

- Accettura, Sara A** Arts and Sciences Coffelt Rm. 8:30 - 10:00  
*When Mystics Have Prophets for Dinner: A Critical Biographical Analysis of William Blake's Visions*  
 William Blake is known as a visionary poet, but his visions have yet to be explained outside of being mystical or imaginative experiences. According to Abraham Maslow's Hierarchy of Needs, there are people able to reach self-actualization, or simply high-functioning human beings. A few characteristics of those functioning at this level include creativity, uniqueness, the need for justice, and most importantly, peak experiences, or times when one feels deeply connected to everything and claims to see things as they truly are. I believe peak experiences to be the spaces from which Blake experienced his visions. By using the criteria established by Maslow concerning peak-experiences I will prove that Blake's visions now have a category.
- Amicucci, Ann N** Arts and Sciences Coffelt Rm. 8:30 - 10:00  
*Heading South: Defining Travel through The Old Patagonian Express*  
 Using Paul Theroux's The Old Patagonian Express as its primary text, this paper examines the travel writing genre and aims to define "travel" and "traveler." It examines travel as both a means of going to a destination and as the experience of the journey there. This paper includes an analysis of why people travel and of the multiple reasons that propel Theroux to travel and to write about his journey. Through a close reading of The Old Patagonian Express, we see that by leaving home, Theroux gets a new perspective from which to view and analyze his life and that by forging his own path along the journey, he develops a sense of accomplishment that translates into authority of his own life. Additionally, this paper examines the consequences of Theroux's position as a solitary traveler, the opposing spaces of home and away, and the existing debate regarding the monikers "traveler" and "tourist."
- Balestra, Alisa A** Arts and Sciences Coffelt Rm. 10:30 - 12:00  
*Racial and Cultural Rootedness: The Effect of Intra-racial Oppression in Toni Morrison's "The Bluest Eye"*  
 This paper examines through new scholarship how black characters in Toni Morrison's "The Bluest Eye" assume conflicting roles of "Other" and oppressor, thereby contributing to "black-on-black" violence. I make, what I believe to be, overtly apparent observations about reasons for the emergence of these roles as well as the connections among the denigration of identity in the characters and community and what Morrison refers to as "destabilized flora." As the characters move farther away from their roots, black-on-black violence intensifies, which in turn weakens the stability of the community. In this paper I explore the actions and behaviors of major characters and make strong associations with their floral images, which I believe signify either their adherence to or disassociation from Africa.
- Bequeath, Danielle M** Health and Human Services Coffelt Rm. 1:30 - 3:00  
*Analysis of Homicide from the Victim's Perspective*  
 In 1980s, the Surgeon General declared that violence is a public health threat. Since then, there has been a call to analyze violence from a public health perspective. The current research seeks to do that by analyzing homicide from the victim's perspective. A profile will be developed of homicide victims in Mahoning and Trumbull Counties. The research will also compare the victims from the two counties to see if they can explain the disparity in the the homicide rates. The profile will be used to identify risk factors and suggest intervention strategies for preventing homicide in the two counties.
- Boerio-Lorubbio, Michele L** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*Community Planning Conference: Childhood Obesity and Overweight*  
 Based on a National Health Initiative and a Healthy People 2010 Objective, this community collaborative identified 66 key community stakeholders form 34 public organizations in Summit County to generate unmet needs related to childhood overweight and obesity. These needs were raked and developed into priority unmet needs, then subsequently developed into strategies for implementation activities to address this topic. This conference was backed by several organizations, including The National Institute of Health and the Health Summit Medical Alliance. This event was the product of months of planning, researching community policy, GIS mapping, literature reviews, and networking within Summit County for collaboration. The end product fulfills requirements for a Masters Thesis in Public Health, leading to a MPH.
- Brenner, Paul C** Health and Human Services Coffelt Rm. 1:30 - 3:00  
*And Justice for Some: A Study of the Effects of Geography and Other Influences on Hate Crimes 1996-2003*  
 Among the most hotly debated issues in American Criminal Justice today is Hate Crimes. In this study the trends over time are analyzed as well as the geographic and demographic data in the highest areas to show possible correlations and effects as well as look at the whole picture of hate crimes as defined by the Federal Government in the Uniform Crime Report from 1996 to 2003 and determine if there has been any appreciable change. The project will also look at census data and compare this to the Uniform Crime Report data on hate crimes to determine what if any effect racial ethnic diversity and/or income have on hate crimes. It will also examine if there is a change in these effects depending on the individuals assaulted i.e. if attacks against African Americans attacks occur in one area or region and attacks against homosexuals in another area or region.

- Burbick, Joyce** Education Jones Rm. 3:30 - 5:00  
*Usefulness of Needs Assessment Surveys for Action Research Through Modern Technology*  
 People are often asked to do things in class with no opportunity for systematic feedback about their experience with the assignment. This is especially unfortunate in the age of technology, where people are expected to know or quickly learn software. This is an action research study designed to produce systematic feedback about an assignment required of teachers who are taking a graduate class. The teachers were asked to learn about and conduct a needs assessment survey in their school building. They were asked to enter the data into Microsoft Excel and display the data on graphs. They presented their findings to the class. This was the first time the teachers had done a needs assessment and the first time they had created and given a survey. For most of the teachers this was the first time they had used Microsoft Excel. We decided to use survey with closed and open ended responses and interview as our method. Because of time constraints we chose to do the survey first. The survey questions mirror the interview questions. We randomly chose four of the respondents to interview. We conducted 10-minute interviews to corroborate the survey responses. The interviews were recorded and transcribed. Of particular interest were thoughts about learning something new, including technology. In the interview, we asked the teachers to respond to the following questions: 1. Share with me how you felt about doing the survey. 2. Tell me about the future usefulness, for you, of needs assessment surveys. 3. Share with me how you learned to do Excel. 4. How did you think about your data? 5. Tell me about the future usefulness, for you, of Excel. 6. Anything else you want to share with me.
- Burgess, Stacey** Business Administration Ohio Room 3:30 - 5:00  
*Diversity Issues In The Workplace*  
 This project, prepared by every student in Dr. McMahon's Organizational Behavior class, helps increase awareness of diversity in the workplace in several ways. The project will appear on the Partners For Workplace Diversity Web pages, providing a statement to the workplace about the range of diversity issues in today's business world. Also, local high school students will find the diversity information helpful as they participate in the 2005 poster contest for the Partners For Workplace Diversity, a group of local businesses that develop diversity programs for their own needs and those of the larger community. Finally, the people who come to view our QUEST demonstration will learn about several dimensions of diversity. This project will be a tool for students in the MBA program. It will help them transfer from a college environment to a professional environment.
- Cartright, Ginger R** Arts and Sciences Ohio Room 8:30 - 10:00  
*Scientists to the Rescue: a Solution to a Water Conservation Problem*  
 As a means of conserving water on the Youngstown State University campus, the suitability of a shallow aquifer as an alternative water source for the University lawn sprinkler system was evaluated. The evaluation focused on hydraulic conductivity, transmissivity, storativity, and specific yield physical properties and the aquifer aerial extent. The physical properties were determined using soil auger samples and an aquifer pumping and recovery test. The aerial extent of the aquifer was determined using topographic expression, soil auger boreholes, and pre-existing borehole logs. The aquifer is part of a Pleistocene kame terrace along the Mahoning River. It is a fine grained and well graded sandy material (CL-ML). The aquifer is present over an area of approximately 30 acres. Laboratory determinations of permeability on soil auger samples yielded an average hydraulic conductivity of 0.022 cm./sec. Aquifer transmissivity, storativity, and specific yield were determined from the pump test results using the Neuman solution and the AQTESOLV computer program. The average transmissivity was 11.52 m<sup>2</sup>/day, the average storativity was 0.01, and the average specific yield was 0.17. Results indicate the aquifer is capable of yielding 11,600 m<sup>3</sup>/day, an amount that exceeds the University lawn sprinkler system demand. The actual sustainable yield will be substantially reduced as the aquifer volume and continuity is affected by building foundations and the aquifer may be bounded by non-contributing materials such as clay and other low permeable materials. Furthermore, maximum aquifer yield may not be attainable as the installation of multiple production wells would be required.
- Cole, Nicolene E** Education Jones Rm. 3:30 - 5:00  
*Safe\*Zone: Making a World of Difference*  
 Because online resources for targets (victims) of bullying (harassment) are so abundant and the state of mind of those seeking assistance is typically one of panic, over-stress, or confusion, it is vital to the well-being of the person(s) searching for answers to quickly locate relevant resources. The Safe\*Zone Project Website is an online resource directory created to harness the thousands of sources of help for targets of bullying in an uncomplicated layout divided into user-defined relevant categories. Resources are included for teachers, parents, friends, adult targets, and targets ages 5-19. Emergency telephone numbers for all 50 states and the U.S. territories are included for emergency assistance. Through easy to locate, instantaneous information Utilization of the Safe\*Zone Project Website should alleviate a substantial amount of the tension that the act of bullying creates. This website is directly applicable to educators within school districts needing activities, lesson plans, and answers to student questions concerning the lessening of instances of bullying.
- Cook, Abigail** Business Administration Coffelt Rm. 3:30 - 5:00  
*Impact of Outsourcing: A Stakeholder Approach*  
 This study examines the short-term and long-term effects of outsourcing on different groups of stakeholders both in the home country and the host countries. The stakeholder groups focused on in the study are: investors, employees, government, suppliers and customers. We hypothesize that although the short-term effects of outsourcing may be adverse on some of the groups, in the longer term all the stakeholders in both home and host countries will be better off.

**Crowl, Elizabeth M** Arts and Sciences Coffelt Rm. 8:30 - 10:00

*The Lord of the Rings: Tolkien Creates a New Genre, the Epic Elegy*

The paper will argue that The Lord of the Rings, although epic in proportion, is also an elegy that reflects the tone, themes, and events contained in Anglo-Saxon elegiac poetry. The Lord of the Rings contains a powerful sense of fate and transience as do the Anglo-Saxon poems Beowulf, The Wanderer, The Seafarer, The Ruin, and Deor. The Lord of the Rings is not merely a quest to destroy a ring of power so that ultimate evil may not possess it. A great evil is subdued, but that does not halt the passing of an era. Frodo tells Sam as they lie on the jagged rocks of Mount Doom, "I am glad you are with me, Sam, here at the end of all things." (Return of the King) While it is not the end of all things, it is the end of all things as the people of Middle Earth have known them. It is the passing of an age, the diminishment of magic, the end of the Elves in Middle Earth, the further and permanent separation of hobbits and men. The Lord of the Rings then, is a lament, an elegy that echoes the inevitable changes that define existence. Wyrd or fate has a hand in the trials of men, hobbits, elves, dwarves, and ents. As in the Anglo-Saxon elegiac poems, the peoples of Middle Earth all lament this great passing of an age. The bulk of the paper will attempt to make connections between the Anglo-Saxon elegies and The Lord of the Rings in order to prove the case for The Lord of the Rings as an epic elegy.

**Cummings, Theresa E** Education Jones Rm. 3:30 - 5:00

*Usefulness of Needs Assessment Surveys for Action Research Through Modern Technology*

People are often asked to do things in class with no opportunity for systematic feedback about their experience with the assignment. This is especially unfortunate in the age of technology, where people are expected to know or quickly learn software. This is an action research study designed to produce systematic feedback about an assignment required of teachers who are taking a graduate class. The teachers were asked to learn about and conduct a needs assessment survey in their school building. They were asked to enter the data into Microsoft Excel and display the data on graphs. They presented their findings to the class. This was the first time the teachers had done a needs assessment and the first time they had created and given a survey. For most of the teachers this was the first time they had used Microsoft Excel. We decided to use survey with closed and open ended responses and interview as our method. Because of time constraints we chose to do the survey first. The survey questions mirror the interview questions. We randomly chose four of the respondents to interview. We conducted 10-minute interviews to corroborate the survey responses. The interviews were recorded and transcribed. Of particular interest were thoughts about learning something new, including technology. In the interview, we asked the teachers to respond to the following questions: 1. Share with me how you felt about doing the survey. 2. Tell me about the future usefulness, for you, of needs assessment surveys. 3. Share with me how you learned to do Excel. 4. How did you think about your data? 5. Tell me about the future usefulness, for you, of Excel. 6. Anything else you want to share with me.

**Davis, Charles L** Arts and Sciences Pugsley Rm. 10:30 - 12:00

*The Know Nothing Party in Northeast Ohio*

For historians, many of the mysteries surrounding the Know Nothings, a secretive, nineteenth century political party, remain puzzling in the twenty-first century. The Know Nothing Party originated from a secret, nativist New York City organization that required members to be American-born Protestants. The society mandated that all members refuse to vote for Catholics or candidates supporting immigration. The Know Nothings quickly gained a dedicated following, growing from a local organization with only 43 members in 1852 to a national party with over 1,000,000 members by 1854. The order spread from its New York base throughout the United States, reaching Ohio in 1854. By 1855, Ohio contained 138 Know Nothing lodges and 50,000 members. Scholars attempting to determine the rationale for the initial success and subsequent demise of the order attributed these feats to such variant factors as slavery, social change, and sincere anti-foreign sentiments. Through an analysis of popular Know Nothing newspapers in Northeast Ohio, I endeavor to determine the role of ideology, particularly anti-Catholicism and anti-slavery, in the rise and decline of the party. In this investigation, the Northeast Ohio Know Nothing Party serves as a case study of the order as a whole. The purpose of this study is to examine why Ohioans embraced an ideology of intolerance and how such a movement became powerful in such a short period. The use of newspapers is a crucial component of this study because they provide a clear demonstration of why people accepted Know Nothing ideology and reveal the methods used by party leaders to obtain a large following. I argue that the growth of the party in Northeast Ohio resulted from the Know Nothings' dissemination of anti-Catholic sentiments. Furthermore, I contend that the order's demise occurred as a result of the debate concerning the expansion of slavery.

**DiRocco, II, Samuel** Arts and Sciences Rm. 2068 10:30 - 12:00

*Youngstown Jewish Community Federation, 1935-1945*

The impetus, objectives, formation and accomplishments of the Youngstown Jewish Federation from 1935 to 1945 will be the central focus of this presentation. A description of the various religions, ethnic, and societal differences between the German Jewish community and the various Eastern European Jewish communities throughout Youngstown will be included in order to appreciate fully the Federation's importance and overall successes. Undoubtedly, the drastic influx of Eastern and Southern Europeans from 1880-1924 significantly altered the dynamics of communities throughout the US, including Youngstown. The transformation of Youngstown Jewry from a fractured ethnic, religious and cultural community to a unified and active body with one voice during the 1930s is a unique and inspiring piece of local history.

**Dolphin, Christine M** Arts and Sciences Ohio Room 8:30 - 10:00

*The Effects of Testosterone on Protein Expression in C2C12 Myoblasts During Differentiation*

The underlying cellular mechanisms of postnatally-derived stem cells known as myoblasts have been examined to aid in the advancement of reparative and regenerative-type therapies for diseases such as muscular dystrophy. This study focused on myogenic differentiation, a process in which immature myoblasts fuse to form mature, contractile myotubes and irreversibly withdraw from the cell cycle in response to muscle-regulatory proteins. The C2C12 cell line provided the means for studying differential proteins linked to muscle development. C2C12 cells were cultured under appropriate sterile conditions and harvested in a time-dependent manner. Harvested samples were then subjected to quantitative protein analysis and two-dimensional gel electrophoresis (2DGE) in which protein maps were created and proteins visualized by highly sensitive Sypro stain. The anabolic

compound testosterone was administered to myogenic cultures to determine the effects of testosterone on gene expression and the proteome of these myogenic cells during the process of differentiation. Preliminary findings have implicated differential proteins at each time point, indicating changes in gene expression. Future work will be carried out to determine the amino acid sequence and thus the identity of testosterone induced proteins.

- Drouhard, Nicole L** Education Jones Rm. 3:30 - 5:00  
*Self Injurious Behavior: Theory and Treatment*  
This presentation will offer a description of the psychopathology of Self-Injurious Behavior (SIB) and present current theories supporting the development and maintenance of SIB. This presentation will conclude with a discussion of treatment interventions for both professionals and those coping with SIB.
- Eaton, Jessica L** Education Jones Rm. 3:30 - 5:00  
*Self-Injurious Behavior: Theory and Treatment*  
This presentation will offer a description of the psychopathology of Self-Injurious Behavior (SIB) and present current theories supporting the development and maintenance of SIB. This presentation will conclude with a discussion of treatment interventions for both professionals and those coping with SIB.
- Eggleston, Alyson G** Arts and Sciences Pugsley Rm. 10:30 - 12:00  
*Blogging: A Social Act of Power Acquisition*  
Web logging, known now as 'blogging', has increasingly become a subversive tool for data dissemination, social organization, and the acquisition of power or authority within self-defined blogging communities. Blogging communities are frequently constructed by listing some users as 'friends', and thereby granting these friends security clearance to access more important or possibly personal blog entries. Since the friends list is displayed on the blogger's page, a random user could potentially investigate the social connections of that blogger's community by tracing the initial friends list and all other subsequent friends' lists that are attached to the root list. In this way, a 'blog tree' can be mapped to display overlaps, (a high relative frequency of a specific user being listed as 'friend') and it can be hypothesized that such a user's instantiated authority, however artificially that is established, will have a visible and analyzable effect on the output, comments, and blogging entries of other users. The artificiality of the friends list is a potential issue, since these discursive communities are established on the basis of displayed 'interest categories', outside acquaintance, or random contact. Of particular interest to this analysis are: The discursive means by which a 'user entity' reveals or signals authority within his or her posts, comments, or entries. Negotiation of power circles by means of inclusion/exclusion of a particular user through the use of the friends function. The role of anonymously posted comments (both aggressive and non-aggressive) play in determining the discursive face maintenance on the part of the blog author. Data displaying these socially negotiated markers will be determined by several random samplings taken from www.livejournal.com, an open source blogging tool.
- Eggleston, Alyson** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
What is the state of writing at Youngstown State University? How is writing utilized across the disciplines? And how well do YSU composition classes prepare students for their chosen fields of study? The graduate students of English 6901, Composition Research, are asking these and other questions as they study the role of writing at YSU. Research began in February 2005 with a campus-wide survey that asked both fulltime and part-time faculty members to rate the importance of the writing process. The survey also asked questions about specific types of writing the instructor required, both inside and outside the classroom, and about the citation styles used in his or her discipline. Chairs and other faculty members were interviewed to provide a more detailed understanding of the uses of writing in each department. Quantitative results of the campus-wide survey will be presented at Quest 2005, along with additional findings derived from written questions and interviews. Researchers on this project are: Angel Chan, Alyson Eggleston, John Hazen, Ronald Gura, Diana Jones, Mindi Kirchner, Paul Mauch, Stephanie Moore, Josh Mays, Melodie Provencher, Chad Ries, Amelia Sanker, Deborah Watkins, and Ana Wetzl.
- Flick, Amy** Arts and Sciences Ohio Room 3:30 - 5:00  
*Building More Effective Student- Teacher Relationships in the Writing- Classroom*  
As new composition instructors we implemented the use of portfolios and individual student- teacher conferences as a way of ensuring our students' comprehension of subject matter and monitoring their progress. We believed that these methods would enhance our effectiveness as we worked with our students throughout the semester. However, we wanted to be sure that they not only benefitted us, but benefitted our students as well. In trying to make sure that portfolios and conferences were an asset in our classroom, we studied our students reactions to the work and also their progression. Ultimately, we discovered that while these tools do help in the development of student writing, they also, and perhaps more importantly, help teachers to build stronger relationships with students. And through this relationship, we were able to better relate to our students and, in turn, we were better able to respond to their work and their concerns.
- Flick, Amy I** Arts and Sciences Coffelt Rm. 10:30 - 12:00  
*Dude, Why Are You So Mean?: An Examination of Abusive Language and Familiarity in Masculine Discourse*  
In a 2004 linguistic study of the word "dude" and its societal connotation, Dr. Scott Kiesling found that men use this term as a way of creating bonds with other men, while at the same time maintaining distance and therefore preserving their masculinity and heterosexuality. We agree that at one time "dude" served this masculinity defining function. However, for a portion of his research, Dr. Kiesling observed video footage of fraternity interaction in 1993. We believe that in the 12 years since the making of the tape, the term "dude" has become so mainstream that its function has changed. We contend instead that men have begun to use more abrasive language in order to display familiarity with each other and also to share power in the relationship. We created a survey asking students about their use of this kind of language. We inquired about the frequency, context, and rationale behind using certain words in social interaction. We also asked that the students provide us with one word that they often use when addressing friends. We gave this survey to several freshmen writing courses as we tried to explore the conversation

practices of students aged 18-25. To augment this survey research, we also observed student interaction on the Youngstown State University campus. Our research has shown a strong predilection among young men for this type of abusive language. We have situated our findings in the larger conversation of language and masculinity.

