlab. For the Time Estimation task, participants were instructed to listen to a fixed audio signal generated from the program. The participants were told to respond on the keyboard at the same time as the onset of the signal. After one minute, the tones no longer generated, but the participant continued to respond. For the Sternberg task, participants were instructed to memorize a list of numbers. A cue signal is presented for two seconds after the final number in the memory set is presented. Following the cue signal a single number is presented on screen. The participant must respond as to whether this number was part of the original set originally presented. The participants also completed both a demographic questionnaire and the Connors Adult ADHD Rating Scale.

Spectral analysis was used to plot a curve for the period of each harmonic response that was accounted for by the variance of each period. This spectral density curve's slope determined the "color" of noise produced. The results indicated that the variability in responding across the time series for the Time Estimation task , $M = 0.57$, $S = 0.167$, and Working Memory task, $M = 0.33$, $S = 0.439$, both produced a "light pink" curve. This indicated that estimations over time are not simply due to random events. There were also significant differences in the slopes of the curves for these two tasks, $T(34) = -.396$, $p < .001$. Lastly, there were significant differences in predicting ADHD symptoms based on the tasks used. The R^2 Change of .04 was significant, $P = .020$.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Convergent Validity of Executive Function Measures in a College Population

Sarah Heidel
Faculty Mentor: **Jennifer Mabry** *Psychology*

The aim of this study was to inform psychologists' understanding of the relationship between the D-KEFS (a performance-based executive function instrument) and BRIEF-A (a self-report rating scale designed to tap "real-world" executive function) while highlighting the construct of convergent/ecological validity and exploring support for Barkley's theoretical model of executive function. Participants were 40 college students (23 females; mean years of age of 19.8). The sample was drawn from a file review of consecutive university clinic psychological evaluations completed in 2010 and 2011. All participants were currently enrolled at the university and were administered these two instruments (BRIEF-A and D-KEFS) as part of a larger psychological batter to address clinical diagnostic referral questions. Regardless of whether instruments such as the D-KEFS have been devised with ecological validity in mind, researchers and clinicians have a pressing need to understand the relationship between test performance and real world functioning. The D-KEFS CWI#3 demonstrated a significant association with real-world executive function, supporting our hypothesis and Dr. Russell Barkley's theory of executive function establishing the essential role of behavioral inhibition. The trend for the D-KEFS subtests to reveal less executive dysfunction compared to the BRIEF-A self-report may reflect that these two instruments are tapping separable subroutines/constructs across methods and settings. These findings support the need for psychologists to continue to include multiple evaluation methods across settings/sources to address the inherent limitations in both types methodology in quantifying a complex construct such as executive function. Future studies should continue to explore the relationship between the D-KEFS and BRIEF-A across age-groups, gender, and clinical diagnostic groups.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Chronic and acute affects of alcohol on social behavior and object location recognition in female rats

Justin Landreth Sarah Rimmer
Faculty Mentor: **Pamela Jackson** *Psychology*

The present experiment examined the chronic and acute affects of alcohol on social behavior and object location recognition in female rats. Prior studies looking at social interactions between male and female rats are rare, prompting this study to use a ale conspecific to stimulate social interactions in females. During the social interaction task, a male and female rat were placed in the same open-field arena and monitored for 5 minutes. Some of the behaviors that were recorded included: aggressiveness, following, mounting, genital investigation, sniffing, and avoidance. In the object location recognition task, a single female rat was placed in an open-field arena with two identical objects and allowed to investigate for five minutes. They were extracted from the open-field arena for 15 minutes then placed back into the box. This time one of the objects had been moved. Time spent investigating the new position of the object was translated into recognition that the location of the object had changed. It is expected that chronic alcohol doses will not have a large effect on the female rats due to tolerance to the alcohol. However, previous research suggests acute alcohol doses will have a significant effect on both social interaction and object location recognition.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Environmental enrichment influences the long-term effects associated with chronic marijuana use during adolescence: Forced swim test

Bryce Lewis Michael Curry Amy Furrow
Faculty Mentor: **Pamela Jackson** *Psychology*

The forced swim test (FST) is a common procedure used to assess symptoms of depression in rodents by placing them in an inescapable tank filled with water. The FST is a two-day procedure with two sessions conducted 24 hours apart. On the first day each at was forced to swim in the tank for 15 minutes. The purpose of this was to instill a feeling of learned helplessness that can then be assessed on the second day by measuring the latency to, and duration of, immobility. Immobility was defined as the behavior in which the rat displays the minimum amount of movement necessary to keep its head above water. Shorter latencies and longer durations of immobility indicate the presence of depression (Rubino et al., 2008). The FST was one task in a larger study investigating the interaction between the levels of anxiety and depression observed following chronic exposure to cannabinoids during adolescence in male rats housed in different environmental conditions (see Poster 1). Drug exposure is expected to show he highest levels of depression compared to vehicle treated animals on the FST. We also expect to find that the beneficial effects of enriched environment (EE) will lower the depressive effect observed for the drug treated animals compared to the other housing conditions. Specifically, socially housed drug rats will exhibit slightly higher levels of depression compared to EE drug rats, while isolated drug rats will show the highest levels of depression.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Environmental enrichment influences the long-term effects associated with chronic marijuana use during adolescence: A focus on anxiety and depression in adulthood

Lindsay Nolan Richard Bindewald Amy Furrow
Faculty Mentor: **Pamela Jackson** *Psychology*

The sucrose preference task was the third of four behavioral tasks used in this study to measure anxiety and depression in male rats after receiving chronic adolescent exposure to the synthetic cannabinoid agonist, CP 55, 940. All rats were housed in one of three environmental conditions ranging in quality from enrichment to impoverishment, similar to the living conditions found in human society ranging from high, middle, and low SES (see Poster 1). Half of the rats in each environment received either chronic exposure to the

drug, or vehicle (saline), injections throughout puberty. The sucrose preference task measures anxiety and depression, by way of neophobia and anhedonia, respectively. Previous results from our lab indicated the presence of anxiety in Ault female rats who displayed neophobia (fear of novel stimuli) during the first hour of exposure to a novel solution (Furrow & Jackson, 2011). Rubino et al. (2008) found that both adolescent male and female rats chronically exposed to THC showed anhedonic (inability to experience pleasure), a major symptom of depression. In the current study, neophobia was assessed during the first hour of exposure to a novel 2% sucrose solution, and anhedonia by measuring the amount of each solution consumed across days. We expect the drug rats in the enriched environment to exhibit less anxiety and depression compared to controls than those housed in the other environmental conditions.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Environmental enrichment influences the long-term effects associated with chronic marijuana use during adolescence: A focus on anxiety in adulthood

Rina Schick Amy Furrow
Faculty Mentor: **Pamela Jackson** *Psychology*

It has been suggested that the developmental stage of the adolescent brain may be especially vulnerable to the potentially toxic effects of cannabis (Cannon et al., 2006). However, only a minority of those individuals exposed to marijuana during adolescence actually proceed to develop adult psychopathology. Cirulli et al. (2009) suggested that experiencing severe negative environmental living conditions (e.g., chronic stress, low socioeconomic status) may ultimately jeopardize an individual's intellectual development as well as increase the risk for future development of anxiety and/or depressive disorders in adulthood. The effects of environmental enrichment, however, were first studied by Rosenzweig, Krech, and Bennett (1961) who provided evidence suggesting that environmental enrichment (EE) lead to positive structural changes in the brain. The present study will be the first to investigate the impact of EE in rats chronically exposed to cannabinoids during adolescence by assessing symptomology of anxiety and depression in adulthood. The results could be particularly important for increasing the effectiveness of prevention strategies to decrease marijuana use among adolescents. This poster is one of four stemming from the same study using a 2 (drug vs. Vehicle) x 3 (enriched vs. social vs. isolated living environment) research design. Four behavioral tasks were assessed in the study, and the current poster focuses on the elevated plus maze task (EPM), which is a measure of anxiety. The results are predicted to reveal that the benefits associated with EE may offer protection against the adverse effects of the drug.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Implicit and Explicit Attitudes towards Females in Non-traditional Careers

Kellie Schlosser Jessica Felton Bridgette Peach
Faculty Mentor: **Jeff Aspelmeier** *Psychology*

The purpose of this study was to investigate the relationship between gender and the attitudes towards women in non-traditional careers. Approximately 120 participants completed online measures of the Ambivalent Sexism Inventory (ASI),an implicit association task (IAT)and the Gender and Authority Measure (GAM). The IAT was used to measure the participant's unconscious implicit attitudes. A negative relationship between ASI scores and explicit attitudes was predicted for males and not for females. Male participants were expected to have more negative explicit attitudes towards women in authority positions than female participants, based on their scores on the GAM.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Environmental enrichment influences the long-term effects associated with chronic marijuana use during adolescence: A focus on the test of social interaction and anxiety in adulthood

Victoria Scott Amy Furrow Christopher Hartless
Faculty Mentor: **Pamela Jackson** *Psychology*

The current study was designed to investigate the interaction between chronic exposure to a cannabinoid (CP55, 940) during the critical developmental stage of adolescence and environmental living conditions (see Poster 1). Each rat was exposed to one of three environments: an enriched environment (EE) in which subjects were group housed with toys to provide stimulation, a social environment (SE) where rats were socially housed without toys, or an isolated environment (IE) in which rats were single housed in hanging cages, isolated from other subjects. Social interaction (SI) is a common measure for anxiety and other behaviors elicited in social contexts. The social interaction task consists of three 10-minute trials, beginning on postnatal day 82. Each trial occurred 24 hours apart, and began with two days of habituation to the open field and ended with a social interaction session between the experimental rat and a male conspecific. The overall amount of activity was measured by the number of cell entries recorded using a computerized tracking system during the habituation trials. Anxiety was measured by the amount of time spent in the center of the arena during habituation and by the total amount of active social interaction initiated by the experimental rat on the third day. During the interaction trial, aggressive behavior was recorded as well. It is expected that IE drug rats will exhibit the highest levels of anxiety during the task, and possibly aggression, with SE eliciting mild anxiolytic effects, and EE displaying the least anxiety compared to control groups.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Right-Wing Authoritarianism: A Predictor of Implicit Racial Prejudice

Courtney Stanley Jessica Bentz

Faculty Mentor: **Jeff Aspelmeier** *Psychology*

The proposed study will investigate the authenticity of right-wing authoritarianism as a predictor of implicit racial prejudice. Implicit attitudes toward race were measured with a modified Implicit Association Test (Greenwald, McGhee & Schwartz, 1998). he Implicit Association Test (IAT) required participants to categorize African-American and European-American names with pleasant or unpleasant words. Participants also completed the Modern Racism Scale (McConahay, J.B., 1986), the Old Fashioned Racism Scale (McConahay, J.B., 1984), and a Right-Wing Authoritarianism Scale (Altemeyer, B., 1981). It was expected that participants who were high in authoritarianism would take significantly longer to categorize names and words in one IAT condition (European-American/unpleasant word, African-American/unpleasant word) than in another condition (European-American/pleasant word, African-American/unpleasant word). Additionally, it was expected that the Right-Wing Authoritarianism Scale (Altemeyer, B., 1981) results would have no significant effect on the self-report measures of racial prejudice.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Mental Health Needs of Radford University Students

Jennifer Stroup Stirling Barfield Sarah Rimmer Bryce Lewis
Faculty Mentor: **Ruth Riding-Malon** *Psychology*

The present study examines the mental health needs of students on Radford University campus. Participants were asked to complete demographics as well as 2 measures of mental health symptomology. The first measure was the Los Angeles Symptom Checklist (LAS) which is a measure used to identify the presence of symptoms consistent with a DSM-IV diagnosis of posttraumatic stress disorder. The second measure was the Symptom Checklist 90- Revised (SCL-90-R), a measure of symptom distress associated with a variety of psychological disorders. Data was collected in two phases to include end of the Fall 2011 semester and beginning of the Spring 2012 semester, yielding the potential for comparison of symptoms during different parts of the semester. Participant demographics included an age range from 18 to 27, gender 41.5% male and 58.5% female, 52% are college freshman and 76% identified as Caucasian. Preliminary results indicate that between 20-30% of participants are dealing with clinically significant mental health concerns ranging from depression and anxiety to interpersonal sensitivity and hostility. 27.4% of participants endorsed a clinically significant number of mental health concerns. Recommendations include the incorporation of group therapy sessions at the RUCounseling Center, as well as providing resources and education around positive coping skills particularly around exam time.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

The Effect of Aversive Racism on Job Candidate Selection

Morgan Warwick Lesley Skinner Audrey Kraemer
Faculty Mentor: **Jeff Aspelmeier** *Psychology*

The purpose of this class project was to investigate the relationship between the race of a job applicant and participants' perception of applicant's qualification. An Implicit Association Task was used to assess participants' implicit preference of African Americans or Caucasians. The Modern and Old Fashioned Racism Scale was used to assess participants' explicit racial attitudes. Approximately 100 participants completed this class project. Participants were primarily undergraduate introductory psychology students, ranging in age from 18-20. Participants elected to participate in this class project for course credit through SONA. It was expected that when given a fictitious job resume completed by Caucasian or African American applicant, participates who hold negative implicit attitudes about African Americans would rate the African American applicant as less qualified than the Caucasian applicant. Therefore, implicit prejudice was expected to moderate the effects of race on applicant ratings. It was not expected that explicit measures would be an accurate predictor of participants' rating of applicant's qualifications.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

The Role of Trait Aggressiveness a Moderator of the Effects of Mood on Aggressive Cognitions

William Zakrzewski Sarah Wine Portia Wade
Faculty Mentor: **Jeff Aspelmeier** *Psychology*

This class project compared the effects of different mood influencing video clips (IV) on aggressive cognitions and the degree to which these effects depend on trait aggressiveness. Approximately 120 undergraduates attending a medium sized Southeastern university completed the study online. During the study, participants completed the Buss and Perry (1992) Aggression Questionnaire and then watched one of three short video clips designed to elicit positive, negative, or neutral mood states. Next, aggressive cognitions were assessed using a word fragment completion task and a measure of aggressive attributions (DV). It was expected that participants who watched the sad video would complete more words by forming aggressive words and would report more aggressive attributions about other people's behavior, compared to participants who watched the neutral and funny videos. This effect was expected to be strongest among participants who reported high levels of trait aggressiveness.

Session: **Psychology Poster Session II**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Multidisciplinary Symposium II

Labor Pushing Techniques

Blanca Castaneda
Faculty Mentor: **Sharla Cooper** *School of Nursing*

The second stage of labor is considered the "pushing" stage of the labor process. The main goal of this stage is to achieve the expulsion

of the fetus through pushing. The pushing techniques that have been utilized throughout history include direct, uncoached spontaneous and delayed pushing. Until the late 1990's, scientific evidence for the use of these methods was not questioned. During this time, midwives began to advocate for evidence-based practice which lead to experimental studies that revealed several risks and benefits for each pushing method. These discoveries have raised inquiry among health professionals regarding the pushing method that provides the best outcomes for patients. In an effort to address this concern, I researched the risks and benefits of each pushing technique and produced a paper in which I determined which technique provides the best outcomes depending on the circumstances of the "pushing" stage.

Session: **Multidisciplinary Symposium II**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 5:00-5:15pm**
Location: **Heth 019**

Educational Theories in Adventure Education

Quinn Roberts
Faculty Mentor: **Mark Wagstaff** *Recreation, Parks and Tourism*

Interactive media is a powerful educational tool that meshes well with the various teaching and learning theories that exist. This presentation focuses particularly on how interactive media is used as a teaching tool particularly in the adventure education field. More specifically, interactive media technology is an adept tool for teaching single pitch top rope management for rock climbing. Using these educational theories on interactive media, I have created an interactive website that can be used by future students to learn about the technical skills involved with single pitch top rope management for rock climbing. The website is accessible to a wide area of user skill sets and is composed of various forms of media ranging from videos, charts and text. By incorporating different interactive media learning theories, the website creates a more powerful learning medium for the user.

Session: **Multidisciplinary Symposium II**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 5:15-5:30pm**
Location: **Heth 019**

Animal Smuggling in the World and How It Affects the International Community

Jacob Guillaudeu
Faculty Mentor: **Egan Green** *Criminal Justice*

Animal smuggling is a growing concern in our world as we come closer together through globalization. It is becoming a global problem that is affecting every part of the world. With the illegal wildlife trade come's disease, invasive species, a loss of biodiversity, extinction, pollution, and habitat loss. Animal smuggling is a global problem affecting countries all over the world. China being the most well known to import illegal animal parts for their traditional medicinal practices or their cuisine be it from tiger parts, bear gall bladders, ivory, skins, exotic birds and reptiles. India is the main exporter of tiger parts after illegally poaching them, Africa the ivory trade has always been prominent along with the poaching of gorillas and other animals for bushmeat. The illegal wildlife trade is growing economy that is predicted to make over 20 million dollars a year. With the advancement of technology people becoming more of a threat to animals, the wildlife trade is growing. More people are anting to experience the different cuisine, or styles of clothes, hunting of exotic animals, or owning exotic pets all comes from the wildlife trade. The wildlife trade is an illegal trade that needs to be stopped and we need to do that through changing he attitudes and mindset of people partaking in this trade.