- French, Tressa L** Education Jones Rm. 3:30 - 5:00  
*Self-Injurious Behavior: Theory and Treatment*  
 This presentation will offer a description of the psychopathology of Self-Injurious Behavior (SIB) and present current theories supporting the development and maintenance of SIB. This presentation will conclude with a discussion of treatment interventions for both professionals and those coping with SIB.
- Gillespie, P. Ann** Arts and Sciences Rm. 2068 10:30 - 12:00  
*The History of Wick Avenue*  
 Wick Avenue, also known as "Millionaire's Row", was home to several of Youngstown's prominent families during the latter half of the nineteenth century. At the end of the century the families began to move away. The last member of the family to live on Wick Avenue died in 1960, but several family homes and family founded institutions remain.
- Grove, Nathaniel P** Arts and Sciences Ohio Room 10:30 - 12:00  
*CHEMX: Cognitive Expectations for Learning Chemistry*  
 Teaching chemistry means providing learners with experiences which illuminate our conceptually abstract, mathematically-rich subject matter. This means teaching not only chemistry concepts, but also teaching students how to learn chemistry. Students bring expectations about what is sufficient to learn chemistry to our classrooms. Physics education research has explored student expectations through MPEX (Maryland Physics Expectation survey). We have adapted MPEX and developed an instrument, CHEMX, to measure student expectations for learning chemistry. The reliability of CHEMX is significantly higher than MPEX, and CHEMX includes more dimensions of learning science. In particular, CHEMX explores the roles of laboratory and visualization in learning chemistry as shaped by Johnstone's work with the macroscopic, particulate, and symbolic representations of matter. Data collection has focused on differences between faculty and undergraduates in programs approved by the ACS Committee on Professional Training. We are also investigating differences in expectations across sub-disciplines of chemistry. Preliminary findings will be presented.
- Hazen, John P** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
 What is the state of writing at Youngstown State University? How is writing utilized across the disciplines? And how well do YSU composition classes prepare students for their chosen fields of study? The graduate students of English 6901, Composition Research, are asking these and other questions as they study the role of writing at YSU. Research began in February 2005 with a campus-wide survey that asked both fulltime and part-time faculty members to rate the importance of the writing process. The survey also asked questions about specific types of writing the instructor required, both inside and outside the classroom, and about the citation styles used in his or her discipline. Chairs and other faculty members were interviewed to provide a more detailed understanding of the uses of writing in each department. Quantitative results of the campus-wide survey will be presented at Quest 2005, along with additional findings derived from written questions and interviews. Researchers on this project are: Angel Chan, Alyson Eggleston, John Hazen, Ronald Gura, Diana Jones, Mindi Kirchner, Paul Mauch, Stephanie Moore, Josh Mays, Melodie Provencher, Chad Ries, Amelia Sanker, Deborah Watkins, and Ana Wetzl.
- Hoffman, Rachel M** Education Jones Rm. 3:30 - 5:00  
*Self-Injurious Behavior: Theory and Treatment*  
 This presentation will offer a description of the psychopathology of Self-Injurious Behavior (SIB) and present current theories supporting the development and maintenance of SIB. This presentation will conclude with a discussion of treatment interventions for both professionals and those coping with SIB.
- Italiano, Lisa M** Education Jones Rm. 3:30 - 5:00  
*Stress Levels Among Firefighters*  
 This study is to determine stress levels among firefighters. The participants are firefighter from a small town. The department is comprised of thirty firefighter, out of which there are six full time firefighter/paramedics, two captains and a Deputy Chief and Chief. The study is designed to determine how much, if any, stress education and stress reduction techniques can reduce stress. The participants' vitals were taken before and after they were asked to complete a modified Detailed Assessment Posttraumatic Stress (DAPS). They then listened to a short PowerPoint presentation on Critical Incident Stress Management, definitions of stress and stressors, stress management skills and signs and symptoms of stress. A group of participants learned a stress reduction technique of progressive muscle relaxation and practiced it several times a week for a month. After this period all participants will be retested, using the modified DAPS and vitals assessed before and after.
- Jamrozik, Richard M** Health and Human Services Ohio Room 3:30 - 5:00  
*Mahoning County; Drug-Related Homicides 21st Century to Present*  
 This research endeavor recognizes that drugs play many different roles in criminal events, particularly homicide. These drug-homicide links are quite evident, but little research has been conducted in measuring the local relationship in Mahoning County. I plan on presenting a poster to graphically display and report the prevalence of drugs in the homicide rate. Currently, local research in this matter is being conducted, and the results are pending a final outcome. Past research in other cities suggests that the drug-relatedness in homicides as high as the link between drugs and violence have long been evident, but on a local level with pending research I prefer to let the facts speak for themselves. Previous research utilized a 3-part structure, known as the "Tripartite Conceptual Framework" (developed by P.J. Goldstein), for categorizing drug-related crimes. I will use this same measure to formulate my statistical analysis of drug relatedness as applied to Mahoning County homicide rate statistics. All information ascertained will remain confidential, broad, and anonymous as I plan on displaying my findings on the poster supplied through descriptive graphs (pie charts, histograms, etc), executive summaries, etc. If feasible, I also plan on comparing some recent studies done in other areas in this subject and comparing as they relate to the statistics from Mahoning County.

- Keniya, Kiran** Arts and Sciences Ohio Room 10:30 - 12:00  
*Proteomics Approach in the Study of Mechanism of Action of Antibiotics*  
 The biochemical investigative approach of Proteomics has been utilized in the study of the mechanism of action of antibiotics like Triclosan (Trade name- Irgasan) on a model bacterium, *Bacillus subtilis*. By differential display of this strain with the minimum inhibitory concentration of the antibiotics, comparison of the protein maps of both triclosan treated and untreated *B. subtilis* cultures were performed. Several spots which were associated with the antibiotic resistance and in response to treatment with triclosan were identified by the use of Two-dimensional gel electrophoresis coupled with analysis by PD Quest software (Bio-Rad). A unique spot was identified and excised for further analysis by mass spectrometry for determination of amino acid sequence and protein identification. By this new approach a specific biomarker protein in *B. subtilis* that is involved in organism's response to treatment with triclosan and possible resistance to antibiotic action has been investigated. Thus, suggesting new possibilities for the discovery of various future antibiotic drug targets for therapeutic intervention.
- Kinsler, Jonathan A** Arts and Sciences Rm. 2068 10:30 - 12:00  
*The Missing 1928 Retirement Trial of Clarence Darrow*  
 What had become known as Jim Munsene's "Annual Bribery Trial" received national media attention in 1928, when world famous defense attorney Clarence Darrow agreed to defend the reputed Bootleg King of Warren, in the third annual attempt to convict Munsene of offering Sheriff J.H. Smith a \$500.00 bribe. The trial, which was moved from the Trumbull County courthouse to Ashtabula's tiny county seat, Jefferson, created a carnival-like atmosphere in the town and attracted a host of reporters from around the country. The trial was supposed to be Darrow's retirement case, but would the verdict or the stock market crash of 1929 allow that to the case? Come and find out.
- Knowles, Sean L** Arts and Sciences Jones Rm. 8:30 - 10:00  
*A Comparative Study to Evaluate the Coral Reef Ecosystem between East Beach and Lindsey Beach on San Salvador Island*  
 The purpose of this research is to evaluate the coral reef ecosystem of the island of San Salvador, Bahamas, using non-intrusive measurements. A comparative study was conducted between two sites on the island: East Beach and Lindsey Beach. East Beach is situated on the eastern side of the island, which is more susceptible to storm damage. Lindsey Beach is situated on the "more protected" western side of the island, where storm damage is not as severe. Quantitative data involving water quality parameters such as temperature, oxygen content, turbidity, salinity, pH and nutrient analysis (phosphate and nitrate content), as well as fecal coliform count, were collected from both sites utilizing a photoquadrant transecting method. Statistical differences in water quality parameters and fecal coliform counts between East Beach and Lindsey Beach were determined. Qualitative data in the form of photographs of the coral reef communities from both sites were also collected to document species diversity between the tests sites.
- Liller, Matthew A** Arts and Sciences Coffelt Rm. 10:30 - 12:00  
*Dude, Why Are You So Mean?: An Examination of Abusive Language and Familiarity in Masculine Discourse*  
 In a 2004 linguistic study of the word "dude" and its societal connotation, Dr. Scott Kiesling found that men use this term as a way of creating bonds with other men, while at the same time maintaining distance and therefore preserving their masculinity and heterosexuality. We agree that at one time "dude" served this masculinity defining function. However, for a portion of his research, Dr. Kiesling observed video footage of fraternity interaction in 1993. We believe that in the 12 years since the making of the tape, the term "dude" has become so mainstream that its function has changed. We contend instead that men have begun to use more abrasive language in order to display familiarity with each other and also to share power in the relationship. We created a survey asking students about their use of this kind of language. We inquired about the frequency, context, and rationale behind using certain words in social interaction. We also asked that the students provide us with one word that they often use when addressing friends. We gave this survey to several freshmen writing courses as we tried to explore the conversation practices of students aged 18-25. To augment this survey research, we also observed student interaction on the Youngstown State University campus. Our research has shown a strong predilection among young men for this type of abusive language. We have situated our findings in the larger conversation of language and masculinity.
- Lisac, Renee L** Health and Human Services Gallery 3:30 - 5:00  
*Application of Gymnastic Impact Loading Principles to Post-Menopausal Females Diagnosed with Osteopenia*  
 Case Report Rationale/Foundation: Research implies that the impact loading that gymnasts withstand increases the acquisition of bone mass. Purpose/Significance: The purpose of this investigation is to determine if post-menopausal women with osteopenia can tolerate an exercise program which simulates the impact loading that occurs during competitive women's gymnastics, and ultimately benefit from similar bone mineral density (BMD) gains in a shorter amount of time than previous studies involving other exercise strategies. Description (Methods/Materials): The study was divided into 2 parts: 1. Observation of competitive gymnasts during practice sessions to develop an exercise program: Two gymnasts were observed during 3 practice sessions. Specific categories of impact loading were devised for the warm-up session and each of the 4 events. 2. Implementation of the 15 week, 3 days a week, exercise program in a 51 year old, post-menopausal female diagnosed with osteopenia: The subject's BMD was tested via a dual energy X-ray absorptiometry (DXA) pre and post exercise implementation. The subject was not taking any dietary supplements or bone enhancing medications prior to or at the time of implementation. Observation (Reactions/Responses): The subject tolerated the 15 week exercise program with no musculoskeletal injury. The subject showed no significant difference in BMD scores of the lumbar area with a decrease of .6% on the post DXA exam. However, the total score for the hip region had a 4.2% increase in BMD. Conclusions: The favorable outcomes in the hip region and the individual's ability to tolerate the intensity of this exercise program support the need for further research on the exercise program developed in this case report. Studies with larger sample sizes and greater randomization will be necessary to validate the favorable outcomes exhibited in this case study. Keywords: Bone Mineral Density (BMD), Dual Energy X-ray Absorptiometry (DXA), Gymnastics, Impact Loading, Osteopenia

- Lucarell, William E** Business Administration Ohio Room 3:30 - 5:00  
*Diversity Issues In The Workplace*  
 This project, prepared by every student in Dr. McMahon's Organizational Behavior class, helps increase awareness of diversity in the workplace in several ways. The project will appear on the Partners For Workplace Diversity Web pages, providing a statement to the workplace about the range of diversity issues in today's business world. Also, local high school students will find the diversity information helpful as they participate in the 2005 poster contest for the Partners For Workplace Diversity, a group of local businesses that develop diversity programs for their own needs and those of the larger community. Finally, the people who come to view our QUEST demonstration will learn about several dimensions of diversity. This project will be a tool for students in the MBA program. It will help them transfer from a college environment to a professional environment.
- Mauch, Paul** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
 What is the state of writing at Youngstown State University? How is writing utilized across the disciplines? And how well do YSU composition classes prepare students for their chosen fields of study? The graduate students of English 6901, Composition Research, are asking these and other questions as they study the role of writing at YSU. Research began in February 2005 with a campus-wide survey that asked both fulltime and part-time faculty members to rate the importance of the writing process. The survey also asked questions about specific types of writing the instructor required, both inside and outside the classroom, and about the citation styles used in his or her discipline. Chairs and other faculty members were interviewed to provide a more detailed understanding of the uses of writing in each department. Quantitative results of the campus-wide survey will be presented at Quest 2005, along with additional findings derived from written questions and interviews. Researchers on this project are: Angel Chan, Alyson Eggleston, John Hazen, Ronald Gura, Diana Jones, Mindi Kirchner, Paul Mauch, Stephanie Moore, Josh Mays, Melodie Provencher, Chad Ries, Amelia Sanker, Deborah Watkins, and Ana Wetzl.
- Moyer, Russell D** Education Ohio Room 3:30 - 5:00  
*Teacher Networking System*  
 The teacher networking system is a system of communication for special educators to help or eliminate feelings of frustration and isolation. The system provides the opportunity for sharing resources, advice and professional materials and ideas. The Mahoning County Educational Service Center and the Mahoning County Charter College/YSU joined to build this support system to enable teachers to utilize multiple resources to meet students' individual needs.
- Musuka, Sandirai M** Arts and Sciences Ohio Room 8:30 - 10:00  
*Role of uterine Natural Killer (uNK) cells in Preeclampsia*  
 Preeclampsia is a pregnancy condition seen in some women which is characterized by a variety of symptoms that include hypertension, proteinuria, hyperuremia and general edema. In this project, an immunodeficient mouse model, RAG2-/- is being used to investigate the migration of white blood cells (WBC) and uterine Natural Killer (uNK) cells to the uterus after being engrafted with bone marrow cells from normal C57Bl6 mice. Organs were collected from the mice, paraffin embedded and sectioned. Hematoxylin and Eosin staining was done to the first tissue section slide of each organ to determine basic morphology and confirm successful slicing technique. Biotinylated antibody staining targeting the CD45 ligand on WBC was done to detect these cells in the spleens and implants of the engrafted mice. Dolichos biflorus agglutinin (DBA) lectin staining was also done to determine the presence of NK cells by staining N-acetyl-D-glucosamine carbohydrate found on the NK cell surfaces. We tested the currently available anti-CD45 antibodies for use in this model and found none that bound to WBC in paraffin embedded tissues. We have found only a few positively stained uNK cells in some spleens using DBA lectin staining. The strongest result we have obtained in our tissue sections suggesting successful engraftment of BM cells into the immunodeficient mice is the presence of follicles in the spleen. Follicles are concentric rings of lymphocytes that form during an immune response. However, some of the mice that previously tested positive for antibody presence in the serum show no follicles in the spleen. A possible explanation to this might be that the antibodies made earlier still persisted in the blood while the follicles were no longer viable in those mice.
- Nanor, Jane** Arts and Sciences Pugsley Rm. 8:30 - 10:00  
*The Analysis of Overweight in Adolescent ;V Youth Risk Behavior*  
 The future of a nation depends on the youth and the adolescent. The prevalence of overweight in the adolescence has increased dramatically due to the intake of processed food and high fat diets. Overweight and Obesity is one of the leading Health Indicators that reflect the major health concerns in the United States at the beginning of the 21st century. The obesity ;Epidemic; has been associated with several factors such as increasingly sedentary lifestyles combined with easy availability of high-fat foods. One of the national health objectives for 2010 is to reduce the prevalence of overweight from the NHANES III baseline of 11 % to 5%. The growing issue of screen time as it relates to the obesity epidemic is of great concern. Children who spend an excessive amount of time in front of computers and other screens are likely to be displacing activities required for healthy development and increasing their risk of obesity. Because lifetime dietary patterns are established in youth, it is important for adolescents to choose nutritious foods and to develop healthy eating habits. National Health Objectives for the Year 2010 include increasing to five or more the average daily servings of fruits, and increasing the proportion of children and adolescents who engage in vigorous physical activity at least three times a week and moderate physical activity every day. This research focuses on Overweight and Obesity in the adolescent. The objective is to determine how Overweight and Obesity is related to Nutrition (poor dietary behavior), Physical Exercise (very little exercise), and Screen technologies (TV watching, video or computer games). It also analyzes the nation's progress toward achieving some of the Healthy People 2010 objectives.

- Nard, Stacy N** Health and Human Services Gallery 3:30 - 5:00  
*BOSU Balance Trainer Stabilization Intervention For Acute Low Back Pain: A Case Report*  
 Background: Acute low back pain (LBP) accounts for a high percentage of injuries, medical costs, and Physical Therapy treatment in the working age population. Current research lacks evidence for which stabilization treatment interventions should be utilized for patients with acute LBP. Purpose: The purpose of this paper is to describe the use of the BOSU Balance Trainer (BOSU) for implementing McGill's stabilization protocol on a patient with acute LBP. Methodology: This report illustrates the management of a 42 year old male with acute LBP using McGill's stabilization protocol on the BOSU. The inclusion criteria was: 1.) 25-55 years old and 2.) present with symptoms of acute LBP as diagnosed by their physician. Observations: The patient's program consisted of five strength and endurance exercises performed on the BOSU with modifications and progressions as needed. Concurrently, other Physical Therapy interventions were provided. Results of performance measures and questionnaires consisted of: Four Item Pain Scale (P4) 26 to 22, Modified Oswestry Low Back Pain Disability Index Questionnaire (ODI) 70 to 52, Physical Impairment Index (PII) 5 to 3, Right Straight Leg Raises (SLR) 50 to 50, left SLR 70 to 75, Physical Therapist Satisfaction Questionnaires (therapist satisfied). Patient was seen 5 times in 3 weeks and self-discharged from physical therapy care. Conclusions: Even though the patient was non-compliant, clinical significance was demonstrated for the P4 and the right SLR between the first and fourth session and then a relapse was noted at the time of the fifth session due to an abnormally long car ride. Clinical significance was noted in ODI, PII, and left SLR at the time of discharge. The true effectiveness of this protocol could not be determined because of the patient's failure to complete the program.
- Newman, April M** Arts and Sciences Jones Rm. 8:30 - 10:00  
*Presence of Coliform Bacteria in Estuarine Waters at Pigeon Creek, San Salvador*  
 Our study consisted of collecting water samples, testing pH, salinity, dissolved oxygen, water currents, and nutrients at the delta of the Pigeon Creek Estuary during the mean of the high and low tide changes. From the water samples collected, coliform bacteria, which is used as a universal indicator of water quality, was quantified by culturing bacteria in an auger medium. From this growth we counted the number of colonies, which indicated the presence and amount of bacteria at the estuary. One such bacterium was Escherichia coli. We also measured the pH, salinity, dissolved oxygen, and velocity of the water currents. We used nutrient kits to measure Nitrogen and Phosphate, which are indicators of biological activity. With this data combined, we compared and contrasted the water quality at Pigeon Creek delta at various stages of the tidal cycle.
- Ohl, Erica M** Education Ohio Room 3:30 - 5:00  
*Teacher Networking System*  
 The teacher networking system is a system of communication for special educators to help or eliminate feelings of frustration and isolation. The system provides the opportunity for sharing resources, advice and professional materials and ideas. The Mahoning County Educational Service Center and the Mahoning County Charter College/YSU joined to build this support system to enable teachers to utilize multiple resources to meet students' individual needs.
- Parthasarathy, Raghavan** Arts and Sciences Pugsley Rm. 8:30 - 10:00  
*Verification of Groundwater Tracer Models*  
 A number of mathematical models are available to determine the mean residence time and mixing efficiency for groundwater flow in natural aquifers. The mean residence time and the mixing efficiency are the two most important parameters in defining natural groundwater flow in aquifers. The drawback with these available models is that none of them have actually been experimentally tested or verified before they are actually used on the field. My research proposes a mathematical model known as the partial mixing model or the lumped parameter model which calculates accurately the mean residence time and mixing efficiency of groundwater flow in natural aquifers. This proposed partial mixing or lumped parameter model however, unlike all other similar mathematical models was experimentally verified and tested so that it can be applied to field experiments dealing with natural groundwater aquifers in the future. The proposed model was verified by means of an apparatus built for this purpose to simulate natural groundwater flow conditions. The apparatus consisted of a one meter long PVC column packed with sand, having inlet and outlet points for the flow of water. Four probes capable of measuring conductivity are also inserted at strategic sections of the column. Sodium chloride solution was used as a tracer in this research. The experiments were done by setting the column in vertical (90° with ground level), inclined (20° with ground level) and horizontal (0° with ground level) positions. Experimental graphs drawn using data from the column were matched or superimposed with theoretical graphs drawn using the proposed partial mixing or lumped parameter model.
- Pawlen, Diana L** Education Jones Rm. 3:30 - 5:00  
*Self-Injurious Behavior: Theory and Treatment*  
 This presentation will offer a description of the psychopathology of Self-Injurious Behavior (SIB) and present current theories supporting the development and maintenance of SIB. This presentation will conclude with a discussion of treatment interventions for both professionals and those coping with SIB.
- Polis, Jessica L** Education Ohio Room 3:30 - 5:00  
*Teacher Networking System*  
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- Provencher, Melodie** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
 What is the state of writing at Youngstown State University? How is writing utilized across the disciplines? And how well do YSU composition classes prepare students for their chosen fields of study? The graduate students of English 6901, Composition Research, are asking these and other questions as they study the role of writing at YSU. Research began in February 2005 with a campus-wide survey that asked both fulltime and part-time faculty members to rate the importance of the writing process. The survey also asked questions about specific types of writing the instructor required, both inside and outside the classroom, and about the citation styles used in his or her discipline. Chairs and other faculty members were interviewed to provide a more detailed understanding of the uses of writing in each department. Quantitative results of the campus-wide survey will be presented at Quest 2005, along with additional findings derived from written questions and interviews. Researchers on this project are: Angel Chan, Alyson Eggleston, John Hazen, Ronald Gura, Diana Jones, Mindi Kirchner, Paul Mauch, Stephanie Moore, Josh Mays, Melodie Provencher, Chad Ries, Amelia Sanker, Deborah Watkins, and Ana Wetzl.
- Richter, Kathleen A** Arts and Sciences Rm. 2068 10:30 - 12:00  
*The Mill Creek Riding Club, 1927-1935*  
 The Mill Creek Riding Club formed during the economic boom of the 1920s and continued operation until declaring bankruptcy in 1933. The Mill Creek Riding Club's membership reflected the social structure of Youngstown's upper and middle class families during the twenties and the Great Depression. During the late 1920s horseback riding, horse shows, and the game of polo enjoyed renewed popularity, but participation remained limited to those wealthy enough to afford the high cost of the sport. Exclusive private clubs, such as the Alleghany Country Club near Pittsbrgh and the Chagrin Valley Hunt club near Cleveland, provided the necessary facilities for members who lived in the elite neighborhoods of these cities. In 1927, Youngstown's horse enthusiasts, which included members of several prominent local families, followed the example set by these private clubs and organized the Mill Creek Riding Club.
- Ries, Chad** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
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- Rivello, Robert R** Arts and Sciences Ohio Room 10:30 - 12:00  
*Attitudes Toward the Exhumation of Human Remains for Scientific Purposes*  
 In recent years, the practice of exhuming human remains for archaeological or other investigative purposes has come under fire, primarily by cultural and religious groups. This exploratory study will examine views on exhumation for criminal investigation as compared with views from the same persons on exhumation for archaeological study. As the reader will notice in the paragraphs that follow, the acceptability of the exhumation of human remains is a strongly debated topic. It is likely that researchers have, for that reason, hitherto avoided delving deeper into the subject. However, by taking a closer look at the attitudes that persons of varying backgrounds have toward exhumation, it may be possible to "bridge the gaps" by making allowances in procedure and policy to accommodate religious, cultural, or other traditional views regarding the sanctity of human remains and their treatment. By making these allowances and restoring relationships between anthropologists and the people they study, new doors may be opened for more cooperative, productive research.
- Rivera, Candace N** Health and Human Services Coffelt Rm. 1:30 - 3:00  
*Donald Black: An Understanding of the Man and the Theory*  
 This presentation offers a brief biography of Donald Black and focuses on the development of his theory of law. Perhaps, one of the most important lessons to social scientists is how to build a theory. This presentation illustrates how Black developed his theory of pure sociology and then applied it to his most renowned work, *The Behavior of Law*. A criminological theory may never be finished, as it is constantly changing to reflect human behavior, so it evolves. It is perfected by means of criticism, open debate, and admiration. This is the journey of a man and his theory, a theory that hinges on testability, simplicity, and generality.
- Robinson, Daniel J** Education Jones Rm. 3:30 - 5:00  
*Safe\*Zone: Making a World of Difference*  
 Because online resources for targets (victims) of bullying (harassment) are so abundant and the state of mind of those seeking assistance is typically one of panic, over-stress, or confusion, it is vital to the well-being of the person(s) searching for answers to quickly locate relevant resources. The Safe\*Zone Project Website is an online resource directory created to harness the thousands of sources of help for targets of bullying in an uncomplicated layout divided into user-defined relevant categories. Resources are included for teachers, parents, friends, adult targets, and targets ages 5-19. Emergency telephone numbers for all 50 states and the U.S. territories are included for emergency assistance. Through easy to locate, instantaneous information Utilization of the Safe\*Zone Project Website should alleviate a substantial amount of the tension that the act of bullying creates. This website is directly applicable to educators within school districts needing activities, lesson plans, and answers to student questions concerning the lessening of instances of bullying.

**Sanker, Amelia**

Arts and Sciences

Jones Rm. 3:30 - 5:00

*Diagnosing Written Communication: Cross-Campus Composition Compendium*

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**Sarisky, Bill**

Health and Human Services

Ohio Room 3:30 - 5:00

*Case Report-Treatment of Lateral Ankle Sprain Utilizing Jump Stretch® Vertical Ankle Traction Protocol*

Case Report-Treatment of Lateral Ankle Sprain Utilizing Jump Stretch® Vertical Ankle Traction Protocol Bill Sarisky, Student Physical Therapist Youngstown State University Rationale: Ankle ligament injuries have reportedly been the most frequently reported sports injuries, accounting for 20% to 40% of all sports related injuries. The effectiveness of the rehabilitation program after injury or surgery often determines the success of future function and athletic performance. Description: This case report utilizes the Jump Stretch® Vertical Ankle Protocol (VAT) to treat and return an 18 y/o male baseball player to sport 2 days after experiencing a grade 2 lateral ankle sprain with only one treatment. The subject was diagnosed with a grade 2 lateral ankle sprain and directed to remain on crutches for 5 days and return to practice in 10 days. Observations: The VAT protocol approach to treating lateral ankle sprains was developed to return athletes to sport more quickly than traditional treatment. The VAT protocol includes ankle traction utilizing Jump Stretch® Bands to distract the ankle while the patient performs active and passive ROM, proprioceptive exercises, ambulation, and sport specific exercises. The Sports Ankle Rating System (SARS) was used as an outcome measure performed on initial evaluation and discharge. The SARS included Quality of Life Measure questionnaire, subjective Clinical Rating Score, and the Single Assessment Numeric Evaluation (SANE). The subject was given the SARS on day 1 and reported a combined score of 11.25% and a Quality of Life Measure of 5%. The subject returned the next day after completing the baseball game and reported a combined score of 71.75% and a Quality of Life Measure of 74%. Conclusion: Results of the SARS and return to sport of the subject, the Jump Stretch® protocol intervention was effective in decreasing pain, increasing Quality of Life Measure, increasing SANE and Clinical rating Score.

**Slusher, Sandra G**

Arts and Sciences

Ohio Room 8:30 - 10:00

*Monoclonal Antibodies against Staphylococcus aureus Type 5*

Staphylococcus aureus is associated with a high mortality rate, as well as high morbidity and medical expense. Each year in the United States alone, it causes approximately 260,000 hospital acquired infections, with Serotype 5 Staphylococcus aureus (S. aureus) being one of the most prominent. Serotype 5 S. aureus contains a capsular polysaccharide which inhibits phagocytosis, thus preventing the body from ridding itself of the bacteria. In this study we attempted to make monoclonal antibodies to Type 5 S. aureus. Produced in the spleen of immunized mice, the antibodies were fused to a myeloma cell line to form hybridomas. These hybridomas were tested for binding to purified capsular polysaccharide (CP) by Indirect ELISA's. Hybridomas that tested positive for antibodies that bound to CP were subcloned and retested for binding to CP and for binding to whole bacteria, also using Indirect ELISA's. The positive subclones were subcloned a second time and retested for antibody binding. If the second subclones were positive for binding, they were frozen for future use in the production of a phage display library.

**Smith IV, Jim**

Business Administration

Ohio Room 3:30 - 5:00

*Diversity Issues In The Workplace*

This project, prepared by every student in Dr. McMahon's Organizational Behavior class, helps increase awareness of diversity in the workplace in several ways. The project will appear on the Partners For Workplace Diversity Web pages, providing a statement to the workplace about the range of diversity issues in today's business world. Also, local high school students will find the diversity information helpful as they participate in the 2005 poster contest for the Partners For Workplace Diversity, a group of local businesses that develop diversity programs for their own needs and those of the larger community. Finally, the people who come to view our QUEST demonstration will learn about several dimensions of diversity. This project will be a tool for students in the MBA program. It will help them transfer from a college environment to a professional environment.

**Sobecki, Kyle A**

Arts and Sciences

Ohio Room 8:30 - 10:00

*The Effect of Dexamethasone on C2C12 Myoblasts with relation to mTOR and cdc2 (Cdk1)*

We examined the effect that Dexamethasone had on C2C12 mouse myoblast cells in regards to the protein changes that were found by running two-dimensional gel electrophoresis. First, the proteins from normal C2C12 cells were run out on 2-D gels in three different time trials (0H, 4H, and 24H). The same time trials were used for the C2C12 cells after differentiation with Dexamethasone media. Previous studies indicated that we may expect Dexamethasone to effect growth of C2C12 cells by either increasing myotube formation after differentiation (Lariviere) or by reducing differentiation as reported by Desler et al. Based on the protein maps of normal C2C12 cells after differentiation compared to C2C12 cells differentiation with 1 µM DEX media, we should be able to locate specific proteins that play major roles in cell determination. Once these proteins are located in a proteome, they can then be sequenced out to identify the protein of interest. Furthermore, once the proteins of interest are found, another step in the project is to run a Western Blot on the 2D gels to find the location of mTOR and cdc2 and determine how much of an impact DEX has on those two proteins.

- Stambolia-Kovach, Anna** Arts and Sciences Ohio Room 8:30 - 10:00  
*Riparian Vegetation Structure Along the Industrially Impacted Mahoning River, Ohio*  
 The Mahoning River was once one of the most industrialized rivers in the world. Between 1920 and 1970 the river served over 50 steel-related facilities by providing water and power to the plants and receiving vast amounts of untreated waste materials. Dangerous levels of mercury, PAHs and PCBs persisting in river sediment and sport fish prompted the Ohio Department of Health (ODH) to issue a 1988 dermal contact advisory and a 1997 advisory against any consumption of channel catfish and common carp caught from the lower reaches of the Mahoning River. Thirty years after most of the steel industry left Youngstown, neither advisory has been lifted. During the last century, more than ten low head dams were constructed along the Mahoning River to provide water and energy to industrial plants, and the damage to aquatic habitat and organisms caused by industrialization along the Mahoning River is most acute in sites immediately upstream of these dams. Biologists now have ample evidence of the damaging effects of sediment contamination and low head dams on aquatic life in the Mahoning River. However, relatively little research has been conducted on the terrestrial component of the river. Globally, dams have been found to alter the composition and structure of riparian woodlands that are adapted to free-flowing water and frequent restructuring events such as flooding. The riparian corridor of the Mahoning River has not previously been assessed for impairment caused by riverbank contamination or the presence of low head dams. This study describes the structure and integrity of the riverside woodland along the lower industrialized reach of the river. Statistical analysis of vegetation community parameters reveals trends in spatial patterns as they are affected by dam presence, location along the length of the river, and proximity to the river itself. As remediation efforts are being considered and implemented, this study also provides a thorough catalogue of riparian vegetation species to be monitored throughout the remediation process.
- Sterling, Avery C** Arts and Sciences Pugsley Rm. 8:30 - 10:00  
*Visitors Attitudes Towards Forest Resources*  
 The purpose of this study is to analyze public attitudes toward forest resources using data collected from a 2002 Forest Valuation Survey in Taiwan. The mailed questionnaire included 12 statements concerning attitudes towards forest resources measured by a five-point Likert-type scale (Strongly agree, Agree, Cannot tell, Disagree, Strongly disagree). Furthermore, the respondents' socioeconomic characteristics were inquired. Empirical results of this study revealed that the 12 statements describing public attitudes toward forest resources were condensed into two attitudinal dimensions which could be interpreted as "Use Values" and "Non-Use Values" using the principal component analysis. The Kaiser-Meyer-Olkin measure was 0.928 indicating the existence of sufficient correlations between the statements for the analysis. The reliability of the solution was satisfactory (Cronbach's alpha = .9125). The explained proportion of the total variation of the original variables was 63%. Empirical results of this study based on the K-means cluster analysis described the public could be identified into four groups as "Use-Oriented", "Intermediate", "Nonuse-Oriented", and "Don't-Care". Results of the K-means cluster analysis were tested for accuracy using the multiple discriminant analysis. The Box's M was significant at the 5% level of confidence, and the Wilk's Lambda scores were .08 and .32 for both discriminant functions, respectively, indicating that group means were significantly different. The canonical correlation results were both above 0.8, supporting that there were strong relationships between the discriminant score and the cluster membership. The results of this study provide insight into the understandings of public attitudes toward forest resources that can be used for forest ecosystem management purposes.
- Tarcy, Lisa M** Arts and Sciences Ohio Room 8:30 - 10:00  
*Proteomic Profiling of Macrophages Infected with *Penicillium marneffe**  
 Activated macrophages are capable of carrying out phagocytosis of foreign entities in the body and initiating an immune response to destroy them. The proteins produced by macrophages may differ depending on whether or not they have phagocytized a foreign molecule. The purpose of my study is to compare the proteins produced by macrophages infected with the fungus *Penicillium marneffe* to those not infected. This is achieved by growing and collecting the conidia (spores) of the pathogenic fungus *P. marneffe*, adding them to a solution containing live murine macrophages, and allowing for phagocytosis to occur. The proteins are then isolated from both infected and control macrophages and are visualized with the aid of 2-dimensional gel electrophoresis. This technique provides spot "maps" of the proteins present, which can then be compared and contrasted. Proteins of interest are those found in only one group of macrophages (infected or control). Further studies include excision of these spots and sequencing in order to identify the proteins.
- Temelkoff, David** Arts and Sciences Ohio Room 10:30 - 12:00  
*Synthesis and structures of pyranose N-glycosyl amides and triazoles*  
 Derivatives of glycosyl amines are known to have interesting biological activities, for example as inhibitors of various glycoprocessing enzymes. In order to produce diverse structures with which to further investigate the structural requirements for this inhibition, we have developed a glycosyl amide synthesis using bis(diphenylphosphino)ethane (DPPE) in Staudinger-type chemistry, which avoids some of the problems associated with using triphenylphosphine, and allows for the rapid synthesis of collections of glycosyl amides. Additionally, we have developed fast and efficient syntheses of glycosyl 1,2,3-triazoles as mimics of glycosyl amides by using Cu(I)-catalyzed reactions of glycosyl azides with terminal acetylenes. This presentation will detail the synthesis, structural analysis (NMR and X-ray), and preliminary enzyme inhibition potential of amide and triazole glycosyl amine derivatives.

- Terra, Francesco** Business Administration Coffelt Rm. 3:30 - 5:00  
*Millwood Inc.: Turning Wood Waste into an Opportunity*  
 Millwood Incorporated, a vertically integrated wood pallet manufacturer, enlisted the services of the authors to assess the volume of wood waste available in the northeastern Ohio area. Millwood is contemplating entry into the manufacture of wood pellets for home and business heating. The manufacture of these pellets requires a substantial amount of suitable wood waste to be continuously available. Millwood estimates that the wood waste generated by their own pallet operations would not provide a sufficient supply of raw material for this new operation. Since the move contemplated by Millwood would entail a substantial investment, Millwood management decided that it was critical to learn if sufficient wood waste is available in northeastern Ohio to sustain a wood pellet manufacturing operation. The purpose of this research was to ascertain how much wood waste is available, and how it is currently being disposed of. Discussions with Joe Pecchia at Millwood determined what information Millwood needed to go forward with their evaluation of this potential opportunity. To obtain this information, a telephone survey with a fax survey follow-up was conducted. This research successfully established a baseline. That is to say, it established, with some certainty, the minimum amount of wood waste generated within 100 miles of Alliance, Ohio. Given the statistical analysis of the gathered data, it was possible to provide a range of potential annual wood waste, bounded by an upper and lower limit. The research results helped the management of Millwood Inc. to support the decision-making process and to minimize the risk of failure in their attempt to start manufacturing the new product line.
- Torres, Jamie L** Health and Human Services Gallery 3:30 - 5:00  
*Body Weight Support Treadmill Training with an Individual with SCI: A Novel Approach*  
 To assess the outcomes of an implemented pilot protocol of body weight support treadmill training (BWSTT) and proprioceptive retraining (PR) with an individual with C3, ASIA D SCI. BWSTT was done with use of a treadmill and the LiteGait® system, 1 day per week for 1 to 2 ½ hours (20-30 min. of this time representing treadmill ambulation), including a 4 day per week PR home exercise program. Training lasted for a duration of 11 weeks. The training consisted of walking on a treadmill while supported by an overhead BWS system. Two trainers provided manual assistance of each lower extremity (LE) and one trainer provided manual assistance at the hip. Progression in training was accomplished by reducing BWS, increasing treadmill speeds, and increasing continuous treadmill ambulation time. Main outcome measures included gait function (velocity, time, BWS, endurance, amount of manual assistance needed), ASIA motor score, FIM locomotor score, proprioception (hip, knee, ankle), timed 10m walk test, WISCI test, Berg balance test, quality of life (CHART) and life satisfaction (LSI-A). Over the course of training, the subject decreased the amount of BWS needed (35-20lbs.), increased ambulatory velocity and time, decreased need for manual assistance, improved in timed 10 m walk test, improved quality of ambulation in coordination and balance, and reported improved capabilities in ADL's. FIM locomotor, WISCI, and Berg test scores remained unchanged. This pilot protocol suggests that improvements in ambulatory capabilities and ADL's can result with ASIA D SCI. However, research suggests that the greatest ambulatory gains with this sort of rehabilitative intervention occurs in the ASIA C and ASIA D classifications. Therefore, a larger controlled study is needed to determine if similar results can occur within a larger population of ASIA D SCI, with other ASIA levels and/or SCI levels (tetraplegic vs. paraplegic).
- Tranovich, Leslie L** Education Jones Rm. 3:30 - 5:00  
*Self-Injurious Behavior: Theory and Treatment*  
 This presentation will offer a description of the psychopathology of Self-Injurious Behavior (SIB) and present current theories supporting the development and maintenance of SIB. This presentation will conclude with a discussion of treatment interventions for both professionals and those coping with SIB.
- Walsh, Kelly A** Arts and Sciences Coffelt Rm. 8:30 - 10:00  
*Joan Didion Through the Years: An Exploration of Content and Form*  
 Joan Didion has maintained a distinct writing style throughout her career and has also used her writing to explore various American cultural themes. In looking closely at her organizational patterns, which at first appear to be somewhat scattered, one can begin to see how her form is a commentary on the way different cultural institutions in America actually function. "Slouching Towards Bethlehem" is a collection of essays that Didion wrote during a time in her life where she realized and saw that "things fall apart; the center cannot hold." Her essays in the collection work in order to understand why this happens. Her writing, the style and the content, challenge readers to question cultural systems—like law, history, family, geography, language etc.— that have come to be so innately trusted in the present time. In her most recent book, an autobiography, "Where I Was From," Didion still maintains much of the same style and character that her writing displayed forty years ago; however, she now brings more of the personal into her writing, ultimately challenging the reader to look at the ways various cultural institutions define who we are as individuals. She moves between small scope examples and broad ways of looking at culture in order to understand the connections between the two. In the autobiography, Didion seems to be writing a history of California. But essentially, everything she has written about has impacted her being and thinking profoundly. In looking at both of these texts together, Didion's progression as a writer and thinker can be traced. Her organizational patterns and themes come full circle, and where she struggled to find closure and answers in "Slouching Towards Bethlehem," she manages to find in "Where I Was From."
- Watkins, Deborah** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
 What is the state of writing at Youngstown State University? How is writing utilized across the disciplines? And how well do YSU composition classes prepare students for their chosen fields of study? The graduate students of English 6901, Composition Research, are asking these and other questions as they study the role of writing at YSU. Research began in February 2005 with a campus-wide survey that asked both fulltime and part-time faculty members to rate the importance of the writing process. The survey also asked questions about specific types of writing the instructor required, both inside and outside the classroom, and about the citation styles used in his or her discipline. Chairs and other faculty members were interviewed to provide a more detailed understanding of the uses of writing in each department. Quantitative results of the campus-wide survey will be presented at Quest 2005, along with additional findings derived from written questions and interviews. Researchers on this

project are: Angel Chan, Alyson Eggleston, John Hazen, Ronald Gura, Diana Jones, Mindi Kirchner, Paul Mauch, Stephanie Moore, Josh Mays, Melodie Provencher, Chad Ries, Amelia Sanker, Deborah Watkins, and Ana Wetzl.

- Weaver, Travis** Arts and Sciences Ohio Room 10:30 - 12:00  
*Synthesis of C-linked 1,2,3-triazole carbohydrate mimics*  
 The synthesis of carbohydrate mimics such as C-glycosides remains an important goal since these compounds have interesting biological potential. We have expanded our dithiane approach to C-disaccharides to include a pyranose nucleophile, which has been coupled with electrophiles en route to novel C-disaccharides. The use and limitations of this method will be presented as will the synthesis of novel 1,2,3-triazole-linked sugars in which the “non-reducing” saccharide is linked to the triazole through carbon and not nitrogen. Regiospecific synthesis of these C-glycosidic triazoles using metallated acetylides and proof of their structures will be presented in detail.
- Wetzel, Ana** Arts and Sciences Jones Rm. 3:30 - 5:00  
*Diagnosing Written Communication: Cross-Campus Composition Compendium*  
 What is the state of writing at Youngstown State University? How is writing utilized across the disciplines? And how well do YSU composition classes prepare students for their chosen fields of study? The graduate students of English 6901, Composition Research, are asking these and other questions as they study the role of writing at YSU. Research began in February 2005 with a campus-wide survey that asked both fulltime and part-time faculty members to rate the importance of the writing process. The survey also asked questions about specific types of writing the instructor required, both inside and outside the classroom, and about the citation styles used in his or her discipline. Chairs and other faculty members were interviewed to provide a more detailed understanding of the uses of writing in each department. Quantitative results of the campus-wide survey will be presented at Quest 2005, along with additional findings derived from written questions and interviews. Researchers on this project are: Angel Chan, Alyson Eggleston, John Hazen, Ronald Gura, Diana Jones, Mindi Kirchner, Paul Mauch, Stephanie Moore, Josh Mays, Melodie Provencher, Chad Ries, Amelia Sanker, Deborah Watkins, and Ana Wetzel.
- Zelenak, Francine A** Arts and Sciences Ohio Room 10:30 - 12:00  
*Building More Effectifve Student- Teacher Relationships in the Writing- Classroom*  
 As new composition instructors we implemented the use of portfolios and individual student- teacher conferences as a way of ensuring our students' comprehension of subject matter and monitoring their progress. We believed that these methods would enhance our effectiveness as we worked with our students throughout the semester. However, we wanted to be sure that they not only benefited us, but benefited our students as well. In trying to make sure that portfolios and conferences were an asset in our classroom, we studied our student's reactions to the work and also their progression. Ultimately, we discovered that while these tools do help in the development of student writing, they also and perhaps more importantly, help teachers to build stronger relationships with students. And through this relationship, we were able to better relate to our students and, in turn, we were better able to respond to their work and their concerns.
- Zhang, Xinde** Arts and Sciences Pugsley Rm. 8:30 - 10:00  
*Analysis of Wildlife Watching Expenditures with a Double Hurdle Model*  
 Abstract: According to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, 82 Million U.S. residents 16 years or 16 older participated in wildlife-based recreation activities. This study will focus on wildlife watching participants' expenditures on their wildlife watching activities. By analyzing the data from the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation based on a double hurdle model, Empirical results of this study indicates that income, age, gender, education level, wildlife category and some other explanatory factors have significant effects on wildlife watching expenditures.