Session: **Multidisciplinary Symposium II**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 5:30-5:45pm**
Location: **Heth 019**

Beta Beta Beta Biology Conference

Veterinary Rehabilitation: Small Animal Application

Rachel Cohen
Faculty Mentor: **Karen Francl** *Biology*

Veterinary rehabilitation is a complementary medical practice used in conjunction with primary veterinary care. Within small animal medicine, rehabilitation applies different methods to treat injury or illness, decrease pain, and restore function to patients. Such techniques are most often used for patients that have recently undergone surgery, are affected by chronic diseases or ailments, in need of pain regulation, or require weight management. During the research process, focus has been directed towards the application of common methods of rehabilitation including, hydrotherapy, physical exercises and manual therapy, acupuncture, and electrotherapy. Furthermore, this research follows three canine patient case studies over the course of their rehabilitation using different methods of rehabilitative application. Two case studies show the completion of rehabilitation for post-surgical patients, undergoing separate approaches to applied care. The third case study documents the application and effects of hydrotherapy on patient mobility following ruptured spinal disc surgery.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **30 minute oral presentation**
Day & Time: **Wednesday 5:15-5:30pm**
Location: **Heth 044**

Investigating which environmental factors influence the emergence of rock boring urchins, West Indian sea eggs, and marine snails

Amanda Sorenson Kiersten Newtoff
Faculty Mentor: **Jeremy Wojdak** *Biology*

Many organisms alter their activity or habitat use over daily, seasonal, or yearly time spans, whether cued by air temperature (insects), light availability (diurnal vs. nocturnal), moisture (amphibians), or other environmental factors. Rock boring urchin (Echinometra mathaei) and West Indian sea eggs (Tripneutes ventricosus) are found in tidal pools in many tropical regions. These urchins as well as marine gastropods are common in the intertidal area of Little Lameshur Bay in St. John, U.S. Virgin Islands. We

examined a 147 m2 study area over the course of three days to determine which environmental factors influenced the emergence of rock boring urchins, and West Indian sea eggs. Within this area, we set up two 1 m2 plots to more accurately measure the emergence of marine snails. We surveyed the study area five times each day measuring the number of visible organisms, tide height, air temperature, water temperature, and light availability. We determined that rock boring urchins were positively correlated with water temperature, West Indian sea eggs showed no clear relationship with any of our explanatory variables, and marine snails were positively correlated with both tide height and water temperature.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 5:30-5:45pm**
Location: **Heth 044**

Effects of Harvesting and Tree Canopy Cover on Black Cohosh, an Appalachian Medicinal Plant

Azzi Maya Weston Rogers
Faculty Mentor: **Christine Small** *Biology*

Black cohosh (Actaea racemosa) is an Appalachian medicinal herb whose roots and rhizomes are widely harvested to treat menopausal, menstrual, and inflammatory symptoms. This plant has become an important substitute for prescription hormone replacement therapies, due to FDA concerns over the safety of these drugs. It has been listed as one of the top 10 selling herbal supplements worldwide since 2002, with more than one million kilograms harvested from Appalachian forests in the past 10 years. Because there is little commercial cultivation of black cohosh and few regulations on wild harvest, the long-term viability of this native Appalachian plant is threatened. To better understand black cohosh growth requirements, we studied natural populations in George Washington National Forest in southwest Virginia. In 72 - 2 x 5 m2 plots, light availability and above-ground growth of black cohosh were measured. To examine black cohosh harvest response, each plot was subjected to one of three harvest treatments: 0, 33, or 66% cohosh removal. Black cohosh leaf area ($r = -0.369$; $p = 0.010$), maximum plant height ($r = -0.314$; $p = 0.030$), and mean plant height ($r = -0.333$; $p = 0.021$) were all negatively affected by lower forest light availability. Most pronounced effects of shading were found after intense (66%) harvest (canopy cover vs. plant height, $r = -0.570$; $p = 0.03$). Management plans for this important Appalachian natural resource must consider growing conditions, particularly limiting harvesting in deeply shaded environments. It is important better understand and regulate harvesting to prevent overexploitation and possible loss of our native Appalachian forest diversity.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 5:45-6:00 pm**
Location: **Heth 044**

Predictors of feeding success in the brown pelican, Pelecanus occidentalis.

Victoria Scott
Faculty Mentor: **Jeremy Wojdak** *Biology*

Optimal foraging theory predicts that organisms will feed in a way that optimizes consumption while minimizing energy expenditure so that there is a maximum net gain of energy. Over a three day period I observed the diving behavior of brown pelicans in Little Lameshur, St. John, USVI to determine what factors affect feeding success. The height of each dive, the distance from shore, and the success rate of each pelican were recorded during three observation periods per day. I hypothesized that the pelicans would dive most frequently under conditions when visibility was greatest. I also predicted that during mid-day, the frequency of dives and the success of the dives would be greatest, and the height of dives would be irrelevant. All birds dove quite near the shore, in areas rich in seagrass which often serve as nurseries for schools of small fish. The most successful dives occurred in the morning while the evening dives had the lowest success rate. High dives and medium dives were most common midday, while lower dives were most common in the evening. Jump dives only occurred in the evening and had the lowest success rate of all the dives. Although these results do not coincide with my predictions, it was clear during observation periods that the sun being directly overhead while feeding was a disadvantage as the fish would easily be able to perceive the pelican's shadow.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 6:15-6:30pm**
Location: **Heth 044**

Quantifying Arsenate Reductase Gene Expression in Environmental Bacteria

Megan Smith Jasmine Jackson Erin Fowler
Faculty Mentor: **Georgia Hammond** *Biology*

Ecosystems face interacting natural and anthropogenic factors that can have detrimental effects on environmental processes. Arsenic, a known carcinogen, can enter headwater streams that feed into primary human water sources. In order to cope with the presence of one of the toxic forms of arsenic, arsenate, bacteria have the arsenic resistance gene, arsC, arsenate reductase. We have analyzed our culture collection from an abandoned arsenic mine in Floyd County, Virginia for members that have the gene, ars. arsC converts arsenate to arsenite in a reduction reaction which provides the bacterial cell with the potential to oxidize organic compounds and gain energy from the process. Many bacteria eliminate arsenite out into the environment using a membrane-bund transport protein. Our study focuses on expression of arsC in cultures raised in three different concentrations of arsenate. These experimental arsenate concentrations are similar to arsenate concentrations found at the arsenic mine from which the baterial samples were isolated. As a control, we also analyze arsC expression in the same cultures raised under conditions without arsenic. Our preliminary results using Real-Time PCR indicate that in cultures raised without arsenate, there is no arsC expression. In cultures raised in the presence of arsenate, we see high levels of arsC expression relative to our housekeeping gene, the small subunit ribosomal RNA gene. These data are significant in terms of understanding how bacteria can take one toxic form of arsenic and convert it into other toxic forms of arsenic in the environment. Metabolic activity of bacteria with arsenic resistance genes can directly influence distribution of toxic forms of arsenic in the environment.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 6:30-6:45pm**
Location: **Heth 044**

Quantitative wing damage of bats during fall and spring surveying efforts at Virginia hibernacula

Jordan Kime Tessa Canniff
Faculty Mentor: **Karen Francl** *Biology*

Since the detection of Geomyces destructans in Virginia hibernacula beginning in 2009, we have intensified efforts to monitor bat population response and to document individual health. In fall 2009, we added a new metric to our long-term demographic and health data collections: a wing damage score, measured by analysis of backlit photographs. We examined the wings of 1382 bats of 9 species over three years from 14 hibernacula. In ImageJ, we calculated the areas of blotches, scars, and holes relative to ttal visible wing area. Collections of Little brown bats (Myotis lucifugus) and Tri-colored bats (Perimyotis subflavus) were sufficient to permit statistical analysis of trends over time. Using a general linear model analysis of ranked data, we observed that Little brown bats differed in blotching ($p<0.0001$), scarring ($p<0.0001$) and hole damage ($p<0.0325$) over time relative to time since initial detection of Geomyces. Tri-colored bats differed in blotching ($p<0.0001$) and scarring ($p<0.0001$) but not in hole damage ($p=0.4289$) since the time of first detection of Geomyces. For both species, percent cover of blotching generally was greater in the first year since WNS detection, then decreased or leveled off in subsequent years. Scarring in the Tri-colored bat was more evident in the second year following WNS detection, whereas the first year showed the most scarring for Little brown bats. For both species, hole damage generally was greater in the spring and lower in the fall, suggesting healing during summer months. Because data collection and analyses are ongoing, additional findings will be discussed.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 6:45-7:00pm**
Location: **Heth 044**

Comparing habitat preferences of mongoose across three habitats on St. John, U.S. Virgin Islands

Brenna Hyzy Hilary Moore Kelsey Townsend
Faculty Mentors: **Karen Francl** *Biology*
Jeremy Wojdak *Biology*

In order to better understand mongoose distributions, short-term movement patterns, and habitat preferences across St. John, we compared vegetation structure and animal demographics among three locations: Lameshur Bay trail, Yawzi Point trail, and around field station (VIERS). We live-trapped mongoose for a 50-hour period from March 8-10, 2012, placing 15 tomahawk traps at 10-m intervals in each habitat/trail (30 trap-nights). For each captured mongoose, we measured weight, total body length, tail length and determined gender. Photographs of teeth were used to estimate age, and helped us document the number of reproductively-mature (>10 months of age) individuals. To distinguish a recapture, we shaved unique patterns into the fur of each captured mongoose To complement our capture efforts, we measured soil temperature and performed vegetation surveys at each trap site, estimating percent coverage of trees/shrubs, grasses, and cacti, and used range poles to estimate total vegetation volume and the Levin' index of vertical diversity. We captured 41 unique individuals across all three sites, with male captures (N = 33) far exceeding females (N = 8). We documented a 7:1 male-to-female ratio at Lameshur Bay Trail (93.3% of males and 50% of females reproductively mature), a 12:1 male-to-female ratio around the field station (43.8% males and 0% females reproductively mature), and a 1.5:1 female-dominated ratio at Yawzi Point (40% males and 66.7% of females reproductively mature). Average movement of individuals between captures was 73.5 m (SE = 28.3 m), and we did document one individual moving between our trap sites (maximum distance = 1011 m). Vegetation comparisons to mongoose capture success are on-going. Our study will help habitat managers establish sound trapping techniques and select ideal trap placement if they intend to complete short-term, intensive mongoose removal efforts.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 7:15-7:30pm**
Location: **Heth 044**

Enhancing Statistical Skills in Ecology: Quantifying Bird Feeding Behaviors

Kiersten Newtoff
Faculty Mentor: **Christine Small** *Biology*

Success in graduate, medical or other post-undergraduate endeavors in the sciences requires foundations in research and experimental design. However, only recently have undergraduate biology curricula begun to stress quantitative skills needed for higher education and careers. With National Science Foundation funding, RU's Biology Department is working to enhance quantitative skills and more thoroughly integrate statistics into introductory courses so that students can effectively apply research skills t biological problems. This semester, we modified a traditional ecology lab to emphasize scientific inquiry, experimental design, and hypothesis testing. Students first were introduced to regional bird diversity using museum specimens and field observation. From this, they generated hypotheses about feeding behaviors and seed preferences related to beak size and shape. In following labs, students collected over 7,000 feeding observations on bird seed selection (millet, thistle, sunflower, suet) and feeding location (hanging feeder, ground) at campus bird feeders. Using this extensive data set, student groups selected two species for in-depth investigation by developing research questions, collecting natural history information, and conducting statistical analyses to compare feeding behaviors. This multi-week project not only emphasizes use of statistics in exploring and evaluating trends in a biological system, but urges students to explain conclusions in biological context. The experimental design and data gathered may also be reexamined in a new biological statistics course, helping to link these courses and emphasize the importance of quantitative skills in modern biological research.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 7:30-7:45pm**
Location: **Heth 044**

Distribution of black spiny urchins (Diadema antillarum) in nearshore habitats of St. John, USVI

Drew Dietrich Jessica Frazelle
Faculty Mentor: **Jeremy Wojdak** *Biology*

The black spiny sea urchin (Diadema antillarum) is an important species in many reef ecosystems, especially considering the fragile state that many of these systems are in today. Diadema grazes on algae for its primary food source, which helps to keep algal

abundance in check. Conversely, however, Diadema is capable of removing calcium carbonate from the reefs. The objective of our study was to determine if urchin distribution patterns varied predictably with depth, light, and temperature. We also were interested in the daily movement of black spiny sea urchins. We set up 15 transects in Greater Lameshur Bay, checked the transects twice daily to observe the movement of urchins, and took measurements of depth, light intensity, and temperature. We found a pattern in the distribution of black spiny sea urchins, where abundance increased with distance from the shore until approximately 30m out. There was a noticeable difference in their abundance and distribution during the different times of day. In the morning their distribution was closer to shore, and in the afternoon they seemed to migrate further offshore. Knowing more about the grazing habits of black spiny sea urchins may aide future conservation efforts in coral reefs, as they mediate the balance between algal and coral growth in nearshore habitats.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 7:45-8:00pm**
Location: **Heth 044**

A CONTINUATION OF THE CONSERVATION LEGACY PROJECT: RECENT DISCOVERIES IN THE CORRESPONDENCE OF OF A. WILLIS ROBERTSON

Tessa Canniff Daniel Rabago
Faculty Mentor: **Karen Francl** *Biology*

With the 75th anniversary of the Pittman-Robertson act approaching, there has been a renewed interest in Robertson's work in conservation. VATWS and collaborating agencies are currently attempting to scan the correspondence of A. Willis Robertson during and after his appointment as Chairman of the Commission of Game and Inland Fisheries and his early years as a Senator. One goal is to create an accessible online database of these documents in hopes of elevating the awareness of early conservation proliferated by Robertson. Radford University's student chapter of The Wildlife Society has stepped up their involvement with these pursuits. Scanning and processing about 700 documents has highlighted Robertson's success as a conservation reformer in three major ways: (1) his willingness to correspond with local groups and organizations, (2) easing the flow of information and resources pertaining to environmental struggles and the propagation of local animal populations, (3) and his efforts made to educate both government officials as well as the general public on the need for resource management. In our presentation, we will highlight correspondence regarding these topics as we update the members of VATWS on the advancements of this important endeavor.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 8:15-8:30pm**
Location: **Heth 044**

Reef fish size distribution, abundance, and schooling behavior in two bays of St. John, USVI

Fallon Parker Jessica Baker
Faculty Mentor: **Jeremy Wojdak** *Biology*

We observed the size distribution and abundance of four common reef fish species (Longspine Squirrelfish, French Grunt, Princess Parrotfish, Yellowtail Snapper), in Greater and Little Lameshur Bays off St. John, USVI. These particular species were chosen because they were common and easily distinguishable. Before our observations began, we noticed a difference in the size of the individual fish in the two bays. We predicted that Greater Lameshur Bay would have larger fish than Little Lameshur Bay because it is wider, deeper, and more extensive reefs. We also predicted that smaller fish would school together more often than larger fish. Over six observation periods, we divided the two bays into areas that could be covered thoroughly in two hour time periods. We systematically counted the size of fish and school size.

Session: **Beta Beta Beta Biology Conference**
Presentation Type: **15 minute oral presentation**
Day & Time: **Wednesday 8:30-8:45pm**
Location: **Heth 044**

Anthropological Sciences Poster Session

Heth Cemetery Project

Brandon Buck Daniel Riegel Jacob Conner William Willis Cliff
Faculty Mentor: **Cliff Boyd** *Anthropological Sciences*

Located in Radford, Virginia, is a long neglected cemetery that holds the remains of one of the founding families of the City of Radford – the Heth Cemetery. Over time this cemetery has fallen into disrepair and a portion of history has been lost. The gal of this project has been to clear the cemetery, map graves and plot the extent of the cemetery by using ground penetrating radar and other archaeological methods, and also to identify c-transforms and n-transforms affecting the site. A final goal is to record and better document the cemetery as a historical landmark and to provide the City of Radford with a richer understanding of the Heth family and its importance.

Session: **Anthropological Sciences Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-5:45pm**
Location: **Heth 016**

Where is the Flanary Site?

Jacob Conner
Faculty Mentor: **Cliff Boyd** *Anthropological Sciences*

The Flanary site (44SC13) was a prehistoric site in Scott County, Virginia, that was excavated in 1977 by Howard MacCord due to impending road construction. During this excavation, a Late Woodland- Mississippian period palisaded village was discovered. From the examination of MacCord's map, it was hypothesized that this village could have extended south of the road. In order to test this hypothesis, an approximately 5600 square meter area was surveyed and test excavated using a systematic sampling strategy by Radford University between May 23-27, 2011. Through the analysis of the artifact densities in the shovel test pits, it was determined that the Woodland and Mississippian artifact densities were much lower than those recorded by MacCord and several Archaic artifacts were

uncovered. This analysis led us to conclude the core area of the Flanary site did not extend into this area.

Session: **Anthropological Sciences Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-5:45pm**
Location: **Heth 016**

44PU72 Ceramic Temper, Surface Treatment, and Chemical Analysis

Daniel Riegel
Faculty Mentor: **Cliff Boyd** *Anthropological Sciences*

The 44PU72 site, located on the Radford Arsenal property in Pulaski County, Virginia, is a Late Woodland period site, and was the subject of a Phase I archaeological survey in the summer of 2011 by Radford University. The survey, which included 23 STPs an one trench, produced 831 ceramic shreds of varying temper material and surface treatments. The research presented in this poster was conducted to determine the distribution of different styles of ceramics at the site and their geochemical composition. The surface treatment and temper of the ceramics are compared to the archaeological record of other sites in the area. After completion of this analysis, an XRF Spectrometer was used to demonstrate the different chemical compositions pertaining to different types of pottery.