- Abdalla, Alicia** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.
- Accettura, Sara A** Arts and Sciences Coffelt Rm. 10:30 - 12:00  
*Dude, Why Are You So Mean?: An Examination of Abusive Language and Familiarity in Masculine Discourse*  
 In a 2004 linguistic study of the word "dude" and its societal connotation, Dr. Scott Kiesling found that men use this term as a way of creating bonds with other men, while at the same time maintaining distance and therefore preserving their masculinity and heterosexuality. We agree that at one time "dude" served this masculinity defining function. However, for a portion of his research, Dr. Kiesling observed video footage of fraternity interaction in 1993. We believe that in the 12 years since the making of the tape, the term "dude" has become so mainstream that its function has changed. We contend instead that men have begun to use more abrasive language in order to display familiarity with each other and also to share power in the relationship. We created a survey asking students about their use of this kind of language. We inquired about the frequency, context, and rationale behind using certain words in social interaction. We also asked that the students provide us with one word that they often use when addressing friends. We gave this survey to several freshmen writing courses as we tried to explore the conversation practices of students aged 18-25. To augment this survey research, we also observed student interaction on the Youngstown State University campus. Our research has shown a strong predilection among young men for this type of abusive language. We have situated our findings in the larger conversation of language and masculinity.
- Adair, Brad P** Arts and Sciences Rm. 2068 1:30 - 3:00  
*The Future of the North Atlantic Treaty Organization (NATO)*  
 The North Atlantic Treaty Organization (NATO) is an alliance of 26 countries from North America and Europe committed to fulfilling the goals of the North Atlantic Treaty signed on 4 April 1949. Originally founded to deter Soviet aggression during the cold war, NATO has recently struggled to redefine its mission and its membership since the fall of the Soviet Union. Organized as a panel discussion, the presentation will focus on current issues such as membership expansion, and NATO's new role in crisis management and peacekeeping, while examining the role of individual members.
- Alberti, Joe** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
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- Alli, Sparkil** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*Evaluation of the "Voting is Healthy" Public Awareness Campaign*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and HSC 4826 Community Health Planning class shared responsibility to plan, conduct and evaluate the "Voting is Healthy" Public Awareness Campaign. The Campaign was coordinated with other voting activities sponsored by YSU Student Life. The project used multiple media and methods. It was conducted from October 27 – November 2, 2005. The project was intended to encourage members of the YSU community, especially students, to: exercise their right to vote; analyze and compare the health care proposals of both major Presidential candidates; and provide experiential learning for Community Health and School Health majors through service learning. We developed a poster display with the campaign logo, rationale for and sponsorship of the campaign, graphics and written comparison of Bush and Kerry Health care plans, and appropriate patriotic design and graphics. Table top displays were developed and used in Arby's with the campaign logo, rationale for and sponsorship of the campaign and where get information about finding one's polling site. Handouts to voters were developed with phone numbers for locating polling sites in the YSU region, with two incentives to remind people to vote: a wrapped mint, and a flag sticker. The campaign was planned based on health education theory and the National Health Education Standards. The evaluation plan included documentation and comparison to determine the amount of literature and incentives distributed and discarded and documentation of observations, comments and conversations with campaign consumers. The qualitative and quantitative evaluation identified recommendations for what would be done differently and what would be replicated if another such event is conducted. The most effective awareness campaign strategies were one-on-one communication with consumers, provision of information about voting sites, and the mint incentive which enabled workers to engage consumers in conversation about the issue. Evaluation of the project as a class and organizational service learning activity were also conducted. Community Health and School Health student workers increased their professional skills by participating in the project.
- Alli, Sparkil** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.
- Almedhayan, Naser M** Engineering and Technology Humphrey Rm. 1:30 - 3:00  
*Quest for the Best: Designing a Competitive Robot for Parts Collection*  
 The principle objective of our senior design project is to develop an autonomous robot that will pick-up and sort various balls. The balls will be made of brass, steel and glass. We must collect the balls on the course and place the appropriate balls in our bin in order to gain points in head-to-head competition with another robot.
- Arnal, Josh M** Engineering and Technology Ohio Room 10:30 - 12:00  
*Investigating Work Measurement Techniques Applied to a China Company's Processes*  
 An analysis was performed on work measurement techniques applied within a local manufacture's facility. Results from the analysis led to student learning, management insight, and have strengthened the company and university relationship. Techniques applied included time and motion studies using both classic stop watch and more advanced computer driven video techniques. Work sampling has also been applied to determine if inefficiencies exist due to the distribution of work load among the employees.
- Awad, Diana L** Arts and Sciences Coffelt Rm. 10:30 - 12:00  
*And She Lived Sadly Ever After: An Evaluation of Victoria Glendinning's Rebecca West: A Life*  
 "And She Lived Sadly Ever After: An Evaluation of Victoria Glendinning's Rebecca West: A Life" explores the art of biography. The project includes texts and articles that are used to evaluate the effective and ineffective aspects of Glendinning's work as well as certain aspects of biographical theory. Such areas of analysis include Glendinning's use of quotations, commentary, detail, and imagery. Moreover, the project assesses Glendinning's candid reactions and bold hypotheses about West's intentions and inner thoughts. An extension of this project is the honors thesis section, which explores Glendinning's use of psychology in the biography. Glendinning suggests that depression and other psychological disorders afflicted West, and these suggestions are examined using the principal manual of psychology during the 1980s, Diagnostic and Statistical Manual of Mental Disorders III (DSM-III). Furthermore, West's personal awareness of her psyche is explored through a number of her own writings. To learn what theories influenced her attitude, the history of psychology during West's time is surveyed.







support a more prominent and active international role, one that is proportionate to the nation's economic power. Organized as a panel discussion, the presentation will focus on current Japanese foreign policy issues.



- Clark, Elizabeth M** Arts and Sciences Jones Rm. 1:30 - 3:00  
*Women, War and the Mahoning Valley*  
 This project is focused on women in the Youngstown area who worked during the Second World War. The goal is to show that the conditions during this time liberated these women in a way that their daughters would be part of the feminist movement in later years. There was a war going on between women's roles in the past and what they were becoming. The paper will focus on the liberating events that these women underwent including but not limited to entering new areas of the work force, learning of their ability to run the household with limited availability of goods (rationing), the creation of daycare, and furthering of education. Also, their acceptance as workers by others and themselves is an important issue covered. Oral histories of these women will be used to see how this national issue occurred in this area. These make it possible to receive more personal accounts of the atmosphere at the time. While in many ways the country was not ready to have women in the work force in the 1940s and 1950s, the area gained by these women is what made it possible for women to enter careers that used to be closed to them. This time was one that altered America especially for women. Although many of these women would quit their jobs and become fulltime mothers and wives the experience of working served to heighten their self-awareness and confidence. It is important to understand the climate of that time to fully understand future events in the women's rights movement. This paper will examine aspects of this time that may have changed these women ever so slightly that their daughters and granddaughters would soon break through gender barriers.
- Coakley, Brent D** Engineering and Technology Humphrey Rm. 1:30 - 3:00  
*High Level Language Programmable Robot*  
 This research and design project encompasses the application of students' academic background and future interests to a real-world engineering practice. Students will have the opportunity to experience project management and long-term team dynamics. This research provides a preparatory experience for real-world engineering including budget management, timelines, stress management, and business relationship development. Our goal is to experience all of these situations through the construction and programming of a robot that will be used to participate in a competition against other robots from Electrical and Computer Engineering programs in the IEEE Region 2. The results will be orally presented during the Youngstown State University QUEST held in spring of 2005 and for the senior capstone class in the Electrical and Computer Engineering Department. Also, it will be documented in written report format. This goal will be attained within sixteen weeks. After competition, our design may be modified to perform more practical applications like programming a robotic arm to work on an assembly line or picking debris off of an industry floor.
- Cochran, Thomas** Arts and Sciences Jones Rm. 8:30 - 10:00  
*Metal Analysis on the Island of San Salvador, Bahamas*  
 The purpose of this experiment was to determine what metals were present in the sand and soil on the island of San Salvador, Bahamas. The samples were collected from coral reefs, an estuary, and several lakes, including one that was once used as a landfill. These areas were chosen because of the unique ecology each displays. The samples were brought back to YSU for further analysis by irradiating the samples and then examining the energy given off to determine what metals were present. Metals we expected to find included lead, sodium, aluminum, manganese, cobalt, copper, arsenic, as well as trace amounts of other metals. Crystalline structure of the sand and sediment, especially calcite and aragonite, could also be identified using our methodology. The results were used in a quantitative analysis to compare the differences in metal composition and their biological impact between the inland lakes, coral reefs and estuary.
- Cochran, Thomas J** Arts and Sciences Jones Rm. 8:30 - 10:00  
*Presence of Coliform Bacteria in Estuarine Waters at Pigeon Creek, San Salvador*  
 Our study consisted of collecting water samples, testing pH, salinity, dissolved oxygen, water currents, and nutrients at the delta of the Pigeon Creek Estuary during the mean of the high and low tide changes. From the water samples collected, coliform bacteria, which is used as a universal indicator of water quality, was quantified by culturing bacteria in an auger medium. From this growth we counted the number of colonies, which indicated the presence and amount of bacteria at the estuary. One such bacterium was *Escherichia coli*. We also measured the pH, salinity, dissolved oxygen, and velocity of the water currents. We used nutrient kits to measure Nitrogen and Phosphate, which are indicators of biological activity. With this data combined, we compared and contrasted the water quality at Pigeon Creek delta at various stages of the tidal cycle.
- Coller Sr., Robert E** Arts and Sciences Jones Rm. 10:30 - 12:00  
*Impacts of Hurricane Frances on the Natural Environments of Sandy Hook, San Salvador, the Bahamas*  
 San Salvador is an island located in the Bahamas about 640 km ESE of Miami, Florida. The Island has a frequency of a hurricane every 2.87 years, whether it is a direct hit or a brush of the storm. San Salvador sustained a direct hit by Hurricane Frances on September 2, 2004. The storm packed 250 kph winds and a tidal surge of 2 to 3.4 meters and waves reaching 4.6 meters in height. Sandy Hook is an accretionary sedimentary landform located on the southeastern end of San Salvador. Aerial photographs of the area suggest that Sandy Hook is particularly vulnerable to hurricane induced change. We will assess changes to the environment by performing GPS surveys of the present shoreline position and comparing the results to the topographic map of the area and high-resolution aerial photographs obtained in 1999. In addition, we will measure and investigate the beach area and associated sand dunes for changes due to the storm. These observations and measurement will provide baseline data for assessing changes resulting from Hurricane Frances and changes resulting from future storms.





**Danish, Nicole L**

Arts and Sciences

Ohio Room 8:30 - 10:00

*Scientists to the Rescue: a Solution to a Water Conservation Problem*

As a means of conserving water on the Youngstown State University campus, the suitability of a shallow aquifer as an alternative water source for the University lawn sprinkler system was evaluated. The evaluation focused on hydraulic conductivity, transmissivity, storativity, and specific yield physical properties and the aquifer aerial extent. The physical properties were determined using soil auger samples and an aquifer pumping and recovery test. The aerial extent of the aquifer was determined using topographic expression, soil auger boreholes, and pre-existing borehole logs. The aquifer is part of a Pleistocene kame terrace along the Mahoning River. It is a fine grained and well graded sandy material (CL-ML). The aquifer is present over an area of approximately 30 acres. Laboratory determinations of permeability on soil auger samples yielded an average hydraulic conductivity of 0.022 cm./sec. Aquifer transmissivity, storativity, and specific yield were determined from the pump test results using the Neuman solution and the AQTESOLV computer program. The average transmissivity was 11.52 m<sup>2</sup>/day, the average storativity was 0.01, and the average specific yield was 0.17. Results indicate the aquifer is capable of yielding 11,600 m<sup>3</sup>/day, an amount that exceeds the University lawn sprinkler system demand. The actual sustainable yield will be substantially reduced as the aquifer volume and continuity is affected by building foundations and the aquifer may be bounded by non-contributing materials such as clay and other low permeable materials. Furthermore, maximum aquifer yield may not be attainable as the installation of multiple production wells would be required.

**Dargo, Christy M**

Health and Human Services

Humphrey Rm. 3:30 - 5:00

*Learning to Listen: Health Assessments within the American Deaf Culture*

Within the healthcare industry, many factors must be considered when assessing a patient. These factors include health history, genetics, socioeconomic status, and more specifically, their cultural background. From the African Americans to the Italians and Chinese, each culture represents a group of traditions and beliefs that the healthcare team must be aware of and sensitive to. However, special considerations must be made for individuals who also share common beliefs and ways of life such as those who are deaf. Within the United States, 8.6% or 20 million people have some diagnosed hearing impairment. Of those 20 million, approximately 8 million are completely Deaf (50% of these individuals lost hearing in childhood). For a Deaf individual to adjust to a hearing world requires alterations of daily activities. From these adjustments arises a supportive community of individuals who create organizations such as new churches and schools specifically for the Deaf. The medical community must learn to see the big picture when it comes to the Deaf society by learning the genetics of deafness, the specific healthcare practices these individuals believe in, the difficulties of communication that may interfere with proper medical attention, and how these individuals perform in the job world. With a greater knowledge of the life issues which these individuals have to contend, the healthcare team as a whole can begin providing better, more sensitive care to the Deaf culture.

**Davidson, Jennifer E**

Engineering and Technology

Gallery 8:30 - 10:00

*Design and Testing of a Hydraulic Pump-Based Dynamometer Utilizing a 2.2-Liter Engine with Software Interface*

The design and construction of this hydraulic pump-based dynamometer will be used in future laboratory experiments to replace the current water-flow-resistance dynamometer at Youngstown State University. Future students and faculty will benefit from the high-accuracy dynamometer test results provided in this report. Such results will include brake thermal efficiency, shaft power and engine performance. The piston pump included in the system operates in a closed loop. It siphons oil from the reservoir by means of a hydraulic pump connected to the engine. A flow control valve, hydraulic oil flow meter and pressure sensors are utilized as measurement devices in the operation. Data is collected every step of the way. Once the fluid is through the system it is diverted directly to the hydraulic fluid reservoir. The load on the engine is created by gradually closing the oil flow control valve. The software interface allows the automation of data collection. Also, the globe valve is controlled electronically, allowing for precision and accuracy in measurement. The aforementioned software interface, using Labview1, allows students to gain hands-on testing experience while providing clear results that can be analyzed quickly and easily. The results are validated by comparing the data obtained from the dynamometer/computer interface to a software simulation of the hydraulic dynamometer.

**Davis, Darcy A**

Arts and Sciences

Coffelt Rm. 3:30 - 5:00

*Gene-Expression Microarray Classification Using Support Vector Machines*

DNA microarrays are very important with respect to future medical research related to genetic expression analysis for disease classification and genotyping for diagnosis and development of effective medication. However, DNA microarrays contain vast amounts of data, containing hundreds of instances with around 10,000 genes each. Finding patterns in this overwhelming amount of data is impossible to do by hand, but classification is possible using a machine learning technique called support vector machine (SVM). I will present the basic concepts of how support vector machine algorithms and software classify data. I will also present research results where SVM technology has been applied to DNA microarrays in an attempt to optimize correct diagnosis of cancer.

**Dinda, Stephen B**

Arts and Sciences

Pugsley Rm. 8:30 - 10:00

*Environmental Ethics: An Empirical Study*

Environmental ethics can be defined as "the diversity of ideas that drive human relationships with the natural environment". An analysis of public environmental ethics in this case is a necessary step to measure human-nature relationships, which can benefit from the use of more appropriate recreation research and measurement to comprehend the full value of nature-based tourism activities within the framework of natural resource management. The purpose of this study is to measure environmental ethics and identify groups exhibiting common patterns of responses using data collected from a mail survey in Taiwan in 2002. Based on a review of the literature concerning environmental ethics, in particular the work of Manning, et al. (1999), 15 statements measured by a five-point Likert-type scale was written to examine the perceived preferences of environmental ethics. Factor analysis was performed on 15 survey questions using a principal components approach and a varimax rotation to delineate the underlying dimensions associated with environmental ethics. A cluster analysis of respondents was then conducted using the three identified factor scores. Based on examination of the dendrogram (hierarchical agglomerative method), a three-cluster solution was suggested. Using an SPSS quick k-means cluster technique, three cluster groups were developed. The results of

this study provide insight into the understandings of public preferences of environmental ethics that can be used to frame alternatives and scenarios for natural resource management and nature-based tourism development purposes



**Dulin, Carol A** Arts and Sciences Jones Rm. 10:30 - 12:00

*Assessment of Wave Energy, Tidal Energy, and Sediment Transport on Junk Beach, San Salvador the Bahamas*

Junk Beach is a large undeveloped stretch of shoreline along the east-central shore of San Salvador. The beach is exposed to the open waters of the Atlantic Ocean and the Caribbean current. The current brings large quantities of buoyant articles discarded from ships, washed overboard, or accidentally released into the ocean. In order to develop an appreciation for the magnitude of wave energy, tidal range, and direction and rate of current and wave transport, a creative and informative experiment was developed that utilizes the junk littering the beach. Students of the Field Investigations in Geology course were divided into working groups of three persons. Each group was assigned the task of building a structure from available "junk" materials found along the beach that could withstand the forces of the rising tides and the associated waves. The students were required to use certain materials and encouraged to be creative in their designs. The structures will be built parallel to the beach and close to the low tide line. The rising tide and associated wave action is expected to destroy certain structures and disperse the articles along the beach. The status of the structures will be checked daily, and tide levels, wave height, wave frequency, and wind direction will be monitored. The outcome of the project will be very instructive and is designed to provide a graphic understanding of wave and tide energy and associated shoreline processes.

**Engelhardt, Ryan R** Engineering and Technology Ohio Room 10:30 - 12:00

*Work Measurement and Design for Ergonomic Improvement of an Industrial Process*

Work measurement techniques coupled with biomechanical, physiological and psychophysical analyses are applied to achieve ergonomic improvements within an industrial workspace. A self-paced flow line for the assembly, test and inspection of hydraulic pumps is evaluated for possible improvements. Work tasks are assessed from a work design standpoint including body position, hand and arm requirements, and small repetitive finger movements. The analysis is not limited to biomechanical motions. Energy requirements are estimated on a physiological basis relative to each required motion. Additional refinement of the workspace is provided through a review of the psychophysical aspects of the work as it is designed for the particular trained worker. An overall work design evaluation is completed by determining standard throughput with rest cycles and other allowances. The overall evaluation provides values for creating a relative job rating/ risk assignment score that could be applied to a company-wide job description/risk assessment plan. This final step of the research is unique because classically job description plans and risk assessment plans are not integrated into one system.

**Eskay, Sarah B** Arts and Sciences Jones Rm. 8:30 - 10:00

*A Comparative Study to Evaluate the Coral Reef Ecosystem between East Beach and Lindsey Beach on San Salvador Island*

The purpose of this research is to evaluate the coral reef ecosystem of the island of San Salvador, Bahamas, using non-intrusive measurements. A comparative study was conducted between two sites on the island: East Beach and Lindsey Beach. East Beach is situated on the eastern side of the island, which is more susceptible to storm damage. Lindsey Beach is situated on the "more protected" western side of the island, where storm damage is not as severe. Quantitative data involving water quality parameters such as temperature, oxygen content, turbidity, salinity, pH and nutrient analysis (phosphate and nitrate content), as well as fecal coliform count, were collected from both sites utilizing a photoquadrant transecting method. Statistical differences in water quality parameters and fecal coliform counts between East Beach and Lindsey Beach were determined. Qualitative data in the form of photographs of the coral reef communities from both sites were also collected to document species diversity between the tests sites.

**Everett, David D** Engineering and Technology Gallery 10:30 - 12:00

*Filtration and a Recirculation For a Cermaic Plant*

The goal was to design a process to conserve and recycle water, with potential savings reaching \$50,000 per year. To achieve this goal, there is a need to filter the water and remove fibrous materials and the colloidal suspension aids that are a by-product of the vacuum-formed ceramic fiber process. Since, water is used inefficiently in three inter-related areas, therefore these areas became the main focus of the project. The first area involves the creation of slurry and fibrous parts. Heated water from the vacuum pumps and the RF unit is used to make a slurry. The slurry is then drawn through a mesh shield to create a fibrous part. The water pulled through the shield is then dumped to sanitary sewer. When the production of parts is met the remaining slurry is dumped. This represents 75% of the total water loss. The second area is the vacuum pumps. The vacuum used to pull the slurry through the mesh is created by four water-cooled vacuum pumps. The pumps use city water as the cooling fluid. Water enters the pumps at 12°C (53°F) and is released when it reaches (80°F). While this water can be used to make the ceramic slurry, the excess is dumped directly into the sanitary sewer, resulting in another source of lost water. The third area revolves around a radio wave oven. This oven is used to dry the vacuum-formed ceramic parts. Radio waves created by a power-tube evaporate water from the parts. This tube is cooled by a water-to-water heat exchanger. One side of the heat exchanger is a closed-loop distilled water line, while the other side is a continuous-flow city water line. The purpose of the city water line is to remove the heat from the distilled water so that the power tube does not overheat. A constant flow of city water into the radio wave oven is required to keep the power tube cool. The city water, now approximately (80°F), is then used for either the ceramic slurry for dumping directly to the sanitary sewer. In order to conserve and recycle the water it will need to be filtered so that it is free of contaminates. Water for the vacuum pumps and for the radio wave oven will need to be cooled to the same temperature that it was when it entered the system.

- Ewing, June** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*Evaluation of the "Voting is Healthy" Public Awareness Campaign*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and HSC 4826 Community Health Planning class shared responsibility to plan, conduct and evaluate the "Voting is Healthy" Public Awareness Campaign. The Campaign was coordinated with other voting activities sponsored by YSU Student Life. The project used multiple media and methods. It was conducted from October 27 – November 2, 2005. The project was intended to encourage members of the YSU community, especially students, to: exercise their right to vote; analyze and compare the health care proposals of both major Presidential candidates; and provide experiential learning for Community Health and School Health majors through service learning. We developed a poster display with the campaign logo, rationale for and sponsorship of the campaign, graphics and written comparison of Bush and Kerry Health care plans, and appropriate patriotic design and graphics. Table top displays were developed and used in Arby's with the campaign logo, rationale for and sponsorship of the campaign and where get information about finding one's polling site. Handouts to voters were developed with phone numbers for locating polling sites in the YSU region, with two incentives to remind people to vote: a wrapped mint, and a flag sticker. The campaign was planned based on health education theory and the National Health Education Standards. The evaluation plan included documentation and comparison to determine the amount of literature and incentives distributed and discarded and documentation of observations, comments and conversations with campaign consumers. The qualitative and quantitative evaluation identified recommendations for what would be done differently and what would be replicated if another such event is conducted. The most effective awareness campaign strategies were one-on-one communication with consumers, provision of information about voting sites, and the mint incentive which enabled workers to engage consumers in conversation about the issue. Evaluation of the project as a class and organizational service learning activity were also conducted. Community Health and School Health student workers increased their professional skills by participating in the project.
- Fenstermaker, Fred C** Arts and Sciences Jones Rm. 10:30 - 12:00  
*Investigation of Salt water Encroachment in the Cockburn Town Water Well Field, San Salvador, the Bahamas*  
 The Cockburn Town well field is the primary source of drinking water for the majority of the residents of San Salvador. A series of more than 100 low volume shallow extraction wells were designed to produce 60,000 gallons of water per day from a porous limestone aquifer. Recent development on the island has increased the water production demand to more than 110,000 gallons per day. The increase in production is tied to a noticeable increase in the salinity of water produced from the well field. In an effort evaluate the extent of saltwater encroachment into the well field and to design a pumping program to mitigate the problem, the Field Investigations in Geology class constructed water conductivity/total salinity concentration maps for the aquifer at a three-foot vertical interval. The conductivity/total salinity concentrations were determined from borehole gradients measured with a Yellow Springs Instruments borehole conductivity meter. The borehole positions were determined using Global Positioning System receivers. The resulting maps show a dramatic increase in conductivity/total salinity as a function of depth for particular hotspots or production wells within the field. Closer analysis of the finding suggests that the increased salinity is the result of over production from certain wells and the likely hydraulic connection of the wells with ocean water filled underground caverns and fractures. Based on these findings, we recommend close monitoring of salinity in wells and reducing the overall pump rate or shutting down saline wells to mitigate the problem.
- Finamore, Natalie** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.
- Flora, Cassandra L** Education Coffelt Rm. 10:30 - 12:00  
*Visions of the Past: Emily Toth's Idealization of Kate Chopin*  
 In the history of American literature, Kate Chopin has been considered as one of the most controversial writers, and several biographers have tried their hand at documenting her life. In 1990, Emily Toth penned one of the most comprehensive biographies of Chopin in an attempt to right the wrongs committed by the first Chopin biographer, Daniel Rankin. However, throughout the course of her biography Toth allows her infatuation and intrigue of Chopin to muddy her depiction of the writer. Instead of delivering the true Chopin, as she promises, Toth delivers to her readers her own idealization of Kate Chopin.
- Frazer, David J** Arts and Sciences Jones Rm. 8:30 - 10:00  
*Presence of Coliform Bacteria in Estuarine Waters at Pigeon Creek, San Salvador*  
 Our study consisted of collecting water samples, testing pH, salinity, dissolved oxygen, water currents, and nutrients at the delta of the Pigeon Creek Estuary during the mean of the high and low tide changes. From the water samples collected, coliform bacteria, which is used as a universal indicator of water quality, was quantified by culturing bacteria in an auger medium. From this growth we counted the number of colonies, which indicated the presence and amount of bacteria at the estuary. One such bacterium was Escherichia coli. We also measured the pH, salinity, dissolved oxygen, and velocity of the water currents. We

used nutrient kits to measure Nitrogen and Phosphate, which are indicators of biological activity. With this data combined, we compared and contrasted the water quality at Pigeon Creek delta at various stages of the tidal cycle.