Session: **Anthropological Sciences Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-5:45pm**
Location: **Heth 016**

X-Ray Fluorescence Analysis of Lithic Artifacts from 44PU72, Southwest Virginia

William Willis
Faculty Mentors: **Cliff Boyd and Jake Fox**
Anthropological Sciences

X-ray fluorescence (XRF) has been shown to be a viable method for examining lithic resource utilization at archaeological sites. We hypothesize that, by using this method, we can discriminate groups of materials and make generalized observations about variation in lithic resource acquisition. In this study we have selected a sample of lithic materials from site 44PU72, which is located within the Radford Arsenal along the New River in Pulaski County, Virginia. This sample has been analyzed using XRF, and through the use of multivariate statistics we explore the geochemical variation in the lithic assemblage. We also suggest that further regional exploration of these variations be made by archaeologists using materials collected through CRM and academic research to begin to establish a concise picture of lithic resource acquisition patterns throughout the region.

Session: **Anthropological Sciences Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Wednesday 5:00-5:45pm**
Location: **Heth 016**

Arctic Geophysics and Educational Outreach Symposium

Thermal Data Collection on the Surface of Arctic Sea Ice

Andrew Vaccaro Megan Lacy Madonna Yoder
Faculty Mentor: **Rhett Herman** *Physics*

Research was conducted to determine if there is a correlation between the surface temperature of sea ice and the thickness of the ice. Based on a simple thermodynamic model, thinner sea ice should have a warmer surface temperature due to the conduction of heat from the warm sea water through the sea ice to the cold air. By testing the accuracy of this theory, a method to quickly and accurately measure the thickness of the sea ice may be developed. During February and March of 2012, data were collected on the frozen Chukchi Sea off the coast of Barrow, Alaska, using an infrared thermal sensor and a capacitively-coupled resistivity survey. The ice resistivity data were processed to determine the thickness of the sea ice on a survey line. Correlations were drawn by comparing the thermal data for the sea ice surface to ice thickness. Some correlation was exhibited as the surface temperature dropped over areas with thicker ice. This presentation will focus on the methodology of thermal data collection developed o the 2012 Barrow research trip and the analysis of the data. Further processing of data may indicate a stronger correlation between temperature and thickness.

Session: **Arctic Geophysics and Educational Outreach Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 6:00-6:20pm**
Location: **Heth 016**

EVALUATION OF ARCTIC SEA ICE THICKNESS BY GEOPHYSICAL ANALYSIS

Marcus Jessee Alec Frazier
Faculty Mentor: **Rhett Herman** *Physics*

While in Barrow Alaska Radford Students used two geophysical methods to detect the thickness of sea ice. This thickness is crucial to understanding the overall change in total arctic sea ice. It is relatively easy to determine the spatial variation of se ice but the ability to detect data in three dimensions is difficult. To detect the ice thickness Radford students used Ground penetrating radar and electrical resistivity.

Ground penetrating radar emits a signal that is transmitted from the unit, passes through the subsurface, and then is reflected off of a boundary. The reflected signal is returned to the unit. The depth to the boundary can be extrapolated from the time that it takes the wave to return to the unit after its emission. Our work showed that this method was ineffective for detecting the bottom of the ice due to the unexpectedly complicated structure of the bottom of the ice.

The OhmMapper array yields an electrical resistivity cross section of the subsurface. A transmitter at the end of its approximately 20m tail transmits a low frequency electromagnetic wave that travels through the ice. The nature of the subsurface is revealed due to the

electrical interference caused by what the signal traverses as it returns to the receivers in the OhmMapper's tail. Since the separation between the transmitter and the various receivers determines the penetration depth of the signal, the tail was lengthened to study the ice at greater depths. Passes of differing tail length can be layered to have a more detailed image of the ground. Since ice and sea water have very different resistivities, the OhmMapper is able to produce an image of the ice and water. The results showed details about the structure of the sea ice. The difficulties that we had with the OhmMapper along with the final results will be discussed.

Session: **Arctic Geophysics and Educational Outreach Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 6:20-6:40pm**
Location: **Heth 016**

Educational Outreach: Bringing Arctic Research to K-12 Classrooms

Brooke Myers
Faculty Mentor: **Mythianne Shelton** *Geology*

This presentation focuses on how three educators experiences scientific research and how those experiences can help foster K-12 students' understanding of research being conducted in Barrow, Alaska. During a two-week research trip to study the changes in sea ice, two student teachers and a science educator participated in research activities as well as communicating with students via Skype. By participating in such collaborations, research trips can have long lasting benefits for both educators and students in promoting an understanding of the research process and our need to know why our world is changing. In addition, a stronger relationship between the researchers and educators can develop.

Session: **Arctic Geophysics and Educational Outreach Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 6:40-7:00pm**
Location: **Heth 016**

Electrical Resistivity of Arctic Sea Ice

Sylvia Phillips Walter Jaronski
Faculty Mentor: **Rhett Herman** *Physics*

Using the OhmMapper electrical resistivity array in Barrow, Alaska, Radford University students measured the thickness of the sea ice to see if it correlated with the temperature of the surface of the ice. The OhmMapper transmits low-frequency radio wave into the ice and, from the signal that returns to the surface, can produce an electrical cross section of the ice, based on the electrical resistivity of various depths of iced. This cross section reveals the thickness of the ice, as well as the structure of the ice/water boundary. With more crosses over the same ice, we can cause the OhmMapper to make a more precise and accurate boundary. Working in extremely cold temperatures creates a number of problems, ranging from minor to potentially devastating These problems, along with our solutions to these problems, will be discussed. This talk will present and interpret the data gained from the second leg of a two week intensive research trip. The data was collected repeatedly over a measured line in order to ensure the highest possible reproducibility. The resistivity data our team obtained showed a strong correlation with the thermal data obtained by the other part of our research team. We will discuss the data, its correlations, and the implications of these correlations during the talk.

Session: **Arctic Geophysics and Educational Outreach Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 7:00-7:20pm**
Location: **Heth 016**

Arctic Geophysics Thermal Data

Laura Keller Maxell Collignon Jason Yonts
Faculty Mentor: **Rhett Herman** *Physics*

To collect thermal data we used an apparatus called WILMA that was a modification of a previous thermal sensor unit. WILMA uses two thermal sensors to calculate both the ambient temperature and the temperature of the surface of the artic sea ice. It does so by using infrared radiation emitted by the ice surface. This device has two main controls; one to initiate data logging and one to mark the data at known locations at intervals of 10 meters. Several difficulties were encountered while using WILMA. One such incident was the oversight of removing the lens cap from the thermal sensors that collects the sea ice surface temperature. This was a fortunate mistake, because, by giving us illogical data, it forced us to eliminate other variables including the effect of a "heat island" due to the nearby shore. Once this error was corrected our final data runs went smoothly. We will present our findings including observed strong correlation between the resistivity data and the thermal data, and supporting our initial contention of a relationship between the thickness of the ice and the surface temperature.

Session: **Arctic Geophysics and Educational Outreach Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 7:20-7:40pm**
Location: **Heth 016**

Artic Geophysics Thermal Data

Maxell Collignon Laura Keller Jason Yonts
Faculty Mentor: **Rhett Herman** *Physics*

To collect thermal data we used an apparatus called WILMA that was a modification of a previous thermal sensor unit. WILMA uses two thermal sensors to calculate both the ambient temperature and the temperature of the surface of the artic sea ice. It does so by using infrared radiation emitted by the ice surface. This device has two main controls; one to initiate data logging and one to mark the data at known locations at intervals of 10 meters. Several difficulties were encountered while using WILMA. One such incident was the oversight of removing the lens cap from the thermal sensors that collects the sea ice surface temperature. This was a fortunate mistake, because, by giving us illogical data, it forced us to eliminate other variables including the effect of a "heat island" due to the nearby shore. Once this error was corrected our final data runs went smoothly. We will present our findings including observed strong correlation between the resistivity data and the thermal data, and supporting our initial contention of a relationship between the thickness of the ice and the surface temperature.

Session: **Arctic Geophysics and Educational Outreach Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 7:40-8:00pm**
Location: **Heth 016**

Radio Astronomy Symposium

Introduction to Radio Astronomy and Radford University Students at Green Bank

Alec Frazier Sarah Montgomery
Faculty Mentor: **Rhett Herman** *Physics*

Radford University students went to the National Radio Observatory in Green Bank West Virginia to learn about radio astronomy. The fields of optical and radio astronomy differ in that optical astronomy relies on the visible light from objects in space, whereas radio astronomy searches for waves that human eyes cannot perceive. Space seems empty and dark, but it's full of electromagnetic waves that have been emitted from objects and events such as exploding stars and the Big Bang. A radio telescope can receive these faint cosmic signals and amplify them so that they can be analyzed. Radio waves coming off stellar entities can be used to determine their elemental composition. Utilizing the Doppler Effect on the incoming signals, it is possible to understand their motions relative to Earth. The telescope available to the students is a 40 foot diameter dish that was state-of-the-art in the 1960s but is still useful now. It only has the ability to adjust vertically and survey a relatively-wide one arc-seconds of the sky at a time. Set to detect a frequency of 1,420.41MHz with some slight alterations, the telescope searched for hydrogen gas clouds out in space. Goals set by the students included mapping the spiral arms of our Milky Way Galaxy, measuring the thickness of our galaxy's center, and detecting Smith's cloud.

Session: **Radio Astronomy Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 8:00-8:20pm**
Location: **Heth 016**

IMPLEMENTATION OF RADIO ASTRONOMY IN SPIRAL GALEXY MAPPING, GALACTIC MAGNITUDE MEASUREMENTS, AND DETECTION OF SMITH'S CLOUD

Marcus Jessee Sylvia Phillips David Heras
Faculty Mentor: **Rhett Herman** *Physics*

Using the 40-foot radio telescope at the National Radio Observatory in Green Bank West Virginia, Radford University students worked to accomplish three objectives; map the various arms of our spiral galaxy, measure the magnitude of the galactic center of the Milky Way, and attempt to detect Smith's cloud, an intergalactic hydrogen cloud that is on a collision course with our own galaxy. Spiral galaxies are galaxies that have a bulge of tightly packed stars surrounded by a disk made up of multiple arms containing stars. Our own Milky Way galaxy is a typical spiral galaxy. Using the 40-foot radio telescope the team was able to detect radio emissions that correlate with the number galactic arms in specified directions. By repeating this multiple times over more than a day we were able to collect data in different directions along the galactic plane. The data allowed the team to determine characteristics of arms of our galaxy including the relative liner velocity between Earth and those arms. Data was used to plot a general structure of our galaxy. Smith's cloud is a high velocity cloud of hydrogen gas that has a mass of one million solar masses and is 9,800 light years across. This massive cloud of hydrogen is projected to collide with the Milky Way Galaxy in roughly 27 million years. Smith's cloud radiates low energy photons that result from cold hydrogen changing from a relatively high-energy configuration to a lower-energy configuration. This cloud has been observed for fifty years through studies conducted with larger radio telescopes but has never been detected with the Green Bank 40-foot telescope. Radford University students worked to be the first group to detect this object using the 40-foot telescope. Another goal was to measure the thickness of the central bulge of our Milky Way galaxy. Over the course of the day the galactic plane containing the center of the Milky Way galaxy passes at a low altitude in the sky. Since the approximate time and direction of the disc is already known, the receiver is set to intercept the hydrogen signal continuously as Earth's rotation brings the galactic center across the field of view of the 40-foot telescope. This allowed us to see the bulge on our data charts. Knowing our distance from the galactic center and how long it took to cross our field of view, we could calculate the thickness of the center of the galaxy.

Session: **Radio Astronomy Symposium**
Presentation Type: **20 minute oral presentation**
Day & Time: **Wednesday 8:20-8:40pm**
Location: **Heth 016**

Literary Symposium II

An Unfathomable Wilderness: The Pastoral Ideal in Early American Literature

Hannah Anderson
Faculty Mentor: **Tim Poland** *English*

Much of early American Literature dealt with the pastoral ideal in conflict with the hitherto unaccounted-for presence of a wilderness in the New World. A bold contrast to the pastoral ideal, the wilderness posed a threat to it as well, and the European settlers of New England, plagued with unfamiliarity and ignorance about the presence and constitution of the wilderness landscape, proceeded in accordance with their existing presumptions and fantasies to explain what their idyllic perspective could view only as an incomprehensible wilderness. This fantasy took the form of a narrative tradition that elevated white, European, Judeo-Christian culture, existence, and ideology above those of the native community, thereby altering perceptions of the native, the wilderness, and the natural landscape itself. Far from short-lived, this narrative has played a role in literature and art throughout time and continues to serve the purpose of labeling what is unknown, unfamiliar, and frightening as evil, uncivilized, ad savage. This essay seeks to examine this narrative at work in early American Literature and to unravel its assumptions, which were strongly influenced by pastoral idealism, in order to expose a more realistic understanding of the wilderness—its landscape, its inhabitants, and its culture.

Session: **Literary Symposium II**
Presentation Type: **30 minute oral presentation**
Day & Time: **Thursday 11:00-11:30am**
Location: **Heth 045**

A History of the Hidden Discrimination in the Censorship of Literature

Ingrid Baker
Faculty Mentor: **Rick Van Noy** *English*

As early as 360 BCE, as evidenced in Plato's "Republic," there has been considerable concern over how much freedom an individual should be allowed in order to express him or herself. When the United States officially formed in the 18th century, our forefathers were careful to address these concerns. The First Amendment to the Constitution reads:

"Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievance."

Why was this issue more important than, say, the Right to Bear Arms (Amendment II) or the Powers of the States and People (Amendment X)? The answer lies within a complex progression of sociological, political, and psychological thought, which neither ceases to change, nor ceases to be influenced by dominant ideological forces.

Numerous books are banned or challenged in schools and libraries each year for various reasons. By analyzing the role of censorship in modern-day arenas, it is clear that this practice can serve as a discriminating force directed against several groups of people, including women and minorities. What does this mean for individuals, educators, and politicians? What does this mean for American culture as a whole? This project is aimed at discovering the hidden discrimination in the practice of censorship and how it affects the world and our understanding of the Constitution.

Session: **Literary Symposium II**
Presentation Type: **30 minute oral presentation**
Day & Time: **Thursday 11:30am-12:00pm**
Location: **Heth 045**

Leadership Poster Session

Chef Charles Carroll Leadership Styles

Amy Anderson
Faculty Mentor: **Sandra French** *Communication*

I will be focusing on Chef Charles Carroll team leadership styles and how he uses them to inspire chefs and anyone who he can reach with his leadership techniques.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Shackleton: A Lesson in Leadership

Scott Beaubien
Faculty Mentor: **Sandra French** *Communication*

The leadership qualities of Sir Ernest Shackleton provide an insight to what it takes to be a good leader. While stranded within the icy waters of Antarctica with his crew of 27 men, his degree of leadership not only kept them alive for over a year, but ensured that they would all make it home in one piece. By taking a deeper look into the expedition through the leadership of Shackleton, people from all walks of life can gain a better understanding of what it takes to be a leader.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Eleanor Roosevelt

Morgan Brown
Faculty Mentor: **Sandra French** *Communication*

Leadership is an important concept to study. By learning about past leaders we can learn how to become better leaders ourselves. Eleanor Roosevelt was one of the most influential women of her time. Through reading Robin Gerber's, "Leadership the Eleanor Roosevelt Way: Timeless Strategies from the First Lady of Courage", we can see that Eleanor's passion and drive are what made her into the authentic leader that she is remembered for today. By using her strong values and her ability to motive her followers she was able to make history as a leader. Examining Eleanor's leadership skills, behaviors and traits will provide examples for current and future leaders to use for themselves.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**

Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Angela Merkel: Women and Leadership

Brittany Dumond
Faculty Mentor: **Sandra French** *Communication*

Abstract: Women leaders have been looked down upon for centuries. Criticisms that they do not seem as capable or as strong as men have kept women from aspiring to be successful leaders. Angela Merkel is the first woman German Chancellor and has overcome all of the criticisms regarding her gender. This poster reflects Merkel's journey to becoming Chancellor and highlights the different stereotypes that she had to overcome in order to be a successful leader.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Robert E. Lee

John Fitzgerald
Faculty Mentor: **Sandra French** *Communication*

Leadership is a popular concept many people wish to acquire, but most do not understand the dynamics and how historic leaders can provide assistance. To help discuss leadership, the historical leader Robert E. Lee is chosen for analysis. Lee is a world-renowned leader known for his success leading the Confederate Army during the Civil War. The importance of examining Lee is to educate others what qualities made him an exceptional leader and how they relate to leadership theories and concepts.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

A Life of Leadership: Jim Rayburn

Dan Griffin
Faculty Mentor: **Sandra French** *Communication*

The leader that I chose to do my project on is Jim Rayburn. Jim Rayburn was the founder of Young Life which started in Colorado. Young Life is a non-denominational Christian organization that is geared towards the high school kids in their areas. Jim Rayburn was an incredible leader that prepared the way for many other leaders in this organization. This research that I am doing will be showing me what type of leadership Rayburn had and used, to create such a successful organization.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Malcolm X: A Leader Defined