- Fuchs, Joanna M** Fine and Performing Arts Pugsley Rm. 3:30 - 5:00  
*Merging of Vocal and Instrumental Music in Beethoven's Ninth Symphony*  
 When Beethoven completed his Ninth Symphony in 1824, he changed the course of music by presenting a finale that broke the boundaries of instrumental music of the period. The transformations in this work range from innovative harmonic structures, which combines new sonorities with techniques dating back to Palestrina, to the creation of novel formal organizations, which include a Turkish march. Most importantly, Beethoven realized his lifelong desire of integrating Schiller's poem "An die Freude" to one of his pieces, a move that proved to be controversial from the beginning. Indeed, his close friends even suggested that he omit the voices altogether. Since then scholars have been dealing with the problem of merging vocal and instrumental genres. In my paper I examine the relationship between the thematic materials and the text in connection to the large-scale musical development. Although the final movement is known as the "Choral" finale, I will argue that the underlying musical ideas stem from the instrumental music rather the vocal tradition as it is often assumed. In conclusion, I will argue that, through the usage of extended harmonies and the merging of musical genres, Beethoven opened the window for the Romantic composers.
- Fulton, Benjamin L** Arts and Sciences Ohio Room 8:30 - 10:00  
*Comparison of Collagen Deposition in the Extracellular Matrix of Male and Female Hypertensive Rats*  
 Hypertension is termed, the "silent killer", due to the fact that symptoms do not manifest until after damage to the blood vessels, heart, brain and kidneys has already been done. While the symptoms of hypertension appear in both men and women, most hypertension research has used male test subjects and therefore very little is known about the effects of hypertension on females. The purpose of this study was to compare gender differences in the structure of the hypertrophied heart of the borderline hypertensive rat. More specifically, this experiment involves the quantitative study of parivascular collagen deposition in the hypertrophied hearts of male and female borderline hypertensive rats. The rats used in this experiment were fed a high sodium diet to induce hypertrophy. At the end of this diet, their hearts were harvested, chemically fixed, and saved for histological studies. The tissue is now being processed for collagen analysis. In the analysis protocol, the hearts will be fixed, embedded in paraffin, sectioned, and captured on microscope slides. The slides will then be stained with Masson Trichrome, a collagen-specific dye. The parivascular collagen deposition will then be measured in the processed slides using Motic software, a digitizing, imaging, and quantitative program that interfaces with the microscope.
- Gardner, Adam R** Arts and Sciences Jones Rm. 10:30 - 12:00  
*Assessment of Wave Energy, Tidal Energy, and Sediment Transport on Junk Beach, San Salvador the Bahamas*  
 Junk Beach is a large undeveloped stretch of shoreline along the east-central shore of San Salvador. The beach is exposed to the open waters of the Atlantic Ocean and the Caribbean current. The current brings large quantities of buoyant articles discarded from ships, washed overboard, or accidentally released into the ocean. In order to develop an appreciation for the magnitude of wave energy, tidal range, and direction and rate of current and wave transport, a creative and informative experiment was developed that utilizes the junk littering the beach. Students of the Field Investigations in Geology course were divided into working groups of three persons. Each group was assigned the task of building a structure from available "junk" materials found along the beach that could withstand the forces of the rising tides and the associated waves. The students were required to use certain materials and encouraged to be creative in their designs. The structures will be built parallel to the beach and close to the low tide line. The rising tide and associated wave action is expected to destroy certain structures and disperse the articles along the beach. The status of the structures will be checked daily, and tide levels, wave height, wave frequency, and wind direction will be monitored. The outcome of the project will be very instructive and is designed to provide a graphic understanding of wave and tide energy and associated shoreline processes.
- Geitgey, Heather** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*Evaluation of the "Voting is Healthy" Public Awareness Campaign*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and HSC 4826 Community Health Planning class shared responsibility to plan, conduct and evaluate the "Voting is Healthy" Public Awareness Campaign. The Campaign was coordinated with other voting activities sponsored by YSU Student Life. The project used multiple media and methods. It was conducted from October 27 – November 2, 2005. The project was intended to encourage members of the YSU community, especially students, to: exercise their right to vote; analyze and compare the health care proposals of both major Presidential candidates; and provide experiential learning for Community Health and School Health majors through service learning. We developed a poster display with the campaign logo, rationale for and sponsorship of the campaign, graphics and written comparison of Bush and Kerry Health care plans, and appropriate patriotic design and graphics. Table top displays were developed and used in Arby's with the campaign logo, rationale for and sponsorship of the campaign and where get information about finding one's polling site. Handouts to voters were developed with phone numbers for locating polling sites in the YSU region, with two incentives to remind people to vote: a wrapped mint, and a flag sticker. The campaign was planned based on health education theory and the National Health Education Standards. The evaluation plan included documentation and comparison to determine the amount of literature and incentives distributed and discarded and documentation of observations, comments and conversations with campaign consumers. The qualitative and quantitative evaluation identified recommendations for what would be done differently and what would be replicated if another such event is conducted. The most effective awareness campaign strategies were one-on-one communication with consumers, provision of information about voting sites, and the mint incentive which enabled workers to engage consumers in conversation about the issue. Evaluation of the project as a class and organizational service learning activity were also conducted. Community Health and School Health student workers increased their professional skills by participating in the project.

- Geitgey, Heather** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.
- Gerasimek, Adam J** Engineering and Technology Ohio Room 10:30 - 12:00  
*Investigating Work Measurement Techniques applied to an Electronic Manufacturing Environment.*  
 Work measurement techniques have been applied within a local manufacturers facility. The analyses that have been performed have resulted in student learning, management insight and have strengthened the relationship between the company and university. Techniques applied have included time and motion study using both classic stopwatch and more advanced computer driven video techniques. Work sampling techniques have also been applied to determine if inefficiencies exist due to the distribution of work load among employees. This service learning experience yielded benefits to the students involved as well as the company where the work was performed and the community that the company resides in.
- Ghioldi, Anthony M** Engineering and Technology Gallery 1:30 - 3:00  
*GE Design Project*  
 Our group has met three times to discuss the General Electric design project. The first time we met we gathered questions to ask Jeff Burns to finalize the whole idea. The tour through the General Electric Ravenna Plant provided us with much more useful information and the overall layout of the project. After getting some answers to our questions at the plant, we began planning some design ideas to apply. In our first discussions we went over each stage in the quartz process and discussed ideas on how to fix or alter the various stages so that the robot arm could have sufficient clearance. Some ideas were accepted and others led us to different plans. The last time our group met we developed a PowerPoint presentation to show how our ideas would work with the robotic arm. This helped us organize the ideas that we have come up with. It also brought up various questions to ask Jeff Burns in order to clarify some of the design specifications with which we were concerned. We are currently awaiting a response regarding some questions on the water jets, clippers, and grips for the robot head. We also need to know the extent of information Mr. Burns needs for a complete and final design. Along with meeting as a group, a couple of us have met to discuss ideas and questions. For the most part we believe that we are headed in the right direction and have many feasible design ideas.
- Giroux, Denise** Health and Human Services Ohio Room 3:30 - 5:00  
*Frequency of Fruit and Vegetable Intake in the Daily Diet of Youngstown State University (YSU) College Students*  
 With the newly published changes in the food guide pyramid specifically recommending an increase in fruit and vegetable intake, it is important for dietetic professionals to assess current intake. Increased consumption of fruits and vegetables has been shown to improve health status and protect against disease. Most publications have reported on the consumption of fruits and vegetables among age groups ranging from children to the elderly, however, few have specifically targeted college students. We will examine this population segment at YSU and investigate which sociodemographic characteristics influence their choices. Intake data will be collected using a survey including demographic data. Approximately 100 subjects will be recruited on campus during the Spring 2005 semester to participate in a Survey-designed study. Data will be analyzed by using the Statistical Package for the Social Services (SPSS) Version 11.5. T-tests and ANOVA will be used to compare groups categorized by sociodemographic characteristics. For all analyses, significance will be set at  $p < 0.05$ . Based on our literature review, we expect to find that frequency of intake will be directly correlated to income level, availability and gender. Older participants are expected to score high as well as athletes.
- Goist, Alyssa J** Health and Human Services Ohio Room 3:30 - 5:00  
*Comparison and Contrast of Static and Dynamic Stretching*  
 Although it is well known that stretching is the best way to improve flexibility, it has been debated whether dynamic or static stretching is most effective. Therefore the purpose of this study was to examine changes in flexibility as measured by range of motion at 5 joints. After baseline measurements, subjects were randomly placed in the dynamic stretch, static stretch, or control group. All baseline measurements were repeated after ten weeks. Each of the stretching groups met three times a week for 15 minutes per session. The control subjects did no stretching. All groups were asked to refrain from any stretching activities outside of those prescribed during the study. No differences in range of motion at any of the 5 joints were observed between groups at baseline or at the end of ten weeks. Although there were trends in the final data suggesting that range of motion improved in both static and dynamic groups, these differences were not significant. Failure to find any significant differences could be due to the small sample size or short duration of the study.



minimum amount of moves for this process is desired for maximum efficiency. The final write up will include assembly drawings, parts details, a parts list, and the controls/pneumatics specs.



- Haug, Heidi L** Education Jones Rm. 10:30 - 12:00  
*Assessing the Impact of Hurricane Frances on Holiday Tracks Beach and Pigeon Creek, San Salvador, the Bahamas*  
Hurricane Frances made landfall on the eastern shore of the Island of San Salvador, the Bahamas on September 4, 2004. Beach and dune environments along this shore are particularly vulnerable to storm activity. The level five hurricane with sustained wind speeds in excess of 250 kph has inevitably changed the geology of the beaches and dunes along Holiday Track beach. Pigeon Creek, a tidal embayment, just west of Holiday Tracks beach would have also been affected due to little protective cover and close proximity to the shoreline. Assessment of the impact of Hurricane Frances requires ground based surveys and observations that can be compared to available pre-hurricane data. GPS surveys of the present Holiday Tracks shore line and dune line positions and adjacent Pigeon Creek embayment will be compared to the 1971 topographic map of the area and 1999 high-resolution aerial photographs. It is expected that the Holiday Tracks shore line and dune line will have been repositioned as a result of the hurricane winds and wave action. It is also likely that the east shore of the adjacent Pigeon Creek embayment has changed. In order to provide ground work for future observations and change, a catalogue of observations and measurements of shoreline features will be made.
- Heflick, Nathan A** Arts and Sciences Pugsley Rm. 10:30 - 12:00  
*Oh Yeah, I AM TO Free: Reactance and System Justification*  
Given the recent Abu Ghraib prison scandal and the current United States' lead "war on terror" it is important to understand the way people support systems under conditions of threat. Based on psychological reactance (Brehm, 1971), terror management theory (Solomon, Greenberg & Pyszczynski, 1990) and system justification theory (Jost & Banaji, 1994), it was hypothesized that under such conditions, support for the system would increase. Using a fictitious professor lecture that stated, among other things, "that freedom does not exist" this hypothesis was verified. The results have serious implications for voting behavior and conflict. In both cases, people may show increased support for a system that protects their perceived freedom, even at the cost of inhumane behavior or personal economic benefits.
- Henning, Andrea L** Business Administration Jones Rm. 10:30 - 12:00  
*Investigation of Salt water Encroachment in the Cockburn Town Water Well Field, San Salvador, the Bahamas*  
The Cockburn Town well field is the primary source of drinking water for the majority of the residents of San Salvador. A series of more than 100 low volume shallow extraction wells were designed to produce 60,000 gallons of water per day from a porous limestone aquifer. Recent development on the island has increased the water production demand to more than 110,000 gallons per day. The increase in production is tied to a noticeable increase in the salinity of water produced from the well field. In an effort evaluate the extent of saltwater encroachment into the well field and to design a pumping program to mitigate the problem, the Field Investigations in Geology class constructed water conductivity/total salinity concentration maps for the aquifer at a three-foot vertical interval. The conductivity/total salinity concentrations were determined from borehole gradients measured with a Yellow Springs Instruments borehole conductivity meter. The borehole positions were determined using Global Positioning System receivers. The resulting maps show a dramatic increase in conductivity/total salinity as a function of depth for particular hotspots or production wells within the field. Closer analysis of the finding suggests that the increased salinity is the result of over production from certain wells and the likely hydraulic connection of the wells with ocean water filled underground caverns and fractures. Based on these findings, we recommend close monitoring of salinity in wells and reducing the overall pump rate or shutting down saline wells to mitigate the problem.
- Herring, Jami L** Arts and Sciences Ohio Room 10:30 - 12:00  
*Bahamian Archaeology*  
Our purpose is to discuss a personal account of what Bahamian Archaeology was like. We will be talking about the Taino Indians (who first met Christopher Columbus) on the island of San Salvador, address what they ate, what tools they used, and essentially what it might have been like to live there during their time period. We will be using a poster board with pictures of the dig site on San Salvador, and will answer any questions that may follow.
- Herriott, Scott W** Engineering and Technology Gallery 1:30 - 3:00  
*General Electric Design Project I*  
A redesign of a GE light production process is our current objective. As GE has defined our objective through the problem statement is: "Automation removes the labor cost of the product for production. We are currently moving offline manual operations to an online process which is fed by a robot. The existing "bench" machine mechanics have proven reliable but must be translated to the automated process. Clearance of the robot end effector make a design change necessary." The final solution is to: "Design a quartz removal and lead trim station which allow a robot end effector to clear the mechanics and remove the process waste. Use of as many existing components is desirable." Accompanying the design will be; assembly drawings, part details, parts list, and controls/pneumatic specs. There are specific stages of the process that must remain intact. These steps are; putting the filament through a water spray, scoring the glass of the filament, removing the scored glass with grippers and cutting the excess leads. In addition to these steps, our goal is to automate this process by introducing a robotic arm in the design. The introduction of the robotic arm should eliminate the need for personnel interaction in the process. This automation design presents numerous problems. Our current design is still in its preliminary stages. An initial problem that we have encountered is a potential clearance issue with the robotic arm. To deal with this issue, we are considering reorienting the quartz removal grippers and lead trimmers. This would allow ample space for the robotic arm to move freely in the area of operation. There are three possible design solutions that we are considering. Our first possible solution involves keeping the existing cart assembly, with the addition of the robotic arm. Before this design is taken into additional stages of development, we must further consult with the customer. The other two designs involve completely replacing the cart with the robot end effector. The differences in these two designs reside in the orientation of the quartz removal grippers and lead trimmers. One design involves the lead trimmers working horizontally, while the other design involves an inverted vertical orientation of the lead trimmers.

**Higgins, Michael T** Education Coffelt Rm. 10:30 - 12:00

*Papa Wants Bear Claws, Baker Man Bakes*

This research project developed out of a critical analysis of biography as a literary theory. The field of biography is frequently called upon as scholars seek to further their understanding of literary greats. This was certainly the case as Princeton professor and Hemingway scholar Carlos Baker undertook his thorough analysis in *Ernest Hemingway: A Life Story*. In his foreword, Baker puts forth that “No biography can portray a man as he actually was. The best that can be hoped for is an approximation, from which all that is false has been expunged and in which most of what is true has been set forth, whether by statement or by implication” (vii). Having thus established the requirements for successfully retelling a life, Baker consciously shirks this duty by submitting the reader to a narrative completely void of any discrimination between what is truth and what is not. Baker acknowledges these shortcomings in his foreword by attempting to couch his explanation within an account of what his book is not. Baker explains that his is not a “definitive” biography, nor is it a “critical” or “thesis” biography (x). With this inexplicable confession, Baker’s attempt to unobtrusively present the unbiased truth of Hemingway’s life actually becomes a platform to perpetrate the Papa Hemingway legend and further his own literary career. In presenting his narrative without pausing to question the veracity of his information, Baker’s determination to remain unobtrusive corrupts his attempt to present the factual observance of his subject’s life.

**Hiznay, William J** Engineering and Technology Gallery 8:30 - 10:00

*Design and Production of a Lunar Buggy for Competition at the U.S. Great Moonbuggy Race 2005*

NASA’s great moonbuggy race is a national competition held at the U.S. Space and Rocket center in Huntsville, Alabama during the first week of April. Teams must design and build an original moonbuggy that will race at the rocket center’s course. The design has to be human powered, and allow for the seating of two people, (one woman and one man). Before the competition, the moonbuggy must be able to collapse and fit in a 1.219m (4ft) cube. This is an approximation of the size that the real moonbuggy had in the lunar landing. The collapsed moonbuggy must be carried by both drivers 6.096m (20 feet) to the starting line; where it will be assembled for competition. Each team will then be timed on how well their design completes the course setup at the rocket center. Time, safety, and originality of the design will play a part in the final standings. The design will be drawn with 3-dimensional Solidworks software. This model will be analyzed with finite element software of Algor to ensure acceptable design factors before parts are purchased. The design will then be fabricated to full scale and tested prior to the competition.

**Hohos, Dennis A** Engineering and Technology Gallery 10:30 - 12:00

*Filtration and a Recirculation For a Cermaic Plant*

The goal was to design a process to conserve and recycle water, with potential savings reaching \$50,000 per year. To achieve this goal, there is a need to filter the water and remove fibrous materials and the colloidal suspension aids that are a by-product of the vacuum-formed ceramic fiber process. Since, water is used inefficiently in three inter-related areas, therefore these areas became the main focus of the project. The first area involves the creation of slurry and fibrous parts. Heated water from the vacuum pumps and the RF unit is used to make a slurry. The slurry is then drawn through a mesh shield to create a fibrous part. The water pulled through the shield is then dumped to sanitary sewer. When the production of parts is met the remaining slurry is dumped. This represents 75% of the total water loss. The second area is the vacuum pumps. The vacuum used to pull the slurry through the mesh is created by four water-cooled vacuum pumps. The pumps use city water as the cooling fluid. Water enters the pumps at 12°C (53°F) and is released when it reaches (80°F). While this water can be used to make the ceramic slurry, the excess is dumped directly into the sanitary sewer, resulting in another source of lost water. The third area revolves around a radio wave oven. This oven is used to dry the vacuum-formed ceramic parts. Radio waves created by a power-tube evaporate water from the parts. This tube is cooled by a water-to-water heat exchanger. One side of the heat exchanger is a closed-loop distilled water line, while the other side is a continuous-flow city water line. The purpose of the city water line is to remove the heat from the distilled water so that the power tube does not overheat. A constant flow of city water into the radio wave oven is required to keep the power tube cool. The city water, now approximately (80°F), is then used for either the ceramic slurry for dumping directly to the sanitary sewer. In order to conserve and recycle the water it will need to be filtered so that it is free of contaminants. Water for the vacuum pumps and for the radio wave oven will need to be cooled to the same temperature that it was when it entered the system.

**Holod, Jason D** Engineering and Technology Humphrey Rm. 8:30 - 10:00

*Gaega County Building Project in Bainbridge Township*

We were given a building site and a proposed new building and parking layout. we are to build this new building in Bainbridge township and follow all zoning and specs from this township. we are to design all parts of the project, from the contours to the plumbing layout. some of the other things include, electric, sanitary sewer, storm sewer, water, flat roof, beams and girders, walls, interior, pavement, HVAC, and many other aspects of this job. we have until the end of the semester to get this project done.

**Honen, Brian R** Engineering and Technology Gallery 10:30 - 12:00

*Personal lift for Fifth Wheel Recreational Vehicle Trailer*

Numerous studies have shown that, due to advancements in medical technology, people are living longer. Advancements in medicine have also allowed many people with disabilities to live full and productive lives. These advancements have generated a greater need for products that facilitate the mobility of senior citizens and the disabled. One area that has such a need is the recreational vehicle market. Many retired couples choose to spend their golden years traveling the country in large R.V. (Recreational Vehicle) trailers that allow them to bring the comforts of home with them on their journey. These vehicles are equipped with almost every amenity that can be found in a permanent house. One area that requires improvement is the method of entry. The floor of a fifth wheel recreational vehicle trailer sets anywhere from 609mm (24 in) to 1016mm (40 in) above the ground. This makes entry and exit somewhat difficult, especially for someone who may have lost some of their mobility. The goal of the project is to create an aesthetically pleasing mechanical lift assembly to replace a standard set of stairs for a fifth

wheel R.V. trailer. The lift must be able to retract completely under the trailer when not in use, and must also accommodate the various entry heights of the numerous models of trailers.

*General Electric Design Project I*

A redesign of a GE light production process is our current objective. As GE has defined our objective through the problem statement is: "Automation removes the labor cost of the product for production. We are currently moving offline manual operations to an online process which is fed by a robot. The existing "bench" machine mechanics have proven reliable but must be translated to the automated process. Clearance of the robot end effector make a design change necessary." The final solution is to: "Design a quartz removal and lead trim station which allow a robot end effector to clear the mechanics and remove the process waste. Use of as many existing components is desirable." Accompanying the design will be; assembly drawings, part details, parts list, and controls/pneumatic specs. There are specific stages of the process that must remain intact. These steps are; putting the filament through a water spray, scoring the glass of the filament, removing the scored glass with grippers and cutting the excess leads. In addition to these steps, our goal is to automate this process by introducing a robotic arm in the design. The introduction of the robotic arm should eliminate the need for personnel interaction in the process. This automation design presents numerous problems. Our current design is still in its preliminary stages. An initial problem that we have encountered is a potential clearance issue with the robotic arm. To deal with this issue, we are considering reorienting the quartz removal grippers and lead trimmers. This would allow ample space for the robotic arm to move freely in the area of operation. There are three possible design solutions that we are considering. Our first possible solution involves keeping the existing cart assembly, with the addition of the robotic arm. Before this design is taken into additional stages of development, we must further consult with the customer. The other two designs involve completely replacing the cart with the robot end effector. The differences in these two designs reside in the orientation of the quartz removal grippers and lead trimmers. One design involves the lead trimmers working horizontally, while the other design involves an inverted vertical orientation of the lead trimmers.