Jamilla Gunter
Faculty Mentor: **Sandra French** *Communication*

Leadership can be studied in many different contexts. There are many leadership studies that exemplify the concept of "leader." The purpose of this presentation is to discover and study what qualities, civil rights activist, Malcolm X possess that cause him to be considered a leader.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Kaitlyn Herrmann
Faculty Mentor: **Sandra French** *Communication*

Leadership is a quality that is shaped by different reason, whether a person is born with leadership traits or has a situation that cast them into that position, it is a quality that is well sought after. For my leadership project, I chose to study Condolezza Rice; she is an important woman to study for leadership. Not only in 2004, was she named the number one most powerful woman by Forbes Magazine, but she has held important roles such as Chief Advisor for Former President George W. Bush and as National Security advisor turned Secretary of State for Former President George H Bush. She possess certain traits that allow her to be a great leader; I will show this by using the Trait Approach and talk about the role of woman in leadership.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

FDR Leadership Poster

Tori Meisen
Faculty Mentor: **Sandra French** *Communication*

I will be examining the leadership styles of Franklin Delano Roosevelt. A good portion of my research will be focusing on the Fire Side Chats, which I feel play a big part in determining what kind of leader FDR was. I will also look at if his decision made him a stronger or a weaker leader for it, along with examining other challenges he faced in his life. By doing this I hope to show what kind of leader FDR was.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Bear Bryant

Alison Miller
Faculty Mentor: **Sandra French** *Communication*

There are many different types of leadership that exist in our world today. Bear Bryant, who is credited as being a six-time national championship coach, exemplifies the many different shades of leadership. My poster explores the different uses of power that Bryant used to lead his football team on the road to win six national championship games. By viewing a leader who used multiple leadership styles, we can learn and gain a better understanding of what exactly it means to be a leader.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**

Location: **Heth 016**

Admiral Lord Nelson's Leadership

Bridget Nelson
Faculty Mentor: **Sandra French** *Communication*

My poster is an example of the leadership style presented by Lord Admiral Nelson through his life. I will be assessing Nelson's leadership style with current leadership theories. Participants will gain an understanding of how to use Nelson's examples of leadership in their daily life.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

A Higher Standard of Leadership: Mohandas Gandhi

Jolyn Paoletti
Faculty Mentor: **Sandra French** *Communication*

The life of Mohandas Karamchand Gandhi reflects practices of leadership that in our current society, are not always prevalent. "We have come to accept that a lower moral standard is necessary to get things done in the real world" (Nair, 1994, p. 15). This belief is the gospel of expediency and seems the commonly accepted double standard of conduct. Gandhi devoted his life to eliminating violence, bringing education, sanitation, and public health to the villages, and promoting mutual respect and tolerance between Hindus and Muslims. He asked his followers to reject not only physical violence, but also violence to the spirit. He said that if "we do not embrace the ideal of nonviolence, societies all over the world will deteriorate to the point where lie will be intolerable. My project will provide a more in-depth look at the life of a man whose "lifestyle point the way to a higher standard of leadership in which integrity is based on a single standard of conduct, a spirit of service is imperative, an decisions and actions are bound by moral principles" (Nair, 1994, p. 7)

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Margaret Thatcher: the Iron Lady

Ashley Pidal
Faculty Mentor: **Sandra French** *Communication*

Margaret Thatcher, the first female British Prime Minister, consecutively won three elections and served her country for eleven years. While in office, she essentially restructured almost every aspect of British politics, revived the economy, and strengthened the nation's foreign policies. My poster shows trait and gender leadership theories. Thatcherism, a term coined while Margaret was Prime Minister, refers to her economic policies and her aggressive and authoritarian leadership style. Margaret Thatcher is considered one of the most important British political leaders of the twentieth century, as well as one of the most respected, influential, controversial, and dynamic.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Jack Welch on Leadership

Ali Reed
Faculty Mentor: **Sandra French** *Communication*

Jack Welch as CEO of General Electrics expanded a business empire through some of the most unconventional methods . This presentation looks at the various leadership methods Jack Welch used during restructuring the company. His leadership techniques made General Electrics one of the most powerful companies in the world today.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

William Wilberforce

Matthew Reppert
Faculty Mentor: **Sandra French** *Communication*

Leadership, defined by Peter G. Northouse in Leadership: Theory and Practice, (2010), "is a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). This poster presentation on William Wilberforce will examine his life and accomplishments as they relate to his leadership traits, beginning from the late 18th century to the early 19th century. We will learn from William Wilberforce what leadership looked like during a time of moral decay in Britain and how specific leadership traits factored into his overwhelming success.

"Accustom yourself to look first to the dreadful consequences of failure; then fix your eye on the glorious prize which is before you; and when your strength begins to fail, and your spirits are ell nigh exhausted, let the animating view rekindle your resolution, and call forth in renewed vigour the fainting energies of your soul." – William Wilberforce

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

H.J. Heinz

Jillian Ruppert
Faculty Mentor: **Sandra French** *Communication*

Leadership is a valuable skill that plays an important role in society. My poster will provide a brief overview of the life and leadership skills of H.J. Heinz. By viewing my poster, people will learn the important leadership approaches that H.J. Heinz used in order to leave his mark on society to this day.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

General Patton: The Manly Leader

Nic Shaw
Faculty Mentor: **Sandra French** *Communication*

In the past, those individuals who were called upon to uphold positions of leadership were often described as a born leader, or a

person who exhibited the traits of a natural leader. Traits like height, bone structure, outgoing personality, hair and eye color, all contributed widely to what a leader was designed to look like. The trait theory suggests that leaders are born, or possess certain traits that make them more probable to become leaders than individuals without these traits. General Patton was a man who led hundreds of brave men into victories in battle. I will attempt to determine if the noticeable traits associated with General Patton's leadership techniques, along with his personality, adhere to the common practice of leadership trait theory.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Booker T. Washington: Success as a Leader

Samuel Thomas
Faculty Mentor: **Sandra French** *Communication*

Booker T. Washington was a successful African-American author, writer, teacher, and leader in the late 1800's and early 1900's. Washington was well known for his representation of the southern black community during the age of Jim Crow segregation. This presentation will apply leadership theories discussed in class to properly evaluate Washington's successes and failures.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Colin Powell

Charlotte Warrington
Faculty Mentor: **Sandra French** *Communication*

Leadership is an important role in today's society. We need leader's who can support others in the accomplishment of a task, to be able to take control, and have confidence in all that they do. My leader is Colin Powell, who demonstrates these main aspects of what it means to be a leader. I hope to portray Powell's different leadership styles and how it makes him and affective leader.

Session: **Leadership Poster Session**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

CORE 102 Poster Session - **Issues in Higher Education**

The growing problem of cheating and plagiarism in today's colleges and universities

Nick Burton
Faculty Mentor: **Michele Ren** *English*

This presentation will give an over view of cheating and plagiarism in today's colleges and universities. It will discuss how students are using tools such as the World Wide Web to help them cheat and are even buying papers online. It will also highlight how teachers are trying to combat this growing problem in colleges and universities all over the U.S. The presentation will cite two recent 3-plus year studies where countless students and teachers where interviewed about cheating and plagiarism in their colleges and universities.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Cultural shock: fitting into a college campus, while being a minority student

Jalen Carethers
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will bring to light the deep unspoken culture of how minorities adjust and fit in on college campuses. According to researchers, being a minority is not only a mental battle, but it also affects your academic performance. The presentation will touch upon the collective problems faced by minorities with possible solutions to these problems. The presentation will explain the idea that the adjustment and cultural shock of fitting into a college for minority students is an increasing and widespread problem.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Relationships between International and American Students in American colleges and universities

Courtney Ellis
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss the student-to-student interactions and personal relationships between International and American students. The presentation will bring to light the array of challenges and obstacles international students are faced with while gaining their education in America and dealing with the lack of interest the American students have in their lives. In doing so, it will explore American students in their efforts at trying to create relationships with international students and how unsuccessful they are. It will also touch upon personal experiences of these students dealing with being in a completely unfamiliar and new culture, surrounded by thousands of unfamiliar people, and feeling they do not belong to the community they are living n.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Attending college and what it holds for our futures

Jillian Fasano
Faculty Mentor: **Michele Ren** *English*

Research shows that going to college to receive a higher education is an extremely important factor in turning someone into a well-rounded individual. This presentation will show how much of an impact college has on an individual as well as our society. M presentation will touch upon topics such as opportunities after college and how college develops students socially, academically, and politically.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

How Minorities are Treated Differently in Colleges and Universities

Mary Garty
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss how people of color are treated differently than white people in academia. Most of the research I have found comes from surveys on college campuses. This racism consists of white people discriminating, neglecting, ignoring, or making fun of people of color. There are many different forms of racism, such as in the work force where white people are ranked higher than people of color, or on college campuses where people of color are discriminated against. The presentation ill show that many minorities have become immune to racism because they are so used to it in their daily life that they just block it out.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

What makes a good learning environment?: A holistic approach

Jonathan Hefta
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

What elements should be taken into account when designing a classroom? How does the instructor contribute to the environment? Education is an important part of society and thus anything related is just as important, this is especially true for the environment in which the teachers teach and the students learn. This presentation sets out to answer what betters the learning environment and explain the different parts of which it is composed. This presentation primarily focuses on what teaching methods and techniques are effective. Multiple teaching methods and techniques are examined as are the types of teachers and teaching. Other factors of an effective learning environment are also looked into, including: The physical layout and construction of the classroom, the technologies used both in the classroom and outside of the classroom.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Having a Sense of Community at College: What Can a Sense of Community do for You and How Can You Get It?

Jenna Huggins
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation is about the freshman experience of finding a sense of community on campus, which is a home away from home, along with a sense of family away from home to help students get through all of the stages of going out into the "real world" and adjusting to a new life style. This research will show the different ways of trying to create community from exhibiting certain personality traits, deciding which activities to join, the positive effects of having a sense of community, the experience difference between students who have community and students who keep to themselves, and the difference in work ethic between students who have a sense of community and those who do not. In one study, the researchers found that students who worked together on homework and in class got much better grades and felt more comfortable talking with the professor in class because they knew the people around them and did not feel embarrassed to speak up in front of them. Students who worked alone had a lower rate of lass participation, and because they did not have discussions with others on the topics, they also had a lower information retention rate. This research will show the benefits of students finding a community, benefits ranging from better grades to better social life and connections in the future.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

A Historical look at why students are attending college from the 1960's to the 1990's and today

Cora Kardis
Faculty Mentor: **Michele Ren** *English*

This presentation will compare the past reasons of why students were attending college with why students today are attending college. The research will touch on connections of why students are attending college throughout the last several decades. The reasons why students are going to college are connected throughout the decades with the same ideas of the college experience: students being pushed by parents and counselors, wanting a degree, needing better jobs, having social interactions, having an escape from parental control and so on. Differences within certain decades, such as war, economic status, and politics, influence the reasons that students attended college in earlier decades. This contrasts with the information that my fellow student and I discovered in our survey of Radford University students and why they attend college today.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

What is cheating? : The touchy debate

Virginia Ketterman
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss cheating in the college environment. It will mainly focus on faculty and student definitions of what cheating is, according to current research. One study asked faculty and students to sort 28 characteristics of cheating. Wen finished there were two dimensions found. These include differentiating between cheating on papers and exams, and deciding the severity of differing actions that are qualified as cheating. The presentation will also touch on the difference between contemporary and traditional beliefs on cheating, with traditional being more strict and defined and contemporary being lenient and focused on the situation.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Sorority Life: The positives and negatives of being in a college sorority

Francesca Martinez
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This paper looks at the positives and negatives of being in a sorority. The presentation will touch upon how being in a sorority gives you more opportunities. In the future, being in a sorority can help you with job opportunities and your resume. Being a part of something looks good on your resume because you are doing an activity and you're also doing school work. Being in a sorority can be positive if you like being a part of something and have set rules, expectations, and goals. People are looking for graduates who do more than just school work, so being in a sorority will help you out. You will also gain friendships and memories while being in a sorority. However, being a part of a sorority can be negative, causing stress, peer-pressure, and lack of focus. If you cannot handle being a part of the sorority because of the parties, peer-pressure and high expectations you have to reach, that can negatively affect you. Being in a sorority is positive or negative depending on the person. Some women love being in a sorority because of everything you gain, whiles others do not. I did my own survey with women in sororities from the south east and they told me why they joined, why they love it, and what they did not like about it. I researched journals from the Radford University database site and I am going to use three journals. I am using Differential Impact of University Student Living Groups, An Evaluation of Normal School Sororities and In the Fraternal Sisterhood: Sororities as Gender Strategy.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

What Students truly learn in college

Will McCauley
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss what students in all levels are actually learning in college. Through my research I have found that many students do not feel that their school work is the most important thing in college. Students feel that the most important thing is their social life. Many students go to college to get the "college experience," which can include Greek life, clubs, sports and partying. Many students especially their freshman year do not feel that academics are the most important part of college. The research shows different assessments and polls that have been taken. These polls show what undergraduate students are focusing on the most, whether it's social life or academics.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

The Ease of Cheating and Plagiarism in College Communities

Meghan Shumate
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss the acts of plagiarism and cheating that occur in today's college communities, the major issues as to why it occurs, and why it is becoming easier for today's students. While plagiarism and cheating are very similar, plagiarism is a more specific form of cheating. This presentation will touch base on why cheating occurs whether it is due to laziness or stress overload and explores the reasons behind plagiarism as well—whether it occurs by accident or if the teachers are at fault for poor class structure. Regardless as to why cheating happens in today's college culture, copying of someone else's work is unfortunately becoming easier for students as technological devices come into play as well.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Why students really go to college

Maraika Smith
Faculty Mentor: **Michele Ren** *English*

Why students really go to college

Maraika Smith

Faculty Mentor: Michele Ren

This presentation will look at why college students truly go to college. Often it seems to be for the wrong reasons. Although many teachers and parents would like to think their students go to college to broaden their horizons and to feed their hunger for knowledge, unfortunately this is not usually the case. Research has shown that most students attend college to gain some self-fulfilling experience. At some point during adolescence, students were told stories of this

"magical" college experience and since that moment, the full momentum of students' mentality has been to discover college and all that it has to offer. The presentation will also point out how older student have a drive to progress academically more than freshmen, who are looking strictly for the partying experience.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Chicken Soup for the College Student's Soul

Melissa Vogel
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss how college student's interactions around campus will affect their social lives and their college experience. The social interactions that college students face throughout their college experience can either have a positive impact on their experience or a negative one. The sources I will use consist of studies and surveys done on college students. They discuss student's first year experience and the different factors that might influence dropout rates. I conclude that the key to retention is in improving social support from their peers and that learning communities are necessary in order for students to be successful and have a positive development throughout college.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Greek Life: It's Impact on College Student's Social and Academic Lives

Daniel Alvarado
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss the impact that Greek organizations, fraternities and sororities, have on students both academically and socially. Greek organizations can help students create networks for academic needs as well as a brotherhood or sisterhood for friendships while in school and after graduation. The media has given Greek organizations a bad reputation because of the link to alcohol abuse and even though the cons are usually publicized there are many pros to being a member of Greek organizations. This research will give examples of how fraternities and sororities can help students keep their grades high, get involved in the community and can lead to higher graduation rates. The research will also show that in order to better the reputation of Greek organizations, universities will have to back them with overall support and the organizations themselves will have to uphold a higher standard of conduct for their members. In one study the researchers found that contrary to belief students involved in Greek organizations had higher retention rates, higher GPA's and after four years higher graduation rates than non-Greek students. Therefore there have been some studies that have shown that involvement with Greek organizations do better college students social and academic lives and these findings should be shared with the general public in order to better the reputations of Greek organizations.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Effortless: A study on student motivation.

Chris Best
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

My presentation will take a look at the lack of undergraduate effort at universities and how it affects various aspects of the learning process. The research will elaborate on why undergraduates, freshman in particular, don't always apply themselves and the factors that lead to this. These factors include things such as students receiving grades they haven't truly earned, the demands of other campus activities, and professors not giving students any incentives to come to classes. For my research I mixed personal experiences with studies conducted by different professors from a multitude of time periods. In addition to the studies I pulled useful information from an anthropological study book and a documentary film about undergraduate college students.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Blind Racism: Educating Whites about White Privilege

Jordan Blevins
Faculty Mentor: **Michele Ren** *English*

This project aims to educate whites on white privilege and how everyday white privilege translates into racism. This presentation will show how ignorance is a luxury which plays a role in white privilege. Educating the viewers on current and historical forms of white privilege/ racism, as well as explaining unearned benefits is important in this project. The presentation will touch on ways to create an active role in uprooting racism through activist and educational activities. Studies found five distinct psychosocial groups which show racism is not just harmful to minority groups, but to dominant groups as well. Research will explain how racism is rooted in ignorance and how simply engaging in diverse multicultural activities brings about understanding and awareness of others.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

How prepared are students for entrance into college?

Julie Harriss
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will provide facts and background information concerning the effectiveness of high schools' academic rigor and how that translates into college preparedness. Sources will be utilized to show the types of classes students take—regular, remedial, honors, advanced placement – and to show the feelings students have about being ready to enter college academics. The research will try to show the link between students who do take challenging classes, such as advanced placement classes, and the feelings of being prepared to enter college. Research will also show the attempts of high schools and administrators to combat the problems of declining achievement in high school. It will show research and opinions of teachers and administrators who are trying hard to motivate and challenge all the students in high school to help them be better prepared for college. In addition, college professors will be quoted to show their views on incoming students and their basic readiness to learn new material. Along with administrators' and teachers' point of view, student views will also be shown, including statistics of students who wished they had taken harder classes. Students have expressed wishes that they had taken more of certain classes in high school, such as more English, science, math classes, etc.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Where the Majority of Learning in College Takes Place

Hunter Higgerson
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss whether college undergraduates, particularly freshman, learn more inside or outside of a classroom. I have found that some students go to college to get a degree and get a better job after graduation. But along the way, many students learn more life skills while living on their own, away from their parents than they do inside a class. The research shows that there are many different opinions from professors, students, and parents as far as what they think that students should learn. But what students are actually learning and where this learning is taking place are up for debate. The research also shows that students feel that they learn more outside of the class that will help them later in life, more so than the information that they learn in the classroom about specific subjects.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Cliques: A positive or negative aspect of college?

Alexandra Loar
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will focus on institutionalized cliques maintained by the university with particular attention paid to living learning centers. I conclude that they have positive effects. With living and learning centers, students can expect to achieve higher grades and better social skills. After one attains both respectable grades and adequate social skills comes a higher self-esteem, which all college age students can use a boost in. With my research, I expect to find the profits of building a strong relationship with their professor. By creating a strong student to faculty bond, students can expect to be able to easily go to a professor or help. Being able to go to a professor for help can only benefit scholars grades. Through inquiring a strong relationship with professors, students should expect the process of finding a job easier. With my data inquiry you can expect to find immense evidence on living and learning centers that have formed based on friendships in the dorms, and positive benefits for cementing a good connection with those teaching you.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

The Impact of Facebook on College Students

Casey Marr
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will demonstrate why keeping in touch with friends from back home and family in college through Facebook is a key aspect of transitioning into college. The research is based on a guide for students, data on the student population with Facebook, and studies on how much social networking affects successful college students, whether it is grades, friendships, or keeping in touch with family. This presentation explores how Facebook influences first-year college students.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

A Lesson for the Educational System

Zachary Martinez
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss certain flaws with the educational system and possible remedies to these weaknesses. The research evaluates how well the educational system fulfills its purpose of giving students a valuable education as promised, thus finding where the educational system needs improvement. The unrelenting areas of concern are grade inflation, salaries and job security, "the gap" or miscommunication between levels of education, and funding. After

highlighting these fields of concern, the research assesses how past efforts to improve these problems have failed, and it takes these failures into consideration while attempting to solve them.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

The Positive Effects of Being Involved on a College Campus

Zach McGuire
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

My presentation will show how being involved on a college campus can be very beneficial for the student as they start out, throughout their experience, and even after they graduate. Many students find that being involved has helped create a smoother transition into college life for them. In my research, I found that being involved does not just mean joining an organization or playing a sport. Campus involvement can also include interacting and setting up meetings with professors, and even spending time with fellow classmates. This presentation will explain how social skills can be affected, how being involved can help create connections between students and professors, and how students' futures can be changed by becoming involved on a college campus.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Why Students Attend College

Chandler Thrasher
Faculty Mentor: **Michele Ren** *English*

My presentation will discuss why students go to college. It will present different reasoning from academics to social aspects. The academic aspects of this presentation will include: the importance of receiving good grades, getting a diploma, and wanting to get a well-paying job. The social aspects of the presentation will include: the benefits of fraternities and sororities, wanting to experience night life, and being active in clubs. The presentation ill show different examples of what college represents to students and why they want to attend.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Battle of the sexes

Alexis Williams
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation demonstrates the differences between the sexes found in college life. The research focuses on how male and female students experience college differently when it comes to grades, leadership roles, and interests. The research will show ho professors also experience gender differences in the college environment. This information will illustrate how gender differences can be an advantage at times, but it will also show how it can be a disadvantage as well. For instance, a girl in the engineering program could acquire more scholarships because females are desired since there are generally so few. Likewise, a boy in dance or theatre gets priority for those scholarships because there are fewer boys in the dance and theatre program. The presentation is an overall view of how females and males are treated in college.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Can being involved in Greek life Help Students Achieve Academic Success?

Rachel Bilbrey
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will discuss the many different problems first year students face when they come to a university. The presentation will focus on studies of student involvement in Greek life at American colleges and universities in order to provide an overview of the positives and negatives of joining a fraternity or sorority. Research will focus on grades, graduation rates, and life after college.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

"The cost of an American Education for foreign students"

Nick Camillucci
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This poster will show statistics and facts about current immigration into the United States. My work will include numbers and statistics that show graduation rates, and effects on the American workforce, and expected total income that a foreign graduate of an American school will receive. Also it will show struggles and obstacles that immigrants must face when coming to American soil to seek and education. The poster will have a risk and reward column and a rough total of what the expected cost for an education of a student who immigrated to America. I will describe examples of language barriers, currency conversion, financial aid and other obstacles that can affect the ease of a student receiving an American education. Additionally, the poster will have minimal requirements for each schooling level, K-8, and High school through College listed underneath them.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

College Students and Time Management

Christopher Church
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss information on how college students handle and adjust to time management in college. The research will show how students struggle with time management when they first arrive to college, how they cope with the stress of college management, and how they learn throughout their experiences. This research will also show surveys and graphs of current students' daily agenda and managing of time. Research will also show how students have dealt with time management throughout the years and how it has changed over time.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

International Students and the American Campus

Cory Dunn
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss what the typical international student experience is on an American campus. The research given will mostly touch on the International student performance in the classroom. It will ask if the International student is more competent in the classroom and if so, why that is. The presentation will also introduce topics such as International student alienation, their ability to communicate with their professors, and American Ignorance. It will further explain how these few topics influence better grades and why the International student is viewed as more competent because of these topics. Also this presentation will briefly discuss the cultural differences International students experience on campus in terms of sociability with the American student.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

College Aid in Crisis: How Students are Suffering Because of the Current Lack in Financial Aid

Jacqueline Hackett
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss the current economic situation college students are facing when it comes to their financial security, as well as the effect this is placing on colleges and their students' futures. Students are unmotivated to do work and are greatly distracted when it comes to their academics. When students have to have jobs while it college, they are focusing on making money to stay in school, instead of staying in school to make money. This causes mediocre students to enter the job market in the future, therefore providing the workplace with mediocre workers who will affect society as a whole. The presentation will touch upon what universities and the government are failing to do in terms of capping tuition, and it explores the current data circling around the tuition situation.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Positive effects of Greek life

Marisa Kiehl
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will look in to the ever-popular organization among all North American college campuses, known as Greek life and its numerous contributions to undergraduate student life and the negative stereotypes that it portrays. Benefits of Greek life include acclimating to a new environment, making strong bonds with peers, involvement in philanthropy and other local organizations, along with better academics, which can lead to better opportunities in the work force. Despite the positive outcomes that can come from affiliation with this organization, many feel that Greek life derives from negative aspects as well. A few of these negative stereotypes are hazing rituals, expensive fees, and excessive partying. This presentation will make the positive effects of Greek life evident while also shedding light to the negative aspects of fraternities and sororities.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Grade Inflation in Universities Today

Chelsea Merritt
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss the causes of grade inflation in higher education. I came to the conclusion from my research that the main cause of grade inflation is the end of course faculty evaluations. Instructor evaluations affect promotions, pay raises and tenure in most universities today. This causes professors to feel as if they must give out better grades in order to get good evaluations. Another cause of grade inflation includes the increasing number of adjunct professors. These instructors are hired on a term to term bases, and they must keep students happy in order to keep their jobs, which comes back to the faculty evaluations. Lastly, today's society is so insistent on not hurting feelings or lowering students' self-esteem, which in college means professors must be sensitive to a diverse group of people and what grades they give them.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Discrimination Against International Students in American Universities

Craig Paris
Faculty Mentor: **Michele Ren** *English*

This presentation will discuss the discrimination experienced by international students in American universities, with an emphasis on neo-racism, which is racism based upon feelings of superiority of one culture over another. One aspect of discrimination in American colleges is the teaching of "whiteness" in American classrooms, which is the attitude that people who come to America should conform to white, western societal norms, rather than expressing their heritage. Other aspects of discrimination include the teaching of American superiority in American colleges, and also the role that language barriers and differences in societal norms may play in international students perceiving discrimination from their American peers.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Joining Greek Life: Do The Benefits Outweigh The Cost?

Roshan Patel
Faculty Mentor: **Michele Ren** *English*
Clarie Hall *English*

What is Greek life and why is it so popular how did it come about? This presentation will highlight the advantages and disadvantages of joining Greek life. It will show how Greek life organizations positively and negatively impact the school and the community around them by encouraging social interactions. The presentation will explore why people have a fear of joining a Greek life organization because of hazing and typical stereotypes that are true and some that are not true at all.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Race in Higher Education

Amanda Smith
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will discuss diversity, specifically race, in higher education and the effects that come along with it. The research will touch upon how students are affected, negatively and positively, by various races or a lack of diversity in their lives. Research on this topic will also point out race equality issues such as majority and minority, as well as opportunity issues such as economic restraints to higher education. Furthermore, this presentation will point out the advantageous and disadvantages of various races at colleges and universities around the world. The research ranges from scholarly articles to specific studies conducted on various races and its effects on students in higher education.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Coping Problems with International Students in an American Society

Javier Waase
Faculty Mentor: **Michele Ren** *English*

This presentation will try to emphasize some of the problems international students face when coming to the United States. Being exposed to a new culture is not easy, especially when trying to build a college career in a foreign country. Problems such as: language, coping with a new environment, and the lack of interest given to them by the faculty and students are some of the major problems that will be discussed in the presentation. Furthermore, as Internationals discuss their thoughts and feelings during their collegiate experience, many express a feeling of discrimination and prejudice towards them. All in all the presentation will discuss the problems internationals face and will conclude with some of the possible solutions to fix this.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Hazing: A rite or wrong of passage

Karly Bardy
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation is to bring awareness to something every college student has heard about, but only a select group has to experience it. Hazing is best described as forcing a potential college fraternity or sorority member called pledges into doing humiliations and strenuous tasks. Almost all pledges in every college or university have to partake in hazing before being accepted into a brotherhood or sisterhood. Whether the tasks are illegal, abusive, or inhumane, the pledge takers are expected to complete their tasks if they want to be initiated into their fraternity or sorority. My project will be an overview of what is involved in hazing and what students have to do to prove how badly they want to be in accepted into Greek life.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

A Home Away from Home: A University Community Defined

Elizabeth Mahaney
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

How can one accurately define a college community? This presentation will discuss the many ways that college and university campuses try to convey a sense of community. Specific aspects of what a college community should offer will be included in order to

provide a basic definition. The presentation will take into account the ideas and opinions of college students, professors, and faculty members. The research will include definitive activities, events, and procedures that serve to promote the idea of a university community throughout colleges in the United States.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

International Students Studying in the United States: Negative Worldviews on American College Culture

Charlotte Marion
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

International students in the U.S. are increasingly experiencing more difficulties than their American counterparts. This presentation displays the increasing negative worldview about American college culture, how this is affecting both international and U.S. students alike, and what can be done to improve this destructive setback in American higher education. The research indicates that this is a result of the inconveniences foreign students are facing in relation to their alien status. The research gathered discusses both hardships and negative struggles influencing foreign students studying abroad in the United States. The tribulations of racism, extreme culture shock, English as a Second Language (ESL) testing, and communication imparities are further investigated. These obstructions are additionally considered in how they are undesirably sapping the varying diverse communities at American universities.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Higher Education: Effects on the Workforce

Michael Matott
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will explore the idea of higher education/secondary learning after high school and its effects on America's workforce. The research will look at rates of retention in college as well as the rates of employment of students who graduate with degrees over the years. It will take a look at applicants and enrolled students origins and standardized test scores, comparing them with other industrialized nations outside the United States. The poster will show student opinions on what they are actually learning in college and what they believe they should learn. It will show the increasing attendance in college and its results.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

The modern professor: effects of positive attitudes and innovative teaching techniques on classroom success

Natasha Nahas
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation highlights several modern and traditional teaching methods that have been proven effective at the university level by successful professors. Many different opinions exist about what qualities make a skilled teacher; however, this research focuses on several themes that remain constant in nearly all modern scholarly sources. It presents studies conducted on student psychology and cognition in the classroom environment. Several theories on student-professor relationships are analyzed, including the claim that positive student-professor relationships motivate students to excel. Key teaching techniques are discussed including innovative tools, activities, and interactive discussion. Studies indicate these methods promote enthusiastic participation, encouraging students to use and enhance valuable critical thinking skills. Professor attitudes toward students and education are analyzed, examining the results of open-mindedness in the classroom.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Diversity: How it affects life in college

Emily Norton
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation is about diversity in college, but mainly ethnicity, race and gender. Some of it has to do with the ignorance of diversity, but also mentions the positive and negatives by researching previous studies. Every student has a different experience and outcome from college based on their race or ethnicity; this presentation asks why or how the experiences differ. It also touches upon the faculty's different attitudes towards students; how they change from race or gender, and makes sure to point out that racism often plays a role. It is a reoccurring problem within college but whether it simply goes unnoticed or if it is disregarded is the real question. The presentation will also show that women often have to work harder in college if they want to be successful later in life. It shows it is because women can be treated unfairly in the workforce with a lower income, less opportunities, etc. It establishes that within diversity in college, race and ethnicity is usually affected more than gender.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Increasingly low collegiate classroom participation

Chris Ritenour
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation discusses the growing trend of low classroom participation by college-aged students. Numerous studies and personal classroom experience show the there are many reasons why students do not participate, including a range of issues like laziness, technology distractions, embarrassment of speaking out in class, aggressive instructors, being generally unprepared, and class apathy. These things lead to many students who can't share anything in the classroom conversation, which has become trend in the American college culture.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

First-Generation College Students

Mary Robertson
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will state the facts and background information behind the term "first-generation college students." It will also give those who haven't experienced this situation a better understanding of what first-generation students have to go through and the unique problems they face in college. I will touch on statistics and ways that are offered to help these students. The stigma and what those first-generation students can do to help themselves are also important aspects of this presentation. It will be informative to both non-first-generation students and first-generation students. This presentation is an overview of the understanding of what first-generation college student's experience.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Silent Classrooms: Declining Student Participation in Higher Education

Kevin Shanahan
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will address the issue of declining student participation in higher education classes, including why students do not participate, as well as examine some strategies used to encourage more participation. The research will focus on declining participation as an issue born out of social conventions of the students, rather than educational shortcomings by professors, and it will feature studies conducted with students, explaining why they feel they do not have to participate in class. For the purpose of examining potential solutions to raise participation overall, one ideal case study will be presented wherein professors were able to successfully encourage students to participate.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

College Networking: From Brother to Colleague

James Taylor
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation will discuss the impact Greek letter societies can have on the success and development of young maturing college students as they enter into their career and adult life. The research will describe events and activities students are involved in throughout membership, and how these institutions are implemented to help develop students' social and leadership skills. Hazing and other negative aspects of fraternity life are debated though personal account and quantitative data. In response to these criticisms, the growth of students' personal network is deliberated, and adds to how Greek letter organizations can help land a job.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Surviving the College Lifestyle

Cate Weaver
Faculty Mentor: **Michele Ren** *English*
Haley Russell *English*

This presentation will discuss how college student's social lives can play a significant role with their success within college. Whether students participate in Greek life, sports, clubs, or other activities, they can all have a positive or negative effect on how well students perform academically. The research that I have found consists of different samples and questionnaires evaluating how students are within their learning community and how their engagement plays a significant role in their overall success in college. Other topics that will be discussed are the positives and negatives that these activities play in student's college lives and their effects. Overall, college can be the best four years of your life if you learn to balance your activities with your academics which is key to success.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Cyberbullying within universities too?

Thomas Yoo
Faculty Mentor: **Michele Ren** *English*
Claire Hall *English*

This presentation discusses the bullying that takes place in college. Bullying is the foundation for understanding of cyberbullying. Cyberbullying is affecting the lives of students on campus. Some studies suggest that the bullying does not stop from high school to college. Cyberbullying includes harassing, obsessive, and obscene

messages, and it is the new form of bullying. In the technological age cyberbullying is more often taking place by social networking, cell phones, and additional devices or technology to communicate with one and another. There are differences in how cyberbullying affects college students psychologically compared to high school and middle school student. This study is going the draw on guides for stopping bullying, research on preventing cyberbullying, and statistics on how often bullying happens throughout a typical college year compared to a high school year.

Session: **CORE 102 Poster Session - Issues in Higher Education**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

CSCR Open House

Jeanne Mekolichick
Faculty Mentor:

Please come visit the Center for Social and Cultural Research on the second floor of Russell Hall from 12-2pm to learn about faculty-student-community research projects on various topics and with assorted groups on and off campus. And, find out how you can get involved.