*Impacts of Hurricane Frances on the Natural Environments of Sandy Hook, San Salvador, the Bahamas*

San Salvador is an island located in the Bahamas about 640 km ESE of Miami, Florida. The Island has a frequency of a hurricane every 2.87 years, whether it is a direct hit or a brush of the storm. San Salvador sustained a direct hit by Hurricane Frances on September 2, 2004. The storm packed 250 kph winds and a tidal surge of 2 to 3.4 meters and waves reaching 4.6 meters in height. Sandy Hook is an accretionary sedimentary landform located on the southeastern end of San Salvador. Aerial photographs of the area suggest that Sandy Hook is particularly vulnerable to hurricane induced change. We will assess changes to the environment by performing GPS surveys of the present shoreline position and comparing the results to the topographic map of the area and high-resolution aerial photographs obtained in 1999. In addition, we will measure and investigate the beach area and associated sand dunes for changes due to the storm. These observations and measurement will provide baseline data for assessing changes resulting from Hurricane Frances and changes resulting from future storms.

*Assessment of Wave Energy, Tidal Energy, and Sediment Transport on Junk Beach, San Salvador the Bahamas*

Junk Beach is a large undeveloped stretch of shoreline along the east-central shore of San Salvador. The beach is exposed to the open waters of the Atlantic Ocean and the Caribbean current. The current brings large quantities of buoyant articles discarded from ships, washed overboard, or accidentally released into the ocean. In order to develop an appreciation for the magnitude of wave energy, tidal range, and direction and rate of current and wave transport, a creative and informative experiment was developed that utilizes the junk littering the beach. Students of the Field Investigations in Geology course were divided into working groups of three persons. Each group was assigned the task of building a structure from available "junk" materials found along the beach that could withstand the forces of the rising tides and the associated waves. The students were required to use certain materials and encouraged to be creative in their designs. The structures will be built parallel to the beach and close to the low tide line. The rising tide and associated wave action is expected to destroy certain structures and disperse the articles along the beach. The status of the structures will be checked daily, and tide levels, wave height, wave frequency, and wind direction will be monitored. The outcome of the project will be very instructive and is designed to provide a graphic understanding of wave and tide energy and associated shoreline processes.

*Work Measurement and Design for Ergonomic Improvement of an Industrial Process*

Work measurement techniques coupled with biomechanical, physiological and psychophysical analyses are applied to achieve ergonomic improvements within an industrial workspace. A self-paced flow line for the assembly, test and inspection of hydraulic pumps is evaluated for possible improvements. Work tasks are assessed from a work design standpoint including body position, hand and arm requirements, and small repetitive finger movements. The analysis is not limited to biomechanical motions. Energy requirements are estimated on a physiological basis relative to each required motion. Additional refinement of the workspace is provided through a review of the psychophysical aspects of the work as it is designed for the particular trained worker. An overall work design evaluation is completed by determining standard throughput with rest cycles and other allowances. The overall evaluation provides values for creating a relative job rating/ risk assignment score that could be applied to a company-wide job description/risk assessment plan. This final step of the research is unique because classically job description plans and risk assessment plans are not integrated into one system.

**Hromyak, Dustin A**

Engineering and Technology

Gallery 1:30 - 3:00

*General Electric Design Project I*

A redesign of a GE light production process is our current objective. As GE has defined our objective through the problem statement is: "Automation removes the labor cost of the product for production. We are currently moving offline manual operations to an online process which is fed by a robot. The existing "bench" machine mechanics have proven reliable but must be translated to the automated process. Clearance of the robot end effector make a design change necessary." The final solution is to: "Design a quartz removal and lead trim station which allow a robot end effector to clear the mechanics and remove the process waste. Use of as many existing components is desirable." Accompanying the design will be; assembly drawings, part details, parts list, and controls/pneumatic specs. There are specific stages of the process that must remain intact. These steps are; putting the filament through a water spray, scoring the glass of the filament, removing the scored glass with grippers and cutting the excess leads. In addition to these steps, our goal is to automate this process by introducing a robotic arm in the design. The introduction of the robotic arm should eliminate the need for personnel interaction in the process. This automation design presents numerous problems. Our current design is still in its preliminary stages. An initial problem that we have encountered is a potential clearance issue with the robotic arm. To deal with this issue, we are considering reorienting the quartz removal grippers and lead trimmers. This would allow ample space for the robotic arm to move freely in the area of operation. There are three possible design solutions that we are considering. Our first possible solution involves keeping the existing cart assembly, with the addition of the robotic arm. Before this design is taken into additional stages of development, we must further consult with the customer. The other two designs involve completely replacing the cart with the robot end effector. The differences in these two designs reside in the orientation of the quartz removal grippers and lead trimmers. One design involves the lead trimmers working horizontally, while the other design involves an inverted vertical orientation of the lead trimmers.

**Hubbard, Karrie L**

Arts and Sciences

Rm. 2068 1:30 - 3:00

*The Security Council of the 21st Century*

The Security Council has primary responsibility, under the Charter of the U.N., for the maintenance of international peace and security. It is the only U.N. body that may decide on enforcement measures including economic sanctions (such as trade embargoes), peacekeeping, or collective military action such as Dessert Storm in 1991. Organized as a panel discussion, the presentation will focus on current issues facing the Security Council as it enters the 21st century, such as equitable representation, humanitarian intervention, Security Council reform, and the Council's role in crisis management.

**Hudspeth, Brett A**

Arts and Sciences

Coffelt Rm. 3:30 - 5:00

*What do the Assumptions make of Harberger's Model? (Namely, the Conclusions)*

The paper entitled "The Incidence of the Corporation Income Tax" by Arthur Harberger has become a foundation for advanced work in public finance in the 40 years since its publication. Harberger's general equilibrium model allows one to study the impact of an income tax on the allocation of money to capital and labor in a corporate market. But what are the weaknesses of this paper? As with any paper, the assumptions form the weakest link. In my work, I have examined each assumption and its effect on the final conclusion set. Further, I have built a computer-based version of the model with which I will demonstrate each assumption and show the conclusions of the model.

**Huggins, Diana M**

Arts and Sciences

Jones Rm. 10:30 - 12:00

*Impacts of Hurricane Frances on the Natural Environments of Sandy Hook, San Salvador, the Bahamas*

San Salvador is an island located in the Bahamas about 640 km ESE of Miami, Florida. The Island has a frequency of a hurricane every 2.87 years, whether it is a direct hit or a brush of the storm. San Salvador sustained a direct hit by Hurricane Frances on September 2, 2004. The storm packed 250 kph winds and a tidal surge of 2 to 3.4 meters and waves reaching 4.6 meters in height. Sandy Hook is an accretionary sedimentary landform located on the southeastern end of San Salvador. Aerial photographs of the area suggest that Sandy Hook is particularly vulnerable to hurricane induced change. We will assess changes to the environment by performing GPS surveys of the present shoreline position and comparing the results to the topographic map of the area and high-resolution aerial photographs obtained in 1999. In addition, we will measure and investigate the beach area and associated sand dunes for changes due to the storm. These observations and measurement will provide baseline data for assessing changes resulting from Hurricane Frances and changes resulting from future storms.

**Hughes, Lyndsey A**

Arts and Sciences

Rm. 2068 1:30 - 3:00

*Should We Get Rid of the Electoral College?*

The electoral college is unfair, outdated, and irrational. The best arguments in favor of it are mostly assertions without much basis in reality. True, the electoral college has inertia on its side, but that's hardly a reason to resist reform -- especially when the system puts at risk the basic democratic ideal of equality and inclusion, the very ideal the U.S. is seeking to promote around the world.

**Jackson, Lisa L**

Arts and Sciences

Jones Rm. 10:30 - 12:00

*Assessment of Wave Energy, Tidal Energy, and Sediment Transport on Junk Beach, San Salvador the Bahamas*

Junk Beach is a large undeveloped stretch of shoreline along the east-central shore of San Salvador. The beach is exposed to the open waters of the Atlantic Ocean and the Caribbean current. The current brings large quantities of buoyant articles discarded from ships, washed overboard, or accidentally released into the ocean. In order to develop an appreciation for the magnitude of wave energy, tidal range, and direction and rate of current and wave transport, a creative and informative experiment was developed that utilizes the junk littering the beach. Students of the Field Investigations in Geology course were divided into working groups of three persons. Each group was assigned the task of building a structure from available "junk" materials found along the beach that could withstand the forces of the rising tides and the associated waves. The students were required to use certain materials and encouraged to be creative in their designs. The structures will be built parallel to the beach and close to the low tide line. The rising tide and associated wave action is expected to destroy certain structures and disperse the articles along the beach. The status of the structures will be checked daily, and tide levels, wave height, wave frequency, and wind

direction will be monitored. The outcome of the project will be very instructive and is designed to provide a graphic understanding of wave and tide energy and associated shoreline processes.

**Jackson, Erin M** Arts and Sciences Ohio Room 8:30 - 10:00

*Role of Myosin Light Chain Phosphatase in Relaxation of Cavernal Smooth Muscle in the Rat*

Erectile dysfunction arises when the smooth muscle cells of the corpus cavernosum are not able to fully relax and allow sufficient filling of blood. Nitric oxide (NO), released from nerve endings, is believed to be the major factor that initiates relaxation in these smooth muscle cells. NO, through its second messenger cGMP, regulates relaxation through several pathways. However, the relative roles and mechanism of action of these regulatory pathways in cavernosal smooth muscle remain unknown. It has been hypothesized that myosin light chain phosphatase (MLCP) plays a role in regulating the contractile state of smooth muscle. Therefore, Calyculin A, a direct inhibitor of MLCP, was used to investigate the role of MLCP in mediating NO-induced relaxation in rat corpus cavernosal smooth muscle. Isometric tension of rat cavernosal tissue was analyzed during induced contraction and relaxation in vitro. Strips of corpus cavernosum were placed in individual tissue chambers filled with physiological buffered saline solution at 37°C and attached to force transducers. Data was collected using the PolyVIEW data acquisition and analysis software system (Astro Med, Inc.). After a 1 hour equilibration period, tissue samples were contracted by the addition of norepinephrine (10-4M) followed twenty minutes later by Calyculin A (10-6M) or dimethyl sulfoxide (DMSO, 10-5M) to experimental or control groups, respectively. Finally, the tissues were relaxed using the NO donor, sodium nitroprusside (10-3M). Preliminary results demonstrated an average relaxation of 43% of total contraction for the tissues treated with Calyculin A as compared to control groups, which had an average relaxation of 68% of total contraction. These data indicate that Calyculin A has an inhibitory effect on NO-induced smooth muscle relaxation. This suggests that MLCP plays an important role in mediating the mechanisms of NO-induced relaxation of corpus cavernosal tissue and may provide the basis for alternative treatments for erectile dysfunction.

**Jasenc, Ashley N** Arts and Sciences Jones Rm. 8:30 - 10:00

*Comparative Analysis of E. coli on Coral Reefs in San Salvador, Bahamas*

The purpose of this research was to evaluate human impact upon coral reef ecosystems on the island of San Salvador, Bahamas. The experiment was a comparative analysis between two sites on the island: Lindsey Beach on the west side of the island and Grahams Harbor on the north side of the island, which is also exposed to the outflow of sewage produced from the Gerace Research Center. Fecal coliform bacterial counts were collected from each site and compared. This data was supplemented with YSI probe readings of temperature, oxygen content, turbidity, salinity, pH, and nutrient analysis. On each beach, two equidistant transects were measured and 10 sample points were chosen for data collection. Data was collected from water column samples and microlayer coral head (mucus layer) samples for further fecal coliform bacterial tests. The bacterial extractions obtained directly from the microlayer of the coral reef heads were taken and used to indicate bacterial activity within the coral. The water column samples were used as a control to determine if the bacteria could survive in free salt water without the coral mucus layer. A total of 40 samples were taken at each beach. The fecal coliform counts of Graham's Harbor are expected to be higher due to the flow of sewage into the ocean from Gerace Research Center.

**Javens, Stephen** Health and Human Services Ohio Room 3:30 - 5:00

*The Natural Born Criminal*

For my presentation, I would like to analyze Cesare Lombroso's Biological School of Thinking and compare his theories to the Classical and Psychological Schools of Thinking. The presentation will focus mainly on the Biological School and include important theories such as the "born criminal," the "insane criminal," and the "criminaloid." More modern elements of the Biological Theory will also be mentioned such as biochemistry, genetics, and neurophysiology. The first half of the presentation will be devoted to Cesare Lombroso's Biological School of Thinking, from the humble beginnings of the "born criminal" to the modern day ideas of genetically crime inducing traits. The second half of the presentation will give a brief look at the Classical and Psychological Schools of Thinking and compare them to the Biological School. It is believed that by comparing these three schools of thought, a definite link can be drawn between them to help us understand what factors truly make up the chemistry of criminal nature.

**Jones, Brian T** Engineering and Technology Humphrey Rm. 1:30 - 3:00

*Unmanned Terrain Vehicle*

The use of unmanned vehicles is rapidly becoming the best way mankind has to either go places that are otherwise unreachable or to solve problems or take data and measurements in places or areas that are hazardous to humans. In this reasoning, our team would like to research the creation of an unmanned terrain vehicle. This vehicle will move under its own power, controlled remotely by a personal computer through the use of radio frequencies. It will also be able to send messages back to the computer. All of the messages sent by this system will be transmitted in a secure manner. Most of the research in the area of unmanned vehicles is done in aerial vehicles; however, our project will not fly. This unmanned aerial vehicles, or UAVs, are outside of the realm of the time and budget constraints we have. Though the idea of aerial vehicle was not employed, our project could be changed from a terrain vehicle to an aerial vehicle, by adding the appropriate control systems, motors, and sensors required for flight. This project could be used for other applications by adding the sensor, camera, or other systems suitable for the application. In this project, the computer will be interfaced with a joystick and therefore human input can be used to make the vehicle go in any user-desired direction.

**Jurich, Lisa M** Arts and Sciences Jones Rm. 8:30 - 10:00

*Comparative Analysis of E. coli on Coral Reefs in San Salvador, Bahamas*

The purpose of this research was to evaluate human impact upon coral reef ecosystems on the island of San Salvador, Bahamas. The experiment was a comparative analysis between two sites on the island: Lindsey Beach on the west side of the island and Grahams Harbor on the north side of the island, which is also exposed to the outflow of sewage produced from the Gerace Research Center. Fecal coliform bacterial counts were collected from each site and compared. This data was supplemented with YSI probe readings of temperature, oxygen content, turbidity, salinity, pH, and nutrient analysis. On each beach, two equidistant transects were measured and 10 sample points were chosen for data collection. Data was collected from water column samples and microlayer coral head (mucus layer) samples for further fecal coliform bacterial tests. The bacterial extractions obtained directly from the microlayer of the coral reef heads were taken and used to indicate bacterial activity within

the coral. The water column samples were used as a control to determine if the bacteria could survive in free salt water without the coral mucus layer. A total of 40 samples were taken at each beach. The fecal coliform counts of Graham's Harbor are expected to be higher due to the flow of sewage into the ocean from Gerace Research Center.

**Kachmar, Erica** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*Evaluation of the "Voting is Healthy" Public Awareness Campaign*

Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and HSC 4826 Community Health Planning class shared responsibility to plan, conduct and evaluate the "Voting is Healthy" Public Awareness Campaign. The Campaign was coordinated with other voting activities sponsored by YSU Student Life. The project used multiple media and methods. It was conducted from October 27 - November 2, 2005. The project was intended to encourage members of the YSU community, especially students, to: exercise their right to vote; analyze and compare the health care proposals of both major Presidential candidates; and provide experiential learning for Community Health and School Health majors through service learning. We developed a poster display with the campaign logo, rationale for and sponsorship of the campaign, graphics and written comparison of Bush and Kerry Health care plans, and appropriate patriotic design and graphics. Table top displays were developed and used in Arby's with the campaign logo, rationale for and sponsorship of the campaign and where get information about finding one's polling site. Handouts to voters were developed with phone numbers for locating polling sites in the YSU region, with two incentives to remind people to vote: a wrapped mint, and a flag sticker. The campaign was planned based on health education theory and the National Health Education Standards. The evaluation plan included documentation and comparison to determine the amount of literature and incentives distributed and discarded and documentation of observations, comments and conversations with campaign consumers. The qualitative and quantitative evaluation identified recommendations for what would be done differently and what would be replicated if another such event is conducted. The most effective awareness campaign strategies were one-on-one communication with consumers, provision of information about voting sites, and the mint incentive which enabled workers to engage consumers in conversation about the issue. Evaluation of the project as a class and organizational service learning activity were also conducted. Community Health and School Health student workers increased their professional skills by participating in the project.

**Kachmar, Erica** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*

Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's: a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.

**Karlen, Barbara** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*Evaluation of the "Voting is Healthy" Public Awareness Campaign*

Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and HSC 4826 Community Health Planning class shared responsibility to plan, conduct and evaluate the "Voting is Healthy" Public Awareness Campaign. The Campaign was coordinated with other voting activities sponsored by YSU Student Life. The project used multiple media and methods. It was conducted from October 27 - November 2, 2005. The project was intended to encourage members of the YSU community, especially students, to: exercise their right to vote; analyze and compare the health care proposals of both major Presidential candidates; and provide experiential learning for Community Health and School Health majors through service learning. We developed a poster display with the campaign logo, rationale for and sponsorship of the campaign, graphics and written comparison of Bush and Kerry Health care plans, and appropriate patriotic design and graphics. Table top displays were developed and used in Arby's with the campaign logo, rationale for and sponsorship of the campaign and where get information about finding one's polling site. Handouts to voters were developed with phone numbers for locating polling sites in the YSU region, with two incentives to remind people to vote: a wrapped mint, and a flag sticker. The campaign was planned based on health education theory and the National Health Education Standards. The evaluation plan included documentation and comparison to determine the amount of literature and incentives distributed and discarded and documentation of observations, comments and conversations with campaign consumers. The qualitative and quantitative evaluation identified recommendations for what would be done differently and what would be replicated if another such event is conducted. The most effective awareness campaign strategies were one-on-one communication with consumers, provision of information about voting sites, and the mint incentive which enabled workers to engage consumers in conversation about the issue. Evaluation of the project as a class and organizational service learning activity were also conducted. Community Health and School Health student workers increased their professional skills by participating in the project.

**Katz, Scott E** Engineering and Technology Gallery 1:30 - 3:00  
*GE Design Project*

Our group has met three times to discuss the General Electric design project. The first time we met we gathered questions to ask Jeff Burns to finalize the whole idea. The tour through the General Electric Ravenna Plant provided us with much more useful information and the overall layout of the project. After getting some answers to our questions at the plant, we began planning some design ideas to apply. In our first discussions we went over each stage in the quartz process and discussed ideas on how



Staphylococcus aureus is responsible for most of the infections contracted by individuals with compromised immune systems and neonates. Antimicrobial treatments, such as antibiotics, have proven to be ineffective in the treatment of S. aureus due to high mutation rates in S. aureus isolates. 75% of all clinical cases are due to infection by S. aureus containing types 5 and 8 capsular polysaccharides. The goal of this research project is to develop hybridomas producing monoclonal antibodies against Staphylococcus aureus with type 5 and type 8 capsules. The hybridomas will be grown using P3X media and MRC-5 feeder cells through tissue culture growth procedures. The hybridoma supernatants will be tested for antigen binding using both carbohydrate and whole bacteria ELISA.