Session: **Center for Social and Cultural Research (CSCR)**
Presentation Type: **Open House**
Day & Time: **Thursday 12:00pm-2:00pm**
Location: **2nd Floor of Russell Hall**

CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia I

Our Stuff Is Polluting the Environment

Caitlin Annear
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes the amount of Stuff that human beings use and the trash that this Stuff leaves behind. All of this trash deeply affects our environment such as through polluting water, making places inhabitable, and possibly causing climate change. just imagine a world with trash piles as tall as buildings everywhere and the planet is barely habitable, like in the movie WALL-E. Most of this trash left behind is from Stuff that we don't even necessarily need, so if we become more aware of the things we need and don't need we can change the way we negatively affect our environment.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Obesity: It's More Than Colors on a Map

Erica Carter
Faculty Mentor: **Brenta Blevins** *English*

What is mostly red and orange and is divided into 50 sections? The CDC's 2010 map of obesity across America. In 2010, no state had a percentage of less than 20% of its population to be obese. This means that more than one third of US adults and 17% of children and adolescents from the age of 2-19 are suffering from this disease. We should stop and ask ourselves, how it got this far. Is it due to the fact of the rise of technology and how it has become an object that we live our lives around? An excellent example of this is in the movie WALL-E. These people have become so dependent on technology, that they ride around in hover chairs and have "face-to-face" conversations through hologram TV screens. Or is it as simple as people becoming lazy and having bad eating habits? Who do we blame for this? The social media, for making everything "value sized" or projecting a fancy hover chair that comes in an array of colors? Either way, the epidemic is growing rapidly and we need to find a productive solution to fight off this economic and social disaster.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Sustainable Food on Earth – So We Are Not Stuck Living in Space

Stephanie Carter
Faculty Mentor: **Brenta Blevins** *English*

Sustainable food is often considered to be food that is safe for those consuming it, as well as the sources that it comes from. These food sources would promote quality living conditions for the animals and protection of the environment; it would also provide financial security for the community that is producing it. Accomplishing fully sustainable food production throughout the world would take each person being devoted to adapting this lifestyle and promoting the cause. It would not be easy but it could be possible, and it may even be necessary; without sustainable food sources our planet's ability to support human, animal, and plant life could significantly diminish, and may cause our planet to become completely inhabitable, as demonstrated in the movie WALL-E.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Global Warming's Effects on Animals

Tyra Clayton
Faculty Mentor: **Brenta Blevins** *English*

My project examines how Global Warming is killing off some of our species. If we all take in to consideration that animals are dying off because of the way the world is doing things, then we can help save some of these precious animals. If animals start to die off, then animals that feed on the dying animals will start to die also, causing a chain reaction. How would it make you feel if you started to see animals disappear, animals that you love? I love polar bears and they

are one of the first species that is dying off. It breaks my heart to know that this could change if we all bonded together to help save them. WALL-E shows how everything on Earth dried up and was destroyed except for just one cockroach. Do you want this to actually happen to Earth in the future? I know I do not; so let's do something to change this! Global Warming needs to be fixed and we can do it together.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

The Dystopia of North Korea

Joseph Comings
Faculty Mentor: **Brenta Blevins** *English*

Have you ever wondered what it would be like to live in a dystopian society? Believe it or not, one exists today: North Korea. When compared to Cory Doctorow's Little Brother, North Korea represents ways of oppressive, even dystopian ways, of government rule over its people. Only few have experienced the secretive state firsthand because it's illegal to escape it. Anybody suspected as even speaking out against the government could be beaten, tortured, sent to a forced labor camp, or even killed. North Korea is a real-life dystopian nightmare set in a communist state.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Kony 2012: Invisible Children

Welsey Fitzhugh
Faculty Mentor: **Brenta Blevins** *English*

Close your eyes: imagine you have just tucked your children into bed then during the night while your family is sound asleep a man named Joseph Kony breaks into your house and abducts your children. Your children are then forced to kill your entire family. The girls are forced to become sex slaves as the boys are forced to become child soldiers. The children are coerced to fight for the Lord's Resistance Army. For over twenty-six years Joseph Kony has abducted over 30,000 children. How would you feel if your child was abducted and forced to kill? Kony is still out there. Together we are going to stop him. The short documentary Kony 2012 shows real life child soldiers while the book The Hunger Games depicts fictional child exploitation.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Too Much Network, Not Enough Social?

Rachel Heath
Faculty Mentor: **Brenta Blevins** *English*

Is there such a thing as too much of a good thing? Are we using too much technology that it is slowly harming our daily lives and activities? This project analyzes the problem that the world is facing when it comes to today's Social Networks and Interne users, texting or IM'ing instead of having the confrontation face to face. Are we becoming "afraid" to talk to someone in person or are we getting more and more comfortable behind the phone or computer? Studies show that 7 out of 10 Internet users are active on at least one Social Network, and 9 out of 10 marketers use Social Networking to promote their business. Do you fall in these categories?

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Sticks and Stones

Travis Hoyt
Faculty Mentor: **Brenta Blevins** *English*

When we look at building something, we think of obtaining resources and using them in a way to construct. What would you say if there were no reasonable resources left due to the destructive nature of a nuclear war? If a nuclear bomb dropped there would be an instant explosion creating a radioactive mushroom cloud that would reach 40,000 feet in less than 15 minutes, leaving a 100-yard wide crater up to 130 feet deep. Everyone within a half of a mile would die within seconds. If this were to happen several times in the United States, would the few survivors be able to rebuild our country and society? Like Einstein said, "I know not with what weapons World War III will be fought, but World War IV will be fought with sticks and stones." A good example of his is the role playing video game, Fallout 3, where people are enclosed in shelters for several hundred years after nuclear bombs dropped and are then reintroduced to society trying to clean, rebuild a moral society, and obtain unharmed resources.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

The Abusive Use of Technology: Inspired by WALL-E

Micajah Lacy
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes and shows how human use of technology in today's world is getting out of hand. This project was inspired by a movie called WALL-E; in the movie humans have become so dependent on technology that they forget what life is like outside of their computer screens. For example in the movie people are talking about playing virtual golf with one another and they call it "going to the driving range" and while they are talking they are on a video chat while they are right next to one another. This movie accurately reflects the way we use technology in everyday life. Take your cell phone for example, how many times do you use your cell phone a day, how many times do you check it while you're on a date or out to eat with friends or family, what would your life be like without your cellphone? The movie WALL-E is a good example of how we abuse the technology and does a good job of pointing it out.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Are Weight Problems Becoming a HUGE Issue?

Katie Lusk
Faculty Mentor: **Brenta Blevins** *English*

Have you noticed all of the hype about weight loss and weight gain? Has it become an every-household issue? In today's society people are obsessing over food and obesity is even becoming known as the worst "preventable" disease. Unfortunately, one in three people in America are obese and that varies between different countries. Even worse, the younger generation has become unhealthier than any other generation before them. This could be a direct result from the obsession with technology and the lack of exercise. Is this problem fixable or are we just all headed down a terrible path? Should we be concerned that the members of our society will become just like the characters from WALL-E who are dependent on technology for their every move and who lack any dive to be healthy individuals?

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Express Yourself: Freedom of Online Speech

Nora McFaddin
Faculty Mentor: **Brenta Blevins** *English*

As United States citizens, we are born with the freedom of speech through the first amendment of the U.S. Constitution, while some countries in the world do not have this right at all. Some people may wonder if this right applies to online use… That is here the problem occurs. Yes, U.S. citizens have the freedom of speech, but the internet is a different world. Just like in the book Little Brother, the government, schools, and even your parents/guardians have the ability to monitor everything that you do on the internet. Do you still have freedom of speech?

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Our Future Is in the Hands of Social Networking

Lindsay Odenthal
Faculty Mentor: **Brenta Blevins** *English*

Have you ever realized the impact social networking has made on our society? As a technology dependent society, social networking contributes both good and bad influences on our daily lives. Being able to communicate quickly and share ideas is important in today's society. However, have you ever thought that social networking can take these actions too far? From cyber socializing to computer hacking, social networking can often aid in blowing innocent situations out of proportion. More importantly, these instances can quickly change the outcome of any situation to affect our future. The story Little Brother shows us both the negative and positive influences of social networking.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Effects of Social Networking

Daniel Stratton
Faculty Mentor: **Brenta Blevins** *English*

The main focus of this project is to point of the primary advantages and disadvantages behind social networking. The main social networking sites like Twitter and Facebook have affected many around the world, benefitting them such as being able to instantly communicate with people, but also hurting them at the same time, such as through cyber bullying. With sites like these they can also create their own social castes. With social networking people can meet and chat with others around the world, but at the same time lose track of reality and stay inside social networking. The novel Little Brother is a perfect example of how a social networking site can be beneficial, but also the major disadvantages.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

The Government and Birth Control

Alexis Whitehurst
Faculty Mentor: **Brenta Blevins** *English*

Access to birth control is a very important issue, especially when dealing with population control. Every day the world population increases by 227,000 people. When everyone recognizes the importance of family planning and reproductive health and rights we can more easily find the solutions to issues like global hunger and the environment. People are more aware of birth control now than they were back in the 80s or 90s, but the percentage of unprotected sexually active women is up more now than it was in the 90s. The issue of birth control has come up recently in real life political debates and legislation, while the book The Giver shows a fictional account of government control of sexuality through a pill.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Information Technology Symposium

Web and Database Application Development: UGCCRC Document Upload System

Nick Hagood
Faculty Mentor: J**eff Pittges** *Information Technology*

This capstone project will combine both of my departmental concentrations of software engineering and database – I will be pulling together the various skills of producing an entire system (software engineering) by developing an application in PHP (web programming) and tying it all together with an Oracle backend (database). This project will also provide a valuable real-world experience testing my knowledge of the information technology security certificate I am working towards as well. The project will result in an online application for the submission of proposals to the UGCCRC (Undergraduate Curriculum and Catalog Review Committee).

By tying together all the various aspects I have studied so far in the computer science discipline, this project will give me the opportunity to produce a full-scale system that the university will be able to utilize. This project will give hands-on experience for the skills I have learned so far in my field, and as well as experience combining these skills into a working, valuable product. This project goes above and beyond required curriculum material by requiring a high level of cross-concentration development, without the assistance of software development team members focused on various programming aspects.

This presentation will involve a short site demonstration as well as a brief explanation on how my goals and objectives were achieved, how the project actually ties together various information technology skill sets, and how this project has a strong educational component that relates directly to my studies in the computer science discipline.

Session: **Information Technology Symposium**
Presentation Type: **15 minute oral presentation with a website demo**
Day & Time: **Thursday 1:45-2:00pm**
Location: **Heth 018**

Modeling and Solving Optimization Problems on Wireless Electricity Charging Protocol in Wireless Sensor Networks using Mixed Integer Programming

Nancy White Chloe Norris Eileen Hindmon Catherine Greene
Faculty Mentor: **Hwajung Lee** *Information Technology*

The project we are working on entitled Modeling and Solving Optimization Problems on Wireless Electricity Charging Protocols in Wireless Sensor Networks using Mixed Integer Programming. This project is an extension of a previous project where the focus was on integrating wireless electricity (witricity) charging protocols into wireless sensor networks (WSNs). This year the focus is on modeling and solving various optimization problems on the witricity charging protocols. WSNs are comprised of small sensors with limited memory size, computational capacity, data transmission capacity, and battery power. It is very costly to have to constantly replace the batteries in the sensors and sometimes it is not easy or convenient. This research would eliminate the need for humans to change batteries when they no longer have any power. Energy efficiency is the most critical factor in a WSN because the sensors limited battery life. To eliminate the energy constraint from a WSN, we propose research on witricity charging protocols in wireless sensor networks. A witricity charging protocol is coordinated energy passing between a large numbers of sensors with minimal energy leakage and if charging is limited, maximizing the network lifetime. Energy transmission efficiency indicated how much energy is leaked during witricity transmission. We are using CPLEX to simulate an optimization model in wireless sensor networks. Much time was spent researching and implementing code in Cplex. This language is used mainly for providing optimal solutions to linear equations. The focus is to minimize energy leakage to ensure the more efficient energy transfer possible.

Session: **Information Technology Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 2:00-2:15pm**
Location: **Heth 018**

Optimization Calculator For Wireless Sensor Networks Powered By Witricity

Andrew Rush
Faculty Mentor: **Hwajung Lee** *Information Technology*

There has been a recent increase in the importance of wireless sensor networks for collecting data for military and civilian applications. To achieve energy efficiency in WSN critical processes must be limited, preventing increased applications of SN. To solve this limitation, we propose integrating wireless sensors with wireless electricity (witricity) charging capabilities.

To aid with the creation of WSN, we will create an instrument useable by anyone, including those who do not have a background in witricity technology. This instrument will present the user with an interface to design a WSN defined by the constraints required for each individual network. The users will be able to select a degree of charging: perfect, limited, or no charging. The application will also allow the user to choose between a distributed or a centralized algorithm, power source types, and define device mobility. The application will include an optimization calculator powered by linear programming using CPLEX.

This opposed instrument will create a witricity charging research platform enabling researchers to focus on increasing the capabilities of WSN by removing the barrier created by a lack of knowledge of witricity and its implementation.

Session: **Information Technology Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 2:15-2-30pm**
Location: **Heth 018**

Fault Tolerance in Cluster Computing

Carroll Wongchote Joel Dominic
Faculty Mentor: **Hwajung Lee** *Information Technology*

How much efficiency is lost when varying numbers of nodes fail in a compute cluster? The effects of multiple node failures should not go unnoticed. The research project focuses on testing the fault tolerance of clustered systems using the Apache Hadoop apReduce framework. The cluster used for testing had a network of 10 machines, and the goal of the project was to measure the amount of time it would take the cluster to count the number of words in 100 books. The first step of the process involved recoding a baseline time. After which the system was run in multiple different configurations to test different types of failure that could occur and recorded the amount of time the cluster took to process the data. These results were then compared to the original baseline score as well as to the other scores to come to a conclusion about which types of node failures affect performance the most. Computations in systems which utilize a cluster of nodes to perform a task, do offer a significant increase in sped, but with this increase in speed comes a penalty in stability, since there are more components that have the possibility to fail.

Session: **Information Technology Symposium**
Presentation Type: **30 minute oral presentation**
Day & Time: **Thursday 2:30-3:00pm**
Location: **Heth 018**

Science and Religion Debates

Is there room for God in Evolution?

Pro: Katrina Koussis, Molly Allen and Heather Burgoyne Con: Brian Johnson, Kenzie VanDerwerker, and Matthew Bagley
Faculty Mentor: **Joe King** *Psychology*
Session: **Science and Religion Debates**
Presentation Type: **Debate**
Day & Time: **Thursday 2:00-2:35pm**
Location: **Heth 019**

Should Galileo have been brought to Trial? Given he was brought to trial, should he have been convicted?

Pro: Britani Sanford, Nathan Lawless, and Amber Woods Con: Jenna McChesney and Jennifer Hedrick
Faculty Mentor: **Joe King** *Psychology*
Session: **Science and Religion Debates**
Presentation Type: **Debate**
Day & Time: **Thursday 2:40-3:15pm**
Location: **Heth 019**

Multidisciplinary Symposium III

Politics and Dystopias: The Predicting Power of Dystopian Fiction

Carlin Crisanti
Faculty Mentor: **A.C. Waggaman** *Political Science*

The objective of my project is to examine various depictions of dystopian worlds in classic literature and determine their relevance in a 21st century world. Certain "dystopian" themes, behaviors, societal perceptions, etc. will be analyzed in a contemporary context. The dystopian indicators will be compared with the current state of the United States as depicted by secondary sources and conclusions will be drawn.

Session: **Multidisciplinary Symposium III**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 2:00-2:15pm**
Location: **Heth 045**

Entrepreneurial journalism and nonprofit organizations

Deanna Perry
Faculty Mentor: **Joseph Staniunas** *Communication*

In a world of 24 hour news networks, newspapers have had a difficult time keeping up. Efforts to stay afloat are at the expense of solid, in-depth reporting. Even without the ability to keep print up to date, newspapers have reporters working around the clock to produce content for the web. The suffering art of investigative reporting needs a revival. Thanks to several nonprofit reporting teams that have popped up recently, it might just survive. For my capstone project I have taken it upon myself to find out how these organizations work and how Radford University could start one.

I will use a Powerpoint slideshow and a Wordpress account with my work on it to explain the steps I took to understand the pattern of nonprofit journalism teams partnering withuniversities and local publications to fill the need for investigative news. The Wordpress will have a mock-up of what type of information a nonprofit reporting website would need.I will focus heavily on how Radford University could set up a nonprofitinvestigative news group. This will cover ways to get funded and how to get students involved in the effort without harming our regular student-run publications. I will also discuss the possibility of getting student's work printed in local newspapers Ike the Roanoke Times. Ultimately, this presentation should be a how-to guide for starting an investigative news group that would be affiliated with our school.

Session: **Multidisciplinary Symposium III**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 2:15-2:30pm**
Location: **Heth 045**

Scholar-Citizens and CSCR Symposium II

FLOYD COUNTY PLACE-BASED EDUCATION ORAL HISTORY PROJECT

Shylah Jones Mary Dickerson Amy DuPont Joshua Judd Stephen Lesiv Claire Paulette Matt Probst Josh Shultz
Faculty Mentor: **Melinda Wagner** *Sociology*

The Project focus is oral history interviewing that connects high school age students with elderly residents of their home place, using college age students as mentors. Since 2007, focus has been on World War II veterans. The Project's purpose and goals are to forge connections, build skills and confidence, conserve local history and culture, and foster pride. The partners in this project have forged a symbiotic relationship. The major partners are the Floyd Story Center, Floyd County High School, and Radford University. In the presentation, we will discuss our experiences as Project mentors this semester.