- Kolovich, Steffanie** Health and Human Services Ohio Room 3:30 - 5:00  
*Frequency of Fruit and Vegetable Intake in the Daily Diet of Youngstown State University (YSU) College Students*  
 With the newly published changes in the food guide pyramid specifically recommending an increase in fruit and vegetable intake, it is important for dietetic professionals to assess current intake. Increased consumption of fruits and vegetables has been shown to improve health status and protect against disease. Most publications have reported on the consumption of fruits and vegetables among age groups ranging from children to the elderly, however, few have specifically targeted college students. We will examine this population segment at YSU and investigate which sociodemographic characteristics influence their choices. Intake data will be collected using a survey including demographic data. Approximately 100 subjects will be recruited on campus during the Spring 2005 semester to participate in a Survey-designed study. Data will be analyzed by using the Statistical Package for the Social Services (SPSS) Version 11.5. T-tests and ANOVA will be used to compare groups categorized by sociodemographic characteristics. For all analyses, significance will be set at  $p < 0.05$ . Based on our literature review, we expect to find that frequency of intake will be directly correlated to income level, availability and gender. Older participants are expected to score high as well as athletes.
- Korchnak, Christine R** Health and Human Services Ohio Room 3:30 - 5:00  
*The Effect of a Therapeutic Dose of Cinnamon on Fasting Blood Glucose Levels in Type 2 Diabetes*  
 The study will evaluate glycemic control in a female subject with type 2 Diabetes Mellitus and the effect a one-gram therapeutic dose of Cinnamomum cassia on fasting blood glucose (FBG) control in the same subject. This study will use an experimental case study design where the participant serves as her own control. During baseline the participant will self-report dietary intake, physical activity, and two measurements of blood glucose daily for seven days. The participant will continue the same diet and physical activity patterns followed in the baseline phase but add one gram of Cinnamomum cassia per day for 21 days. On completion of the experimental phase, the subject's FBG is expected to decrease by 18-20% compared to baseline. The outcomes of this study may be valuable to both diabetics and pre-diabetics since Cinnamomum cassia may prove to be an acceptable alternative or complementary treatment in blood glucose management.
- Kotel, Robert J** Engineering and Technology Gallery 1:30 - 3:00  
*GE Production Redesign*  
 The assigned task was to automate a specific process for scoring, snapping and cutting a full-length arc tube into a cut/trimmed form to be used for lighting. The current process has proven successful. However, the company wishes to automate the process to remove the labor cost. Since the existing mechanics are effective, a design change that allows for the clearance of the robot end effector without drastically changing the mechanics of the process is ideal. With this in mind our group has moved towards a solution that would use as much of the existing mechanics as possible. It is obvious that there will be clearance issues with the robot end effector. These areas occur where the excess quartz is removed and the lead wires are trimmed. The focus of the design changes will be primarily in these two locations. An important thing to consider is that this process is to remove the production waste automatically. The proposal is that the brackets supporting the cutters be lengthened allowing a portion of the end effector to easily fit under the cutters. After the quartz is snapped off, the end effector will rotate so that it is positioned on the side of the end effector rather than underneath it. The current design of the end effector will allow for this. The heightened brackets will then allow enough clearance for that portion of the end effector to slide under and then up into the cutters. The lead wires can then be cut and the end effector will drop from under the cutters and move the end product to its desired location. The brackets on the end effector supporting the grippers will also need lengthened to allow for clearance issues. These changes should allow for the process to clear both the snapping and trimming stage.
- Krezeczowski, Jon A** Engineering and Technology Gallery 1:30 - 3:00  
*General Electric Trim and Removal Station*  
 GE Project Jeff Burns came to YSU and gave us his presentation on his GE project on January 24, 2005. In his presentation he explained the general objective of the design. On January 31 we visited the GE Ravenna Lamp Plant to see first-hand the machine that we needed to improve. The following Monday our group met to discuss some preliminary ideas on the design of the machine. Our group consists of John Martin, Eric Latimer, Jeremy Grabowsky, and Jon Krezeczowski. Our group also met up on Wednesday and Friday of that week to finalize our ideas for the design of the machine and clarify our presentation. The objective of the redesign of the machine is to have clearance with all the other automotive processes while using as many existing components as possible. We are changing the machine from having a cart moving the quartz arch tube to having a robotic arm moving the tube through the processes. In our proposed design we will have the grippers that remove the scored quartz ends, stay in the same position. At that position it will not interfere with the robotic end effector arm movement. We are going to move the lead cutters to the end of the process facing against the movement of the arm at a slight downward slope from the horizontal. This downward slope allows the scrap leads to fall to the floor without jamming the cutter process.
- Krieg, Jason M** Engineering and Technology Humphrey Rm. 1:30 - 3:00  
*Quest for the Best: Designing a Competitive Robot for Parts Collection*  
 The principle objective of our senior design project is to develop an autonomous robot that will pick-up and sort various balls. The balls will be made of brass, steel and glass. We must collect the balls on the course and place the appropriate balls in our bin in order to gain points in head-to-head competition with another robot.



stay in the same position. At that position it will not interfere with the robotic end effector arm movement. We are going to move the lead cutters to the end of the process facing against the movement of the arm at a slight downward slope from the horizontal. This downward slope allows the scrap leads to fall to the floor without jamming the cutter process.

Law, Matthew G

Engineering and Technology

Gallery 1:30 - 3:00

*General Electric Design Project II*

General Electric is trying to cut labor costs by changing their quartz removal and lead trim station to an automated process. Currently, GE is moving offline manual operations to an online process which is fed by a robot. The existing mechanics for the machine have proven reliable but changes are needed to automate the process. The biggest problem for this change is that the clearance of the robot end effector is inadequate for the existing machine. This requires a modification to the end effector to accommodate for the tube to complete the operation with the proper clearance. The first operation that needs to be accounted for is the spray wash. This spray wash removes a white coating of the cutting surface on the tube. Following this, a carbide wheel will score the tube by cutting a groove in the surface. Then a mechanism needs to be in place to snap the glass at the score. Next, the glass waste is removed by pulling them off using some mechanism. Finally, a wire cutting mechanism will cut the leads and dispose of them. One option that has been considered is implementing the existing, reliable mechanism with the robotic arm as the loading feature. This seems to be the most logical and simple change that would automate the system. For this method, the gripper bracket can hold two tubes by picking up the first and rotating ninety degrees to pick up a second. The minimum amount of moves for this process is desired for maximum efficiency. The final write up will include assembly drawings, parts details, a parts list, and the controls/pneumatics specs.

Lawrence, Rikki L

Arts and Sciences

Jones Rm. 10:30 - 12:00

*Impacts of Hurricane Frances on the Pigeon Creek Delta: Implications for Predicting Storm-Related Sediment Displacement*

The Pigeon Tidal Estuary is a major feature on the Island of San Salvador, the Bahamas. The estuary covers an area of approximately seven square miles and fills during high tides and subsequently drains during the intervening low tides. The discharge of water from draining transports a tremendous amount of sediment that is deposited as a large submerged delta inside of Snow Bay at the mouth of the estuary. The location of the delta on the eastern side of the island makes it particularly susceptible to reworking and displacement by tropical storms and hurricanes. In September, 2004, Hurricane Frances passed directly over San Salvador. The category five hurricane with sustained wind speeds of 250 kph pushed tremendous volumes of sand inland from the delta. The project has several intended outcomes; 1) characterize the morphology of the delta by creating a bathymetric map using a high density grid of GPS position coordinates and bathymetric soundings, 2) determine the volume of displaced sand from the delta by comparing the bathymetric map to preexisting maps, and 3) investigate evidence for historical storm-related changes to the delta by extracting and examining sediment cores. The project results have implications that reach far beyond the island of San Salvador. The quantification of sand displacement can be used to predict impacts of hurricanes on the natural environment of similar island settings and the numerous shallow bays of the United States eastern seaboard and the Gulf of Mexico.

Lewis, Stacey M

Health and Human Services

Ohio Room 3:30 - 5:00

*How City Landscape Influences Crime*

I will be presenting a posterboard presentation concerning how the design and structure influence crime in a city. Focusing upon city demographics, land use and environmental framework. Understanding the dynamics of crime within a city may help influence how a city may improve itself. Crime influences a city's social and economic performances; therefore this is an important area to conduct research. I will be reviewing and analyzing data on approximately twenty city's. Reviewing each city and their crime statistics. Exploring any information that may help determine if a city's land use or environmental framework does in fact influence crime and how. Results are forthcoming.

Lileas, Catherine

Health and Human Services

Humphrey Rm. 3:30 - 5:00

*Learning to Listen: Health Assessments within the American Deaf Culture*

Within the healthcare industry, many factors must be considered when assessing a patient. These factors include health history, genetics, socioeconomic status, and more specifically, their cultural background. From the African Americans to the Italians and Chinese, each culture represents a group of traditions and beliefs that the healthcare team must be aware of and sensitive to. However, special considerations must be made for individuals who also share common beliefs and ways of life such as those who are deaf. Within the United States, 8.6% or 20 million people have some diagnosed hearing impairment. Of those 20 million, approximately 8 million are completely Deaf (50% of these individuals lost hearing in childhood). For a Deaf individual to adjust to a hearing world requires alterations of daily activities. From these adjustments arises a supportive community of individuals who create organizations such as new churches and schools specifically for the Deaf. The medical community must learn to see the big picture when it comes to the Deaf society by learning the genetics of deafness, the specific healthcare practices these individuals believe in, the difficulties of communication that may interfere with proper medical attention, and how these individuals perform in the job world. With a greater knowledge of the life issues which these individuals have to contend, the healthcare team as a whole can begin providing better, more sensitive care to the Deaf culture.

Loree, Mary E

Arts and Sciences

Jones Rm. 10:30 - 12:00

*Assessing the Impact of Hurricane Frances on Holiday Tracks Beach and Pigeon Creek, San Salvador, the Bahamas*

Hurricane Frances made landfall on the eastern shore of the Island of San Salvador, the Bahamas on September 4, 2004. Beach and dune environments along this shore are particularly vulnerable to storm activity. The level five hurricane with sustained wind speeds in excess of 250 kph has inevitably changed the geology of the beaches and dunes along Holiday Track beach. Pigeon Creek, a tidal embayment, just west of Holiday Tracks beach would have also been affected due to little protective cover and close proximity to the shoreline. Assessment of the impact of Hurricane Frances requires ground based surveys and observations that can be compared to available pre-hurricane data. GPS surveys of the present Holiday Tracks shore line and dune line positions and adjacent Pigeon Creek embayment will be compared to the 1971 topographic map of the area and 1999 high-resolution aerial photographs. It is expected that the Holiday Tracks shore line and dune line will have been repositioned as a result of the hurricane winds and wave action. It is also likely that the east shore of the adjacent Pigeon Creek embayment has changed. In order to provide ground work for future observations and change, a catalogue of observations and measurements of shoreline features will be made.

- MacDonald, Lori A** Arts and Sciences Ohio Room 8:30 - 10:00  
*Proteomic Profiling of Morphogenesis in Wangiella dermatitidis*  
 Wangiella dermatitidis is a darkly-pigmented (dematiaceous) pathogenic fungus. This fungus is a causative agent of phaeohyphomycosis, a superficial or deep infection caused by fungi that form yeastlike cells in tissue. Curiously, W. dermatitidis is dimorphic, i.e., it exists in two forms - a single-celled yeast (Y) and a multicellular (Mc), swollen form. The latter resembles the tissue form of other pathogenic, dematiaceous fungi. Previous investigations have studied the yeast-to-multicellular form (Y-Mc) conversion of W. dermatitidis using temperature-sensitive mutants. At 25°C, the mutants and the wild type (WT) both grow as budding yeasts. However, when incubated at 37°C, the mutant strains undergo Y-Mc conversion while the WT continues to grow as a budding yeast. The precise molecular mechanisms governing this process are unknown, but certainly are regulated by proteins. To identify the proteins involved in the dimorphism of W. dermatitidis, the WT and a multicellular mutant, Mc3, will be grown at 25°C and 37°C. Proteomic analysis, a method of identifying and quantifying specific proteins, will then be performed. Proteomics is often used in studies involving comparison between normal subjects (in this case, the WT) and experimental subjects (the Mc3 mutant). Our hypothesis is that specific proteins are associated with Y-Mc conversion of W. dermatitidis. The proteomic profiles will aid in the identification of proteins that play a role in multicellular development. These specific proteins will be isolated and sequenced. The identification of these proteins may advance the understanding of the pathogenicity of W. dermatitidis and perhaps other fungi.
- Mady, Tara L** Business Administration Coffelt Rm. 4:45 – 5:00  
*Business Student Perceptions of Academic Integrity and Ethical Behavior*  
 My presentation will be of my senior honors thesis, a descriptive study under the supervision of Dr. Maskulka in the Marketing Department, who is working with Dr. Stout of the Accounting Department on this research project. They are collecting data on student's perception of academic integrity and ethical behavior from a sample of WCBA undergraduate students. I will be assisting them in analyzing this data as well as collecting similar data from a private university. Subsequent analysis will examine the similarities and differences between the institutions. The survey instrument that was pre-tested focuses on three major issues: (1) whether students are aware if their university has a Code of Ethics and if so, have they ever accessed it; (2) an evaluation by students of a variety of possible offenses and whether these activities are perceived to be ethical or not. Students are asked whether and to what extent they have ever been in violation of the various offenses. The last step asks the students to indicate the appropriate sanction for both a first and second offense of each action; and (3) the latter part of the survey provides several business scenarios and students are asked to evaluate how they would respond to a certain ethical business decision by selecting one of the alternatives given. The survey concludes with demographic questions (gender, age, rank, family background) which will be able to be cross-tabbed and correlated with their perceptions of academic integrity and business ethics. Such analysis will constitute a significant portion of the thesis. I will present my analysis in an oral presentation.
- Maley, Brian J** Engineering and Technology Humphrey Rm. 1:30 - 3:00  
*High Level Language Programmable Robot*  
 This research and design project encompasses the application of students' academic background and future interests to a real-world engineering practice. Students will have the opportunity to experience project management and long-term team dynamics. This research provides a preparatory experience for real-world engineering including budget management, timelines, stress management, and business relationship development. Our goal is to experience all of these situations through the construction and programming of a robot that will be used to participate in a competition against other robots from Electrical and Computer Engineering programs in the IEEE Region 2. The results will be orally presented during the Youngstown State University QUEST held in spring of 2005 and for the senior capstone class in the Electrical and Computer Engineering Department. Also, it will be documented in written report format. This goal will be attained within sixteen weeks. After competition, our design may be modified to perform more practical applications like programming a robotic arm to work on an assembly line or picking debris off of an industry floor.
- Marshall, Kelly A** Engineering and Technology Ohio Room 10:30 - 12:00  
*Investigating Work Measurement Techniques Applied to a China Company's Processes*  
 An analysis was performed on work measurement techniques applied within a local manufacturer's facility. Results from the analysis led to student learning, management insight, and have strengthened the company and university relationship. Techniques applied included time and motion studies using both classic stop watch and more advanced computer driven video techniques. Work sampling has also been applied to determine if inefficiencies exist due to the distribution of work load among the employees.
- Martin, Pamela A** Arts and Sciences Humphrey Rm. 10:30 - 12:00  
*Fabrication and Characterization of GaN Schottky Diodes*  
 Schottky diodes are important devices commonly used in integrated circuits. Schottky diodes allow current to travel in one direction, but block it from traveling in the other direction. A major application is in voltage clamping, where the Schottky diodes are used to protect sensitive components from excessive voltage. While Schottky diodes are used as discrete devices on their own rights, they are also building blocks for transistors, such as HFETs (heterojunction field effect transistors), which are used in fabricating radio frequency amplifiers or power amplifiers. We have fabricated GaN Schottky diodes using standard photolithography process and measured their I-V electrical characteristics. Ni90Ga10 ohmic contacts were first formed on n-type GaN materials. ZrB2 and TiB2 Schottky contacts were then aligned inside the Ohmic contact patterns. These metal contacts were deposited using YSU's DC magnetron sputtering system. The use of Ni90Ga10 and the metal borides are new concepts we are studying. Our results show that Ni90Ga10 makes better ohmic contacts than traditionally used Ti/Al contacts. The Schottky diodes show low reverse currents in the range of nanoamperes. We will present more results obtained from electrical measurements of the Schottky diodes and discuss the implications of these results in wide band gap semiconductor devices.
- Martin, John D** Engineering and Technology Gallery 1:30 - 3:00  
*General Electric Trim and Removal Station*

GE Project Jeff Burns came to YSU and gave us his presentation on his GE project on January 24,2005. In his presentation he explained the general objective of the design. On January 31 we visited the GE Ravenna Lamp Plant to see first-hand the machine that we needed to improve. The following Monday our group met to discuss some preliminary ideas on the design of the machine. Our group consists of John Martin, Eric Latimer, Jeremy Grabowsky, and Jon Krezeczowski. Our group also met up on Wednesday and Friday of that week to finalize our ideas for the design of the machine and clarify our presentation. The objective of the redesign of the machine is to have clearance with all the other automotive processes while using as many existing components as possible. We are changing the machine from having a cart moving the quartz arch tube to having a robotic arm moving the tube through the processes. In our proposed design we will have the grippers that remove the scored quartz ends, stay in the same position. At that position it will not interfere with the robotic end effector arm movement. We are going to move the lead cutters to the end of the process facing against the movement of the arm at a slight downward slope from the horizontal. This downward slope allows the scrap leads to fall to the floor without jamming the cutter process.











- Molinaro, Natale C** Arts and Sciences Jones Rm. 1:30 - 3:00  
*Working Women of the Mahoning Valley; Balancing Personal and Professional roles*  
 One of the key issues facing women of the Western world is the balancing act between professional and personal demands. The amount of women in the workforce has steadily increased throughout the years as the concept of feminism began to take hold, as well as the economic factors of an ever-rising cost of living. According to the U.S. Census bureau, there is a 63% chance that your taxes will be prepared by a woman, an 83% likelihood that a woman will help you plan your next vacation, and the amount of female lawyers has reached 250,000. In exploring this issue I will take a three-tiered approach. First examine women in the workplace throughout history, then focusing on the modern women's balancing act between family and work, finally conducting independent research into this area. When examining women's emergence into work outside of the home, I will attempt to create a timeline, that shows the struggles and progress that women of older generation underwent, so that modern women are now able to have virtually any job and often times out earn the men in their lives. Finally I will survey women of all income levels, both professional and service oriented in order to achieve an accurate picture of Youngstown's women. The data will then be put into the Micro Case program to receive descriptive stats which will then be used to formulate a picture of women and their attitudes toward workplace flexibility, the effects their jobs have on personal relationships, the effects on children, their hopes for advancement, and the benefits that they receive from work in general.
- Montalvo, Stacey** Health and Human Services Gallery 3:30 - 5:00  
*A Social Work Internship Abroad*  
 This presentation will discuss a recent semester abroad at the University of South Australia. A 500 hour social work internship was completed in this study abroad, 275 hours more than required at Youngstown State University (for the single semester). Discussion will revolve around my experiences in the South Australian education system as a social work intern.
- Moore, Travis E** Engineering and Technology Gallery 10:30 - 12:00  
*Design of a Plastic Layer Machine Using the Finite Element Method*  
 To farmers who plant early sweet corn, it is crucial to protect the young corn in the cool, early spring. A piece of equipment is (a plastic layer machine) will lay a film of plastic to act as a greenhouse. This project includes the design, analysis, fabrication, testing, and evaluation of a plastic layer machine for the rural farm market. Currently, there are various models of plastic laying machines commercially available; however, none of these machines meet the farm market's needs in an efficient manner. Therefore, this design will exhibit features of current machines in conjunction with new characteristics that will distinguish it from the rest. The design challenge is to take the desired functions and propose a frame design to which the necessary components may be attached to efficiently accomplish the task at hand. In general, a plastic layer machine is designed to remove the dirt in its path, lay the sheet of plastic, and replace the dirt to hold the plastic in place. There are two desirable roll sizes of plastic to be used; the plastic will either be 1.524 m or 1.829 m (5 ft or 6 ft) wide enabling it to cover two rows of corn at a time. Ultimately, finite element analysis software and manual calculations will provide the necessary assurance to show the design effectiveness before fabrication begins. Field testing will lead to the evaluation of the machine and confirmation of the design.
- Moreno, Mario C** Education Jones Rm. 10:30 - 12:00  
*Impacts of Hurricane Frances on the Pigeon Creek Delta: Implications for Predicting Storm-Related Sediment Displacement*  
 The Pigeon Tidal Estuary is a major feature on the Island of San Salvador, the Bahamas. The estuary covers an area of approximately seven square miles and fills during high tides and subsequently drains during the intervening low tides. The discharge of water from draining transports a tremendous amount of sediment that is deposited as a large submerged delta inside of Snow Bay at the mouth of the estuary. The location of the delta on the eastern side of the island makes it particularly susceptible to reworking and displacement by tropical storms and hurricanes. In September, 2004, Hurricane Frances passed directly over San Salvador. The category five hurricane with sustained wind speeds of 250 kph pushed tremendous volumes of sand inland from the delta. The project has several intended outcomes; 1) characterize the morphology of the delta by creating a bathymetric map using a high density grid of GPS position coordinates and bathymetric soundings, 2) determine the volume of displaced sand from the delta by comparing the bathymetric map to preexisting maps, and 3) investigate evidence for historical storm-related changes to the delta by extracting and examining sediment cores. The project results have implications that reach far beyond the island of San Salvador. The quantification of sand displacement can be used to predict impacts of hurricanes on the natural environment of similar island settings and the numerous shallow bays of the United States eastern seaboard and the Gulf of Mexico.
- Morlan, Denise M** Health and Human Services Ohio Room 3:30 - 5:00  
*Scope and Limitations of the Doctrine of Judicial Review*  
 In this country, there has been a long standing opposition to the doctrine of judicial review. This has not been a constant opposition. Opposition obviously occurs, however, when a case is decided by a court in a way that goes against the public's ideas of right and wrong. Should the courts be allowed to declare an act of Congress unconstitutional in spite of public opinion? The most popular theory states that if the legislature has made a very clear, fundamental mistake, the courts can and should declare the act unconstitutional for the good of the public.
- Mottle, Theresa R** Arts and Sciences Coffelt Rm. 8:30 - 10:00  
*Voices from the Past: Violence between Husbands and Wives in the Fourteenth and Fifteenth Centuries*  
 This presentation will analyze and use medieval texts, such as Geoffrey Chaucer's *The Wife of Bath*, Margery Kempe's *The Book of Margery Kempe*, and Sir Geoffrey de la Tour's *The Book of the Knight of the Tower*, to notice how violence was used as an acceptable means of control between husbands and wives. Exploration of the norms for English and French societies during the fourteenth and fifteenth centuries will be presented to account for the use of violent behavior in literary texts of the time period.

**Musolino, Anthony J**

Engineering and Technology

Gallery 1:30 - 3:00

*GE Production Redesign*

The assigned task was to automate a specific process for scoring, snapping and cutting a full-length arc tube into a cut/trimmed form to be used for lighting. The current process has proven successful. However, the company wishes to automate the process to remove the labor cost. Since the existing mechanics are effective, a design change that allows for the clearance of the robot end effector without drastically changing the mechanics of the process is ideal. With this in mind our group has moved towards a solution that would use as much of the existing mechanics as possible. It is obvious that there will be clearance issues with the robot end effector. These areas occur where the excess quartz is removed and the lead wires are trimmed. The focus of the design changes will be primarily in these two locations. An important thing to consider is that this process is to remove the production waste automatically. The proposal is that the brackets supporting the cutters be lengthened allowing a portion of the end effector to easily fit under the cutters. After the quartz is snapped off, the end effector will rotate so that it is positioned on the side of the end effector rather than underneath it. The current design of the end effector will allow for this. The heightened brackets will then allow enough clearance for that portion of the end effector to slide under and then up into the cutters. The lead wires can then be cut and the end effector will drop from under the cutters and move the end product to its desired location. The brackets on the end effector supporting the grippers will also need lengthened to allow for clearance issues. These changes should allow for the process to clear both the snapping and trimming stage.

**Naples, Andrew G**

Engineering and Technology

Gallery 10:30 - 12:00

*Design Project 1: Redesign of Quartz Removal and Lead Trim Station*

In order to increase the efficiency of the arc tube production mechanism, several fundamental design changes must occur. The first change that must occur is the complete automation of the system. Currently, the process of arc tube trimming consists of the tube being removed from the assembly line by human means and being fed through a trimming and cutting process. The human factor can be eliminated by the use of a robotic arm. In order to accomplish this, the organization of the scoring, snapping, quartz removal and lead trimming stations must be redone. The first steps of the process, i.e., the scoring and snapping process can almost be left as is. Depending upon future design considerations, the adjustment of the snapping devices may be needed. It is currently unclear as to what will occur with the quartz removal device. Several ideas have been proposed. One idea calls for no change to the apparatus providing clearance requirements are met. Another idea calls for the quartz removal device to be implemented atop the lead trimmers thereby decreasing the horizontal distance for the arc tube to travel. This, however, will be dealt with depending upon the vertical clearance already afforded by the changes to be made in said trimmers. The final stage of the process is where the majority of redesign must occur. It is our idea to reorient the lead trimmers. In order to meet clearance requirements, the trimmers will remain in a vertical position; however, rather than moving in a downward motion as is the current method, the trimmers will reach up to cut the leads. To prevent the interference of the trimmer by the cut pieces, a chute will also be added to provide a safe means of disposal. The design modifications proposed here are subject to change depending upon further investigation.