Session: **Scholar-Citizens and CSCR Symposium II**
Presentation Type: **1 hour presentation**
Day & Time: **Thursday 3:00-4:00pm**
Location: **Heth 045**

CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia II

Degradation of Communication

Erin Compton
Faculty Mentor: **Brenta Blevins** *English*

When you are around the age of twenty-five or thirty and you try to have a conversation with a thirteen to fifteen year old girl, you will most likely notice two things: one, unless asked to put it away, they will have some sort of communication device out, and two, some of the things they say you would have never said to an adult at that age. When children are so stuck to their phones and computers it takes away skills that they need in life. They lose the ability to small talk and have appropriate face- o- face conversations. They have trouble talking to new people without the mask of their online profile. They can use their words as tools of destruction anonymously over the internet with bullying and fake profiles. They also lose the ability to communicate properly, demolishing words and phrases into mere sequences of letters. But most importantly, they lose that human connection and sharing of cultural experiences that makes us a community. In the movie WALL-E, people ride around in their hover chairs, and it becomes evident that they no longer have deep personal connections with each other. They don't have love and true friendship, but rather online gaming partners and gossip buddies. They have lost the ability to communicate without a screen and alone with it have lost their culture and personal attributes along the way. What if this is in our future?

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Save the Planet From Yourself: Stop Polluting!

Molly Cox
Faculty Mentor: **Brenta Blevins** *English*

Can you imagine a world where pollution has become so severe on Earth that human life is no longer sustainable? If we as a human race do not take drastic measures to take care of our planet, then sooner or later the problem of pollution will be irreversible. There are many ways that individuals might help the situation such as using alternative power (i.e. solar, wind), driving electric cars, or recycling their trash. An example of a world where the problem of pollution has made the planet unlivable can be seen in the movie WALL-E.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Lack of Communication Due to Technology: Lazy or Uninformed?

Casey Foutz
Faculty Mentor: **Brenta Blevins** *English*

Have you ever noticed that from generation to generation face-to-face confrontation, verbal communication skills, and literary skills of kids, teenagers, and even adults are becoming less important? In many dystopian pieces such as Little Brother and WallE we see how big of an impact technology has on our everyday lives. Studies show that over 800 million Americans spend almost a quarter of their time on networking sites and blogs with over 500 million users on Facebook alone; this results in less face to face contact. However, Facebook and other social media websites are not the only ways to electronically communicate with others. Cell phone usage has soared from the twentieth century to the twenty-first century. In fact, cell phones are not just used for phones anymore; over half of Americans now have data packages so they can send and receive emails and get on the internet from their phones. While new technology can be good for quick contact and keeping in touch with distant friends and family, the last thing Americans want to see is a generation that cannot physically communicate face-to-face because they simply do not know how because of technology.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Big Brother is Watching

Micala Fox
Faculty Mentor: **Brenta Blevins** *English*

Ever feel like someone's watching you? As scary as it is, you're not alone. It's happening to each of us every day. Today, government surveillance is taking over the lives of every American. Cameras are installed in banks, stores, schools, and pretty much any other civilized institution. Some say it's basic security, others claim it's an

infringement on our privacy. This project analyzes the similarities between our society and the one in the dystopian novel Little Brother, where an innocent teenager tries to fight the government when security and protection go to the extreme.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Is WALL-E Our Future?

Carly Grubbs
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes the connection between lifestyle choices and obesity in the U.S. Obesity – a major leading cause of heart disease and type 2 diabetes – has become an epidemic. Our sedentary, overindulgent lifestyle is mirrored to an extreme in the movie WALL-E, a film in which exercise is a foreign concept and the masses spend their days on a perpetual vacation of buffets. Although the movie is an exaggeration, do the rising obesity rates in the modern world signify a future similar to that of the ubiquitously obese WALL-E population? The movie WALL-E is a good example of how poor lifestyle choices can impact a person's heath.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Conflicts between Technology and the Constitution

Jon Hawkins
Faculty Mentor: **Brenta Blevins** *English*

Have you ever wondered if someone is watching you? Chances are at some point the government has come across your web searches, global positioning system coordinates, or GPS location, and maybe even tapped a phone call. This project analyzes how as technology and society advance everyday, the same needs to happen with our constitutional rights as citizens. In Little Brother, a futuristic version of George Orwell's 1984, the government relieves the people of all personal rights to freedom of speech, freedom of property, and the right to privacy. Little Brother illustrates what can happen if our constitutional rights do not advance at the same pace as our technology.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Surveillance Gone Wild

Ryan Hawks
Faculty Mentor: **Brenta Blevins** *English*

Our society today is rapidly entering an era of no privacy where there is surveillance everywhere you go and there are no secrets from the government. It's so easy for our government to watch us because of how technologically advanced we have become. The more advanced our society gets, the more ways our government can watch over us. There are so many types of surveillance like computer monitoring, tapping of telephones, analysis of social networks online, and actual surveillance cameras, which are just few of the main ways used by the government today to observe people. Certain places even have a system that can recognize you just from a quick scan of the face, or possibly even the way you are walking. Little Brother is a perfect example of a dystopian society with way too much surveillance and possibly too technology advanced systems for our privacy.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Act Now: Stop Pollution Before it Kills Us

Rebecca Lewis
Faculty Mentor: **Brenta Blevins** *English*

Pollution is the change in the environment caused by harmful substances or products. This is a major problem in today's world. Each year U.S. factories spew 3 million tons of toxic chemicals into the air, land and water. Studies indicate about 5 to 10million deaths are just due to polluted drinking water. In the movie WALL-E we see what could happen to earth if we keep polluting our planet. The movie helps us realize that pollution is becoming a bigger and bigger problem and that we need to be doing something about it now so we don't end up like WALL-E.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

The Media's Masquerade

Sheridan Cody McFalls
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes the ignorance of society as a whole, pertaining to common issues in our present and imminent realities. The idea of social ignorance relates to how informed our society is on matters of high importance in our world and civilization today. The movie I am using for an example is called The Matrix. In The Matrix, the entire world as society knows it is simply a giant computer simulation. Robots enslaved humankind hundreds of years before and use them as a source of energy. The robots invented this digital reality, the matrix, in the image of the world as we know it today. Most people in The Matrix are entirely oblivious to the fact that the Matrix is in fact just a computer simulation. Everyone goes about their day to day live ignorant to the reality that their real world, the Earth, is outside of this fantasy land. This situation is very similar to our society's reality in the sense that many of our people are ignorant of issues that are affecting the world physically, politically, and socially altogether. We are largely unaware of social habits which affect our environment, events which go on inside of our government that have a huge impact on us, and also social behaviors we continue to perform which are detrimental to u as a whole. Though, instead of a simulated reality, we're ignorant because of a giant system called "mass media."

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**

Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

The Effects of the Economy on the Ecosystem

Victoria Ogle
Faculty Mentor: **Brenta Blevins** *English*

In a nation run by advertising, department stores and consumerism, we tend to forget that the products we are purchasing and throwing out have a significant effect on the environment. The movie WALL-E gives a good example of this. Can you imagine future generations actually having to leave the planet because it is virtually uninhabitable? While the United States' materialistic consumption rate is going up, the ecosystem is slowing breaking down. If all the countries in the world consumed as much as the United States, it would take more than five Earths to be able to sustain the population. We don't have five Earths, though. We only have one planet, so we must take better care of it or else we will lose it.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Is Technology/Obesity Leading to the End of the Human Race?

Samuel Sapp
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes the growing problem of muscle atrophy because of inactivity over prolonged periods of muscle disuse (bed rest, limb immobilization, etc.). This inactivity-induced atrophy results in a loss of muscle protein due to a reduction in protein synthesis and an increase in the rate of muscle protein breakdown. This is seen in the movie WALL-E. We as a growing population are always looking for the easiest method and this could lead to our demise. In the movie, humans can only move around on hoer chairs on a predetermined pathway. Have you ever thought of having everything you ever wanted at your fingertips? I bet you have but, have you ever realized the consequences for these lazy actions? WALL-E shows us how the entire human race was heading to extinction because of technology and obesity.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Technology: Violent Video Games Causing Violent Times

Philip Cameron Smith
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes the effect of technology on youth during the technological era our society is in today. The specific technology that this presentation is directly aiming at is video games, in particular Grand Theft Auto. Rebecca Leung wrote the article Can a Video Game Lead To Murder? (2009) explaining an incident to support the effect of technology pertaining to the video game Grand Theft Auto. Technology does erode human character of teenagers in which it makes them become artificial by using technology too much. At the extreme of this argument we behave like machines. Gaming systems make teenagers artificial, impatient, insensitive, and selfish. From the dystopian novel Do Androids Dream of Electric Sheep? (1968) by Philip K. Dick portrays one of the main characters Rick Deckard. Deckard shows his reliance upon the technology provided throughout the book; however, as the book goes on, the reader tends to see the loss of empathy that Rick Deckard has acquired. The book, which was written in 1968, shows the same effect of technology on the characters as it does in our technological age today. Do Androids Dream of Electric Sheep? is a prime example of the relevance to Rebecca Lueng's case today.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Pollution on Earth

John Willis
Faculty Mentor: **Brenta Blevins** *English*

This project analyzes the problem of pollution on Earth. Humans produce trash at an alarming rate, and are constantly emitting harmful gasses into the atmosphere. If we continue like this, the planet could soon become incapable of supporting life. People need to start consuming less and recycling more to keep Earth a clean and inhabitable place. This is very important and pertains to everybody because we all depend on Earth to not only survive, but also to live life. The movie WALL-E is a good example of what could happen to this planet if nothing is done about the pollution problem.

Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Presentation Type: **Poster presentation**
Day & Time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Multidisciplinary Symposium IV

Investigation of a Self-Hearing Application for Apple iPad® Technology

Kaila Higuchi
Faculty Mentors: **Lauren S. Flora and Kenneth M. Cox** *Communication Sciences and Disorders*

Hearing screening applications, available on for download on smart devices, have the potential to allow for sophisticated testing techniques and production of reliable results as compared to clinical diagnostic audiometric evaluations. Due to the lack of experimental research investigating the reliability of these apps, this study assessed the validity and user satisfaction of an Apple iPad® application to determine if the results from the application corresponded to clinical pure-tone audiograms. In addition, this study explored the implications of the results for both the consumer and the practicing audiologist. Fourteen participants (range 21-64 years) with varying degrees of hearing loss, not exceeding 70 dB HL, were recruited for this study. Additionally, a survey was administered to determine user perception of the application with regards to hearing health care. A single factor ANOVA ($p < .05$) revealed no statistically

significant differences between the diagnostic audiogram and self-hearing screening application assessment measures. Overall, the iPad® application produced audiometric threshold data comparable to a diagnostic evaluation. Administration errors were identified and are discussed. Examination of responses from the user satisfaction survey indicated that consumers may not only perceive the results as valid, but may also run the risk of subjectively viewing the results as less significant than may actually be the case. The findings from the survey support the need for consumer education regarding implications of self-assessment measures as well as the need for "apps" to produce reliable and valid results.

Session: **Multidisciplinary Symposium IV**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:15-5:30pm**
Location: **Heth 018**

Mathematics Education Research: Strategies for Solving Word Problems

Meghan Wyatt
Faculty Mentor: **Laura Jacobsen** *Teacher Education and Leadership*

In this research paper the focus will be on a case study conducted in a second grade mathematics classroom. This classroom contained students that were in the gifted program and were studying a unit on mathematical word problems and problem solving. The objective of this study was to find useful strategies that can be used in classrooms when the lessons are focused on mathematical problem solving and word problems. Through observations with field notes, interviews, and pre and post tests, this research found that there were five very useful strategies that this teacher often implemented in her classroom that can be used for other classrooms as well. These five strategies are teaching the types of word problems, using manipulatives, integrating the curriculum, using real world problem solving applications, and modeling expectations.

Session: **Multidisciplinary Symposium IV**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:30-5:45pm**
Location: **Heth 018**

Elliptic Curves are Isomorphic to Tori

David Heras James Grenier
Faculty Mentor: **John McGee** *Mathematics and Statistics*

The purpose of this research was to analyze the theorems associated with elliptic curves over the complex field. One the products of this research is a detailed guide, including proofs, of the behaviors of the Weierstrass p and sigma function and their role in determining the properties of elliptic curves over C. The talk shall summarize the crucial theorems that give rize to the overall theory.

Session: **Multidisciplinary Symposium IV**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:45-6:00pm**
Location: **Heth 018**

Multidisciplinary Symposium on Business and Economics

Building a Music Industry Program in a Rural Location

Timothy Shell
Faculty Mentor: **Timothy Channell** *Music*

Networking is an important part of the music industry. Being able to network with others may become a challenge in a rural location. Radford University, with a population just over 9,000 and the city of Radford, VA with a population of approximately 16,00 is such an environment. It can be a challenge building and having a successful music business program. How did Radford University's music business program go from 8 students to over 50 students in just four years?

The Radford University music business program has grown from 8 to 50 students for several reasons. Technology has played a huge role in helping students interact with professionals from the industry. Technology has also provided new opportunities through a university recording studio; providing "real world" work experience for students. Radford Records, Radford University's lab based record label; is giving students valuable hands-on experience through recording of all concert performed in the Covington Center for Visual and Performing Arts, and mixing and mastered experience. Additionally, students have a number of recording projects happening throughout the semester.

The music business program ties all aspects of the industry together by inviting professionals to the MEISA symposium every spring to give insight on the industry. Radford's MEISA chapter invites people with different skills within the industry such as performers, managers for symphonies, booking agencies, recording producers and mastering engineers. The students it in on seminars with each guest speaker to learn how they got where they are today and what they do in their area of the industry. The students are also able to have lunch with them during the symposium and build networking connections.

With tools such as technology, symposiums and recording studios, colleges in rural locations are able to stay relevant with the industry. The students stay current, and are given the opportunity to connect with the industry in ways vital to their future careers.

Session: **Multidisciplinary Symposium on Business and Economics**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:00-5:15pm**
Location: **Heth 019**

Brand Me: Fan-Connect.com

Erin Kelsh
Faculty Mentor: **James Lollar** *Marketing*

Whether you are a biology major or a business major every individual needs their own distinct way to brand themselves in order to be successful. We are not hired based on own paper selves (the part of us displayed on our resumes and portfolios) and I do not fully believe we are hired only on personality either, but instead based on something that many of us should do everyday, Branding. This

project will showcase how branding yourself can make you successful. The main portion of the project is the creation of a business and website called Fan-Connect. This company will be discussed in detail including the background, full description, and a marketing plan.

Session: **Multidisciplinary Symposium on Business and Economics**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:15-5:30pm**
Location: **Heth 019**

Adventure Tourism in Developing Nations

Quinn Roberts
Faculty Mentor: **Mark Wagstaff**
Recreation, Parks and Tourism

Adventure tourism has positive and negative effects on the sustainability of economy, culture and environment, particularly in developing nations. This presentation focuses on more than just the potential positive effects adventure tourism can have on a local area's economy as it explores the potentially positive and negative effects adventure tourism has on a local area's economy, culture, and environment. In many developing nations, there is a strong connection between culture and the environment. The connection between culture and environment should be factored into decision making that leads to potential economic development. The presentation goes in depth on various pre-existing adventure tourism locations in developing nations including, whitewater rafting in Zambia, mountaineering in Peru, and high altitude climbing in Nepal. After looking at adventure tourism in all positive and negative effects it has on various aspects of sustainable life, one can then decide whether or not adventure tourism Isa viable option for positive sustainable growth in developing nations.

Session: **Multidisciplinary Symposium on Business and Economics**
Presentation Type: **30 minute oral presentation**
Day & Time: **Thursday 5:30-5:45pm**
Location: **Heth 019**

"Banking Like an American": A Contribution to the Social Justice of the Hispanic/Latino Immigrant-Refugee Community.

Christal Benton
Faculty Mentor: **Margaret Hrezo** *Political Science*

The purpose of this project is to bring an acute awareness to a topic in society that is hardly discussed in a collegiate setting; Hispanic and Latino Refugee and Immigration acclimation to American culture and society. While the initial idea was to explore a variety of avenues, as it is very easy to do with so many aspects from to choose; including both health care and education, it became clear as my research developed further that there exists a topic often unexplored. There is an aspect of "the American Way" that at least 85% percent of the members living in the Hispanic/Latino refugee community are often times ignorant of, oblivious to, or perhaps even afraid to approach-American banking and finances. To complete the project, the overall aim is to find a method in which it is possible to make new Hispanic and Latino immigrant communities how to "Bank like an American". This includes the primary financial skills such as how to write a check, what a checking and savings account is and how the work, what is necessary to have a checking and savings account and the like. Eventually we can begin to explain more in depth topics to older members; such as defining the terms; investment, credit, bond, and stock. We can explain how to utilize these tools and how they can work toward their benefit as they begin their new lives as American citizens. Because the project is as grandiose as it appears, the most guaranteed way to see the idea prosper is to ensure both longevity and interest.

Session: **Multidisciplinary Symposium on Business and Economics**
Presentation Type: **20 minute oral presentation**
Day & Time: **Thursday 5:45-6:05pm**
Location: **Heth 019**

Art and Design Symposium

Titian's Women

Amanda Reid
Faculty Mentor: **Carlee Bradbury** *Art*

Women of Titian's time did not have the power to cause change, so why do the women in Titian's paintings seem to hold such power; power over the artist, power over the viewer and power over the entire scene? Did Titian believe that these women deserved to hold more of a power status than they were originally given so he gave them their power through his artwork? Was he using the female body as a metaphor or symbol for power or did Titian view women as objects like the rest of society; were these paintings just another way for women to be owned? Does the idea of viewing a painting correlate to ownership of the subject?

Most of Titian's images of women are viewed as very sexualized and even, at times, pornographic. It is my belief that Titian had love affair with the female body and used it to tell stories or rather make a point about the power of women. You can see evidence of this in his painting entitled "Venus of Urbino" where he uses the Venus's eyes to connect her with the audience. Titian uses this connection to show the audience the power his women hold. Titian purposely sexualized these women, not to possess them, but to exert their power as sexual beings; sex is a huge form of power, one that women have been using since the dawn of time.

Session: **Art and Design Symposium**
Presentation Type: **30 minute oral presentation**
Day & Time: **Thursday 5:00-5:30pm**
Location: **Heth 045**

Is it okay to make a green rabbit for art? The Ethics of Art

Brittany Hundman Luckele Milford
Faculty Mentor: **Roann Barris** *Art*

The end of the twentieth century introduced the most diverse and progressive forms of art that challenge societal conventions or reflect it in some manner. Transgressive art is art made to inspire controversy and shock. So, how does one respond to the creation of transgressive art? Does outrageous and outlandish artwork deserve the same respect as those of its socially accepted counterparts? How do you judge artists and/or artworks hat cross moral and ethical boundaries? What are the moral and ethical boundaries? The art

world is associated and praised with being an area with the greatest degree of exploration. Advances in biotechnology allow artists to create transgenic art by manipulating animals for artistic ends. Should this be acceptable? The immediate reaction to various artworks often is the decisive factor in its ruin or censorship. As these questions and issues are being presented, one must ponder the ethical arguments to be made for or against the art, its critical reception, and often the artist's role.

Session: **Art and Design Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:30-5:45pm**
Location: **Heth 045**

Emotions of Color

Christine Hargraves
Faculty Mentor: **John O'Connor** *Art*

When doing design its important to incorporate the right colors so that the art work can relate to the viewer. But why is color so important? I studied the different ways in which colors affect the viewer on emotional levels. I used this information to study how these emotional responses can be used to help communicate the intended message for a given design. I did research on color and design theories as well as performed an experiment using the "Adobe Kuler" website. I then used the information I gathered to create a website for a nonprofit group: The Baptist Collegiate Ministry at Radford University. As a further illustration of my research I designed 3 alternative sites that use completely different color schemes to show the importance of using the right colors.

Session: **Art and Design Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 5:45-6:00pm**
Location: **Heth 045**

Functional Active Sportswear for the Fashion Conscience Female

Angelica Thompson
Faculty Mentor: **Kathy Mitchell** *Interior Design & Fashion*

The active wear line that I created was based on women who like to work out and enjoy looking feminine while doing so. The ideas are based on Ultimate Frisbee gear and what would be appropriate for an Ultimate Frisbee player. I designed garments that are slimming and hide problem areas for women. The designs were also created with emphasis on the back because designs should be pleasing at every angle. I will explain the process and the materials chosen and how I sketched my designs, turned them into patters and made mock-ups. I worked to create a line that was functional for active fashion conscience women.

Session: **Art and Design Symposium**
Presentation Type: **15 minute oral presentation**
Day & Time: **Thursday 6:00-6:15pm**
Location: **Heth 045**

A Funny Thing Happened on the Way to Designing Props

Danielle Goad
Faculty Mentors: J**ennifer Juul** *Theatre*

Carl Lefko *Theatre*

This project was a study of the script A Funny Thing Happened on the Way to the Forum and a collaboration between the student, multiple professors and multiple peers. The result of this collaboration was the development of properties for the 2012 Radford University production of the show. Many different items had to be found, altered or created. The largest portion of the project was a bust that began with a clay sculpture of an actresses face and was finished using multiple mediums and techniques. This project is a true testament to the necessity within the theatre world to study literature, history and to develop communications with professors and peers.

Session: **Art and Design Symposium**
Presentation Type: **Artistic exhibit**
Day & Time: **Thursday 6:15-6:30pm**
Location: **Heth 045**

Cale, Kristan
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Camillucci, Nick
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Canniff, Tessa
Session: **Beta Beta Beta Biology Conference**
Day & time: **Wednesday 8:15-8:30pm**
Location: **Heth 044**

Canterbury, Theodore
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Carethers, Jalen
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Carter, Erica
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Carter, Stephanie
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Castaneda, Blanca
Session: **Multidisciplinary Symposium II**
Day & time: **Wednesday 5:00-5:15pm**
Location: **Heth 019**

Chandler, Jessica
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Tuesday 1:00-2:00pm**
Location: **Heth 016**

Church, Christopher
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Clayton, Tyra
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Cohen, Jordan
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Cohen, Rachel
Session: **Beta Beta Beta Biology Conference**
Day & time: **Wednesday 5:15-5:30pm**
Location: **Heth 044**

Collignon, Maxell
Session: **Arctic Geophysics and Educational Outreach Symposium**
Day & time: **Wednesday 7:40-8:00pm**
Location: **Heth 016**

Comings, Joseph
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Compton, Erin
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Conner, Jacob
Session: **Anthropological Sciences Poster Session**
Day & time: **Wednesday 5:00-5:45pm**
Location: **Heth 016**

Cooper, Laken
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 7:00-7:15pm**
Location: **Heth 044**

Corbin, Amy
Session: **Multidisciplinary Poster Session**
Day & time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Cordial, Paige
Session: **Gender Conference**
Day & time: **Tuesday 3:30-3:50pm**
Location: **Heth 022**

Cox, Molly
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Crisanti, Carlin
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Tuesday 10:00-11:00am**
Location: **Heth 018**

Crisanti, Carlin
Session: **Multidisciplinary Symposium III**
Day & time: **Thursday 2:00-2:15pm**
Location: **Heth 045**

de la Garza, Cecilia
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Dickerson, Mary
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Wednesday 1:00-2:00pm**
Location: **Heth 016**

Dietrich, Drew
Session: **Beta Beta Beta Biology Conference**
Day & time: **Wednesday 7:45-8:00pm**
Location: **Heth 044**

Dillard, Krystina
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Dillard, Krystina
Session: **Psychology Poster Session I**
Day & time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Doan, Steven
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Doyle, Shannon
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Wednesday 10:00-11:00am**
Location: **Heth 016**

Dumond, Brittany
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Dunn, Cory
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

DuPont, Amy
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Tuesday 1:00-2:00pm**
Location: **Heth 016**

Eid, Anthony
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Ellis, Courtney
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Esworthy, Jamie
Session: **Psychology Poster Session I**
Day & time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Fasano, Jillian
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Fenimore, Danielle
Session: **Anthropological Sciences Symposium**
Day & time: **Wednesday 10:45-11:00am**
Location: **Heth 018**

Filcek, Kimberly
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Fitzgerald, John
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Fitzhugh, Welsey
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Foutz, Casey
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Fowler, Erin
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 8:00-8:15pm**
Location: **Heth 044**

Fox, Micala
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Frazier, Alec
Session: **Radio Astronomy Symposium**
Day & time: **Wednesday 8:00-8:20pm**
Location: **Heth 016**

Freeman, James
Session: **Geology Poster Session**
Day & time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Freeman, James
Session: **Geology Poster Session**
Day & time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Frum, Philip
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Garty, Mary
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Goad, Danielle
Session: **Art and Design Symposium**
Day & time: **Thursday 6:15-6:30pm**
Location: **Heth 045**

Godward, Dennis
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Gomes, Natisha
Session: **Gender Conference**
Day & time: **Tuesday 3:50-4:10pm**
Location: **Heth 022**

Gordon, Alynn
Session: **Gender Conference**
Day & time: **Tuesday 1:40-2:00pm**
Location: **Heth 022**

Griffin, Dan
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Grubbs, Carly
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Guillaudeu, Jacob
Session: **Multidisciplinary Symposium II**
Day & time: **Wednesday 5:30-5:45pm**
Location: **Heth 019**

Gunter, Jamilla
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Gusler, Stephanie
Session: **Gender Conference**
Day & time: **Tuesday 3:00-3:20pm**
Location: **Heth 022**

Hackett, Jacqueline
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Hagood, Nick
Session: **Information Technology Symposium**
Day & time: **Thursday 1:45-2:00pm**
Location: **Heth 018**

Hammond, Brittni
Session: **Design and Marketing Poster Sesssion**
Day & time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

Harclerode, Tyler
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Hargraves, Christine
Session: **Art and Design Symposium**
Day & time: **Thursday 5:45-6:00pm**
Location: **Heth 045**

Harrison, Whitney
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Tuesday 12:00-1:00pm**
Location: **Heth 016**

Harriss, Julie
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Hartless, Anthony
Session: **Design and Marketing Poster Sesssion**
Day & time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

Hawkins, Jon
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Hawks, Ryan
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Hayes, Travis
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Heath, Rachel
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Hefta, Jonathan
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Heidel, Sarah
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Hemingway, Timothy
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Heras, David
Session: **Multidisciplinary Symposium IV**
Day & time: **Thursday 5:45-6:00pm**
Location: **Heth 018**

Herbert, Shanell
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Wednesday 3:00-4:00pm**
Location: **Heth 016**

Herrmann, Kaitlyn
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Hicks, Hilary
Session: **Psychology Poster Session I**
Day & time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Higgerson, Hunter
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Higuchi, Kaila
Session: **Multidisciplinary Symposium IV**
Day & time: **Thursday 5:15-5:30pm**
Location: **Heth 018**

Hoover-Thompson, Alysia
Session: **Gender Conference**
Day & time: **Tuesday 2:00-2:20pm**
Location: **Heth 022**

Housely, Benjamin
Session: **Multidisciplinary Poster Session**
Day & time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Hoyt, Travis
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Huggins, Jenna
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Hundman, Brittany
Session: **Art and Design Symposium**
Day & time: **Thursday 5:30-5:45pm**
Location: **Heth 045**

Huth, John
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Hyzy, Brenna
Session: **Beta Beta Beta Biology Conference**
Day & time: **Wednesday 7:15-7:30pm**
Location: **Heth 044**

Ingram, Brian
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Janosko, Laura
Session: **Scholar-Citizens and CSCR Symposium I**
Day & time: **Tuesday 10:00-11:00am**
Location: **Heth 018**

Janosko, Laura
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Wednesday 1:00-2:00pm**
Location: **Heth 019**

Jessee, Marcus
Session: **Arctic Geophysics and Educational Outreach Symposium**
Day & time: **Wednesday 6:20-6:40pm**
Location: **Heth 016**

Jessee, Marcus
Session: **Radio Astronomy Symposium**
Day & time: **Wednesday 8:20-8:40pm**
Location: **Heth 016**

Jessee, Marcus
Session: **Geology Poster Session**
Day & time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Jones, Shylah
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Tuesday 1:00-2:00pm**
Location: **Heth 016**

Jones, Shylah
Session: **Scholar-Citizens and CSCR Symposium I**
Day & time: **Tuesday 3:30-4:00pm**
Location: **Heth 018**

Jones, Shylah
Session: **Scholar-Citizens and CSCR Symposium II**
Day & time: **Thursday 3:00-4:00pm**
Location: **Heth 045**

Judd, Joshua
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Wednesday 3:00-4:00pm**
Location: **Heth 016**

Kanter, Tessah
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Kardis, Cora
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Keener, Dr. Emily
Session: **Gender Conference**
Day & time: **Tuesday 5:00-6:00pm**
Location: **Heth 022**

Keller, Laura
Session: **Arctic Geophysics and Educational Outreach Symposium**
Day & time: **Wednesday 7:20-7:40pm**
Location: **Heth 016**

Kelsh, Erin
Session: **Multidisciplinary Symposium on Business and Economics**
Day & time: **Thursday 5:15-5:30pm**
Location: **Heth 019**

Kerper, Sarah
Session: **Psychology Poster Session I**
Day & time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Kerper, Sarah
Session: **Gender Conference**
Day & time: **Tuesday 1:20-1:40pm**
Location: **Heth 022**

Ketterman, Virginia
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Kiehl, Marisa
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Kime, Jordan
Session: **Geology Poster Session**
Day & time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Kime, Jordan
Session: **Beta Beta Beta Biology Conference**
Day & time: **Wednesday 6:45-7:00pm**
Location: **Heth 044**

Kinder, Jeffrey
Session: **Psychology Symposium**
Day & time: **Wednesday 4:15-4:30pm**
Location: **Heth 018**

Lacy, Micajah
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Landreth, Justin
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

LaRosa, Katherine
Session: **James Joyce Roundtable**
Day & time: **Wednesday 1:00-2:00pm**
Location: **Heth 018**

Latimer, Emily
Session: **Psychology Symposium**
Day & time: **Wednesday 4:45-5:00pm**
Location: **Heth 018**

Leiter, Cassandra
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Lenz, Holly
Session: **Design and Marketing Poster Sesssion**
Day & time: **Wednesday 9:00-10:00am**
Location: **Heth 044**

Lesiv, Stephen
Session: **Scholar-Citizens Symposium**
Day & time: **Tuesday 4:30-5:00pm**
Location: **Heth 019**

Lewis, Bryce
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Lewis, Rebecca
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Loar, Alexandra
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Lubeskie, Mark
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Lusk, Katie
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Mahaney, Elizabeth
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Malapile, Oratile
Session: **Multidisciplinary Poster Session**
Day & time: **Wednesday 3:00-3:50pm**
Location: **Heth 014**

Marion, Charlotte
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Marr, Casey
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Martinez, Francesca
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

Martinez, Zachary
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Massie, Brianna
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Matott, Michael
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Maya, Azzi
Session: **Beta Beta Beta Biology Conference**
Day & time: **Wednesday 5:45-6:00 pm**
Location: **Heth 044**

McCauley, Will
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 11:00-11:50am**
Location: **Heth 044**

McFaddin, Nora
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

McFalls, Sheridan Cody
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

McGuire, Zach
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

McKenzie, Catherine
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 7:15-7:30pm**
Location: **Heth 044**

Meisen, Tori
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Mekolichick, Jeanne
Session: **Center for Social and Cultural Research (CSCR)**
Day & time: **Thursday 12:00pm-2:00pm**
Location: **2nd Floor of Russell Hall**

Merritt, Chelsea
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 1:00-1:50pm**
Location: **Heth 044**

Miller, Alison
Session: **Leadership Poster Session**
Day & time: **Thursday 11:00am-12:15pm**
Location: **Heth 016**

Miller, Jacob
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Mills, Allie
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 7:30-7:45pm**
Location: **Heth 044**

Mobley, Jeremy
Session: **Center for Social and Cultural Research Symposia**
Day & time: **Wednesday 3:00-4:00pm**
Location: **Heth 016**

Moskel, Brittany
Session: **Multidisciplinary Symposium I**
Day & time: **Wednesday 11:15-11:30am**
Location: **Heth 019**

Warwick, Morgan
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**

Washington, Keara
Session: **Psychology Poster Session I**
Day & time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

Weaver, Cate
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Webb, Leeann
Session: **Psychology Poster Session I**
Day & time: **Wednesday 4:00-5:00pm**
Location: **Heth 014**

White, Nancy
Session: **Information Technology Symposium**
Day & time: **Thursday 2:00-2:15pm**
Location: **Heth 018**

Whitehurst, Alexis
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 12:30-1:30pm**
Location: **Heth 016**

Whitman, Michelle
Session: **Anthropological Sciences Symposium**
Day & time: **Wednesday 10:30-10:45am**
Location: **Heth 018**

Wike, Brittany
Session: **Chemistry Poster Session**
Day & time: **Wednesday 4:00-6:00pm**
Location: **Heth 043**

Williams, Alexis
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 12:00-12:50pm**
Location: **Heth 044**

Willis, John
Session: **CORE 102 Poster Session - Brave New Worlds: Issues in the Dystopia**
Day & time: **Thursday 3:45-4:45pm**
Location: **Heth 044**

Willis, William
Session: **Anthropological Sciences Poster Session**
Day & time: **Wednesday 5:00-5:45pm**
Location: **Heth 016**

Wiseley, Derek
Session: **Psychology Symposium**
Day & time: **Wednesday 4:00-4:15pm**
Location: **Heth 018**

Wittenberg, Josh
Session: **Beta Beta Beta Biology Conference**
Day & time: **Tuesday 5:00-6:30pm**
Location: **Heth 045**

Wongchote, Carroll
Session: **Information Technology Symposium**
Day & time: **Thursday 2:30-3:00pm**
Location: **Heth 018**

Wyatt, Meghan
Session: **Multidisciplinary Symposium IV**
Day & time: **Thursday 5:30-5:45pm**
Location: **Heth 018**

Yonts, Jason
Session: **Geology Poster Session**
Day & time: **Tuesday 5:00-6:00pm**
Location: **Heth 016**

Yoo, Thomas
Session: **CORE 102 Poster Session - Issues in Higher Education**
Day & time: **Thursday 2:00-2:50pm**
Location: **Heth 044**

Zakrzewski, William
Session: **Psychology Poster Session II**
Day & time: **Wednesday 5:00-6:00pm**
Location: **Heth 014**