**Navoyosky, Julia M**

Engineering and Technology

Gallery 8:30 - 10:00

*Design and Production of a Lunar Buggy for Competition at the U.S Great Moonbuggy Race 2005*

NASA's great moonbuggy race is a national competition held at the U.S. Space and Rocket center in Huntsville, Alabama during the first week of April. Teams must design and build an original moonbuggy that will race at the rocket center's course. The design has to be human powered, and allow for the seating of two people (one woman and one man). Before the competition, the moonbuggy must be able to collapse and fit in a 1.219m (4ft) cube. This is an approximation of the size that the real moonbuggy had in the lunar landing. The collapsed moonbuggy must be carried by both drivers 6.096m (20 feet) to the starting line; where it will be assembled for competition. Each team will then be timed on how well their design completes the course setup at the rocket center. Time, safety, and originality of the design will play a part in the final standings. The design will be drawn with 3-dimensional Solidworks software. This model will be analyzed with finite element software of Algor to ensure acceptable design factors before parts are purchased. The design will then be fabricated to full scale and tested prior to the competition.

**Newton, Daniel A**

Engineering and Technology

Humphrey Rm. 1:30 - 3:00

*Unmanned Terrain Vehicle*

The use of unmanned vehicles is rapidly becoming the best way mankind has to either go places that are otherwise unreachable or to solve problems or take data and measurements in places or areas that are hazardous to humans. In this reasoning, our team would like to research the creation of an unmanned terrain vehicle. This vehicle will move under its own power, controlled remotely by a personal computer through the use of radio frequencies. It will also be able to send messages back to the computer. All of the messages sent by this system will be transmitted in a secure manner. Most of the research in the area of unmanned vehicles is done in aerial vehicles; however, our project will not fly. This unmanned aerial vehicles, or UAVs, are outside of the realm of the time and budget constraints we have. Though the idea of aerial vehicle was not employed, our project could be changed from a terrain vehicle to an aerial vehicle, by adding the appropriate control systems, motors, and sensors required for flight. This project could be used for other applications by adding the sensor, camera, or other systems suitable for the application. In this project, the computer will be interfaced with a joystick and therefore human input can be used to make the vehicle go in any user-desired direction.

- Niser, Entesar** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.
- Nolfi, Anthony F** Engineering and Technology Gallery 10:30 - 12:00  
*Filtration and a Recirculation For a Cermaic Plant*  
 The goal of this project was to design a way to conserve and recycle water, with potential savings reaching \$50,000 per year. To achieve this goal, we need to filter the water and remove fibrous materials and the colloidal suspension aids that are a by-product of the vacuum-formed ceramic fiber process. Water is used inefficiently in three inter-related areas; therefore these areas became the main focus of the project. Heated water from the vacuum pumps and the RF unit is used to make a ceramic slurry. The slurry is then drawn through a mesh shield to create the fibrous part. The water pulled through the shield is then dumped to sanitary sewer. When the quota of parts is met the remaining slurry is then dumped. This area represents 75% of the total water loss. The vacuum used to pull the slurry through the mesh is created by four water cooled vacuum pumps. The pumps use city water as the cooling fluid. Water enters the pumps at fifty-five degrees Fahrenheit and is released when it reaches eighty degrees Fahrenheit. While this water can be used to make the ceramic slurry, the excess is dumped directly to the sanitary sewer, resulting in another area of lost water. A radio wave oven is used to dry the vacuum-formed ceramic parts. Radio-waves created by a power-tube evaporate water from the parts. This tube is cooled by a water-water heat exchanger. One side of the heat exchanger is a closed-loop distilled water line, while the other side is a continuous-flow city water line. The purpose for the city water line is to remove the heat from the distilled water so that the power tube does not over heat. A constant flow of city water into the radio wave oven is required to keep the power tube cool. The city water, now approximately 80°F, is then used for either the ceramic slurry or dumped directly to the sanitary sewer. In order to conserve and recycle the water it will need to be filtered so that it is free of contaminates. Water for the vacuum pumps and for the radio wave oven will need to be cooled to the same temperature that it was when it entered the system.
- Pacak, Marcia** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
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- Parker, David W** Arts and Sciences Jones Rm. 1:30 - 3:00  
*The Early History of Youngstown and the Mahoning County*  
 A brief history of Youngstown and the Mahoning Valley. Topics included are pre-settlement, local American Indians, early settlers, John Young, Poland, the Hopewell Furnace, the Mill Creek Falls, education, taverns, religion, and transportation.
- Paul, Ryan M** Engineering and Technology Gallery 8:30 - 10:00  
*Materials Engineering at Youngstown State*  
 The revitalization of Materials Engineering is very significant for the Rayen College of Engineering and Technology. In the process of educating future engineers, much emphasis is placed upon materials science and engineering, and understanding the important relationships between materials and performance is crucial. The author has had a unique opportunity as an undergraduate to assist in this revitalization as a Student Research Associate for Dr. Robert McCoy. The projects that this author has worked on as well as the unique educational experiences enjoyed will serve as the basis for the presentation.





**Pisciuneri, Patrick H**

Engineering and Technology

Gallery 1:30 - 3:00

*GE Production Redesign*

The assigned task was to automate a specific process for scoring, snapping and cutting a full-length arc tube into a cut/trimmed form to be used for lighting. The current process has proven successful. However, the company wishes to automate the process to remove the labor cost. Since the existing mechanics are effective, a design change that allows for the clearance of the robot end effector without drastically changing the mechanics of the process is ideal. With this in mind our group has moved towards a solution that would use as much of the existing mechanics as possible. It is obvious that there will be clearance issues with the robot end effector. These areas occur where the excess quartz is removed and the lead wires are trimmed. The focus of the design changes will be primarily in these two locations. An important thing to consider is that this process is to remove the production waste automatically. The proposal is that the brackets supporting the cutters be lengthened allowing a portion of the end effector to easily fit under the cutters. After the quartz is snapped off, the end effector will rotate so that it is positioned on the side of the end effector rather than underneath it. The current design of the end effector will allow for this. The heightened brackets will then allow enough clearance for that portion of the end effector to slide under and then up into the cutters. The lead wires can then be cut and the end effector will drop from under the cutters and move the end product to its desired location. The brackets on the end effector supporting the grippers will also need lengthened to allow for clearance issues. These changes should allow for the process to clear both the snapping and trimming stage.

**Reed, Heather L**

Arts and Sciences

Ohio Room 10:30 - 12:00

*Attitudes Toward the Exhumation of Human Remains for Scientific Purposes*

In recent years, the practice of exhuming human remains for archaeological or other investigative purposes has come under fire, primarily by cultural and religious groups. This exploratory study will examine views on exhumation for criminal investigation as compared with views from the same persons on exhumation for archaeological study. As the reader will notice in the paragraphs that follow, the acceptability of the exhumation of human remains is a strongly debated topic. It is likely that researchers have, for that reason, hitherto avoided delving deeper into the subject. However, by taking a closer look at the attitudes that persons of varying backgrounds have toward exhumation, it may be possible to "bridge the gaps" by making allowances in procedure and policy to accommodate religious, cultural, or other traditional views regarding the sanctity of human remains and their treatment. By making these allowances and restoring relationships between anthropologists and the people they study, new doors may be opened for more cooperative, productive research.

**Richendollar, Kelly**

Health and Human Services

Humphrey Rm. 3:30 - 5:00

*World AIDS Day Project*

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**Rigby, Erik A**

Engineering and Technology

Gallery 8:30 - 10:00

*YSU 2005 Human Powered Vehicle*

The American Society of Mechanical Engineers (ASME) Human Powered Vehicle (HPV) Competition is an annual student competition that requires student teams to design and build a student-engineered human powered vehicle that will be evaluated on design and performance parameters. During the annual competition, each HPV will be assessed on its ability to perform based upon the ASME HPV Rules. In the process of designing a HPV, it is convenient to divide the vehicle into subsystems that will be analyzed and designed separately. One of the most important physical features of the HPV is an aerodynamic covering called a fairing. Without a fairing, aerodynamic drag forces due to motion acting on a HPV can be very speed inhibitive and would pose a great handicap during evaluation of the design and performance of the HPV. However, an improperly designed fairing could pose much of the same consequences as no fairing at all. The main purpose of the fairing geometry optimization was to minimize aerodynamic drag forces due to air acting on the vehicle during the competition using appropriate available analyses. Therefore, in order to compete more effectively in the Human Powered Vehicle Competition, finite element analysis (FEA) was used as an aid to optimize the fairing design. The numerical FEA results were analyzed and compared with results obtained from theoretical and experimental results. Just as safety should always be the first priority of an engineer, safety was the number one factor in the fairing design. Consideration of visibility and ergonomics of the human driver are very important aspects of human comfort and were also incorporated into the fairing design.

**Rodenbaugh, Jolene**

Education

Jones Rm. 10:30 - 12:00

*Sediment Source, Transport, and Depositional Patterns at Sandy Point, San Salvador, the Bahamas*

Sandy Point is a prominent landform located at the southwestern corner of San Salvador. It has formed as a result of the combination of long shore drift along the southern and western shores of the island and intense wave refraction at the point. Investigations performed in March 2003 and 2004 indicate that sediment accumulates rapidly at the point and dramatically shifts position in response to major storms. The 2003 investigation produced an average progradation rate of approximately 10 feet per year over the past 33 years. The 2004 investigation showed a dramatic northward shift of sand. In order to further define the rate of sediment accumulation and movement of the deposits, a GPS survey of the low tide line is proposed. The resulting

shoreline position will be plotted on the existing 1971 topographic map of the island and compared to the established shoreline position of the map and determinations from 2003 and 2004. In addition, the proposed research will estimate the total carbonate sand production. This will be achieved by constructing beach elevation profiles to determine cross-section area. These measurements in combination with map area determinations will be used to calculate sand volume.

**Rodriguez, Enrique** Engineering and Technology Gallery 10:30 - 12:00

*Analysis for Non-Plated Through Holes for Printed Circuit Boards*

The goal was to analyze non-plated through holes in printed circuit boards to decrease the overall cost of circuit boards. Currently copper acts as a trace material that runs through the holes where the terminal pins are later placed and soldered on during production. The copper needs to be eliminated from the holes, yet be able to carry a constant current with 75% to 100% solder coverage through the holes. This study needed to be able to accommodate multiple printed circuit board (PCB) layers as well as different types of terminal pin sizes. Computer models were created using various engineering modeling software to analyze the temperature distribution in the printed circuit board as well as current flow through the printed circuit boards. Temperature distribution throughout the PCB will be an essential component in determining how much trace material will be able to be eliminated. The PCB's are placed under the hood of a vehicle or under the dashboard of a vehicle. The PCB's that are placed under the hood of a vehicle will have to be able to dissipate heat at a better rate than those placed under the dashboard. The terminal pins were previously pressed fit into circular holes on the printed circuit board to allow the PCB to be able to go through many processes during production with the pins intact. Solder will have to be able to flow through these holes without the conductive copper material facilitating the flow of this solder. Different shapes and sizes of holes were used to allow a press fit as well as proper solder coverage through the holes onto the pins.

**Roussel, Pamela** Engineering and Technology Gallery 10:30 - 12:00

*Design Project 1: Redesign of Quartz Removal and Lead Trim Station*

Design Project 1: Redesign of Quartz Removal and Lead Trim Station In order to increase the efficiency of the arc tube production mechanism, several fundamental design changes must occur. The first change that must occur is the complete automation of the system. Currently, the process of arc tube trimming consists of the tube being removed from the assembly line by human means and being fed through a trimming and cutting process. The human factor can be eliminated by the use of a robotic arm. In order to accomplish this, the organization of the scoring, snapping, quartz removal and lead trimming stations must be redone. The first steps of the process, i.e., the scoring and snapping process can almost be left as is. Depending upon future design considerations, the adjustment of the snapping devices may be needed. It is currently unclear as to what will occur with the quartz removal device. Several ideas have been proposed. One idea calls for no change to the apparatus providing clearance requirements are met. Another idea calls for the quartz removal device to be implemented atop the lead trimmers thereby decreasing the horizontal distance for the arc tube to travel. This, however, will be dealt with depending upon the vertical clearance already afforded by the changes to be made in said trimmers. The final stage of the process is where the majority of redesign must occur. It is our idea to reorient the lead trimmers. In order to meet clearance requirements, the trimmers will remain in a vertical position; however, rather than moving in a downward motion as is the current method, the trimmers will reach up to cut the leads. To prevent the interference of the trimmer by the cut pieces, a chute will also be added to provide a safe means of disposal. The design modifications proposed here are subject to change depending upon further investigation.

**Rupert, Elizabeth L** Arts and Sciences Jones Rm. 8:30 - 10:00

*A Comparative Study to Evaluate the Coral Reef Ecosystem between East Beach and Lindsey Beach on San Salvador Island*

The purpose of this research is to evaluate the coral reef ecosystem of the island of San Salvador, Bahamas, using non-intrusive measurements. A comparative study was conducted between two sites on the island: East Beach and Lindsey Beach. East Beach is situated on the eastern side of the island, which is more susceptible to storm damage. Lindsey Beach is situated on the "more protected" western side of the island, where storm damage is not as severe. Quantitative data involving water quality parameters such as temperature, oxygen content, turbidity, salinity, pH and nutrient analysis (phosphate and nitrate content), as well as fecal coliform count, were collected from both sites utilizing a photoquadrant transecting method. Statistical differences in water quality parameters and fecal coliform counts between East Beach and Lindsey Beach were determined. Qualitative data in the form of photographs of the coral reef communities from both sites were also collected to document species diversity between the tests sites.

**Russell, David J** Health and Human Services Ohio Room 3:30 - 5:00

*Rape & Rape Awareness*

In our society, rape is one of the biggest issues we live with. This presentation will help make people more aware of the statistics and aspects of this controversial issue. By showing people the dangers and prevention methods, they will be more liable to forsee the problem before it would arise. Most people use the general arguement of victim versus predator, but the aspect is more complex than that. This is where my explanation fits in the equation. Also, my model shows the types of victims, predators, actions, and reactions. The primary purpose of the explanation is to put the vital information that needs to be seen out for the public to recognize. This is one of the biggest problems in society today and people are not as aware as they think they are. With the help of others around them, they could be more informed. If we had more people that would like to put their views out there, it wouldn't be as limited. If the aspect is put out into the public it may help society change its ways in handling this big problem. This is why I think that my presentation will do a great deal for a lot of people.

**Sarich, Christopher** Health and Human Services Humphrey Rm. 3:30 - 5:00

*World AIDS Day Project*

Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from

which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.

**Schnitkey, Emily A** Health and Human Services Ohio Room 3:30 - 5:00  
*Food Safety Knowledge Among YSU Students*

The objective of this study is to evaluate the household food safety knowledge of Youngstown State University (YSU) students. Around 76 million Americans develop food borne illnesses each year. By evaluating the household food safety knowledge of YSU students, we will investigate the need for education and/or better awareness of food safety among college students. Since many college students are beginning to live more independently and prepare their own food, it is important that this population increases their knowledge of food safety. This cross-sectional study will be performed by surveying a convenience sample of YSU students over 18 years of age. Sociodemographic data will be collected from subjects in addition to information about their past food safety education and experience with food borne illnesses. Subjects will complete a food safety knowledge quiz (FDA, 2002) and data will be analyzed using the Statistical Package of Social Sciences, Version 11-5. T-tests and ANOVA will be used to compare groups categorized by sociodemographic characteristics. We anticipate that female YSU students will have a significantly ( $p < 0.05$ ) higher mean food safety knowledge score than male YSU students. Students who reported a food borne illness will have a significantly ( $p < 0.05$ ) higher mean food safety knowledge score than students who did not have a food borne illness. Students under the age of 21 will have a poor food safety knowledge ( $< 23$  points).

**Schubert, Karen M** Arts and Sciences Pugsley Rm. 1:30 - 3:00  
*Poetry*

As creative writing is a form of applied scholarship for individuals in the literary arts, I will make a presentation of poetry. I will read the poems as though I were at a poetry reading, combining creative performance with creative writing. I will read about 12 poems, which will leave time for questions. My poems are often about personal experience. I try to make this interesting to the reader by telling a story with detail and imagery, but also connecting to the reader through a larger shared experience, in the way that we all had unique childhoods, but we were all children. When I'm writing poetry, I try to cause each word to carry its own weight. I want my poems to be woven through with the color and nuance of emotion, but I want some distance as well, and I like that tension. I also like experimenting with mood, tone and language, and I'll pick some poems that are meant to be serious and others fun. The physical parts of my poems are important to me. I think the title should mean something different after the poem is read; in this way it serves as the first line and the last line of the poem. I don't want my poem to wind up to a beginning, but it should begin somewhere after the beginning, and it should end in a way that evokes re-reading. It may contain mystery, but should not contain confusion

**Scobbie, Timothy A** Engineering and Technology Gallery 10:30 - 12:00  
*Analysis for Non-Plated Through Holes for Printed Circuit Boards*

The goal was to analyze non-plated through holes in printed circuit boards to decrease the overall cost of circuit boards. Currently copper acts as a trace material that runs through the holes where the terminal pins are later placed and soldered on during production. The copper needs to be eliminated from the holes, yet be able to carry a constant current with 75% to 100% solder coverage through the holes. This study needed to be able to accommodate multiple printed circuit board (PCB) layers as well as different types of terminal pin sizes. Computer models were created using various engineering modeling software to analyze the temperature distribution in the printed circuit board as well as current flow through the printed circuit boards. Temperature distribution throughout the PCB will be an essential component in determining how much trace material will be able to be eliminated. The PCB's are placed under the hood of a vehicle or under the dashboard of a vehicle. The PCB's that are placed under the hood of a vehicle will have to be able to dissipate heat at a better rate than those placed under the dashboard. The terminal pins were previously pressed fit into circular holes on the printed circuit board to allow the PCB to be able to go through many processes during production with the pins intact. Solder will have to be able to flow through these holes without the conductive copper material facilitating the flow of this solder. Different shapes and sizes of holes were used to allow a press fit as well as proper solder coverage through the holes onto the pins.

**Shreckengost, Robin L** Health and Human Services Ohio Room 3:30 - 5:00  
*Attention Deficit Hyperactivity Disorder (ADHD) problems, funding, and overcoming.*

In my research and study of Attention Deficit Hyperactivity Disorder, I would like to present my findings of a chronic problem that is affecting 4.5 million children and how imperative that the need for increases in funding for a health budget could help improve evaluations and treatment in children. In my presentation, I would like to speak briefly about a small child that we seem to here so much about today. I would also like to bring up evaluating, testing children, involvement of not only parents, but teachers, nurses, physicians, and counselors that are all involved in this process along with a financially burdened government. Finally, I would like to speak about structure, and special education along with treatment. To sum up this presentation, I feel that if we are informative voters this allows us to pick a candidate with a platform that will funnel money from the Federal Government to our state to apply the money to programs that desperately need help like ADHD programs.

**Sinn, Brandon T** Arts and Sciences Ohio Room 10:30 - 12:00  
*A Possible Biodiversity Refugium for Pteridophytes in Zoar Valley Gorge, Cattaraugus Creek, NY: Preliminary Findings*

Zoar Valley Gorge in western New York State contains an ecologically significant remnant of old growth riparian forest. Forested riverside terraces also harbor diverse herbaceous flora, including numerous species of ferns and fern allies. The lack of

human interference due to geographic isolation lends the gorge and each terrace its ecological uniqueness. Our study focuses on Pteridophyte (fern and fern allies) assemblages and their distribution within the gorge. During 2002 – 2004 we systematically surveyed the Pteridophyte flora on seven riverside terraces in the gorge. A number of taxa that indicate high ecological integrity, such as *Diplazium pycnocarpium*, are abundant. This ongoing study will explore the possibility that the unregulated and virtually undisturbed riparian zone within Zoar Valley Gorge represents a biodiversity refugium within the broader fragmented landscape surrounding it.

**Sinn, Brandon T** Arts and Sciences Ohio Room 8:30 - 10:00

*Ferns of Mill Creek Park: Then and Now*

From 1891 to 1944, Ernest Waters Vickers was the first Park Naturalist of Mill Creek Park. He collected many plants from the park and kept them as a teaching herbarium to help him educate the public about the wonders of the park. These early samples of the parks' flora, which are held by the Herbarium of Youngstown State University (YUO), are the foundation for this study of the Pteridophyte (ferns and fern allies) Flora of Mill Creek Park. Since the park is widely used by the public, species of the flora and fauna are subject to constant pressures and the threat of extirpation. The parks' Pteridophytes are of no exception. During the 53 year period in which Vickers collected, he identified 31 species. This study was conducted from June to October 2004 and located only 22 species. Certain regions of the park, especially the gorge, showed significant decreases in Pteridophyte populations. This study suggests why the ferns of Mill Creek Park are so hard hit by environmental changes, and compares their current distribution and abundance with that of the last century.

**Smith, Nicholas J** Arts and Sciences Jones Rm. 10:30 - 12:00

*Assessing the Impact of Hurricane Frances on Holiday Tracks Beach and Pigeon Creek, San Salvador, the Bahamas*

Hurricane Frances made landfall on the eastern shore of the Island of San Salvador, the Bahamas on September 4, 2004. Beach and dune environments along this shore are particularly vulnerable to storm activity. The level five hurricane with sustained wind speeds in excess of 250 kph has inevitably changed the geology of the beaches and dunes along Holiday Track beach. Pigeon Creek, a tidal embayment, just west of Holiday Tracks beach would have also been affected due to little protective cover and close proximity to the shoreline. Assessment of the impact of Hurricane Frances requires ground based surveys and observations that can be compared to available pre-hurricane data. GPS surveys of the present Holiday Tracks shore line and dune line positions and adjacent Pigeon Creek embayment will be compared to the 1971 topographic map of the area and 1999 high-resolution aerial photographs. It is expected that the Holiday Tracks shore line and dune line will have been repositioned as a result of the hurricane winds and wave action. It is also likely that the east shore of the adjacent Pigeon Creek embayment has changed. In order to provide ground work for future observations and change, a catalogue of observations and measurements of shoreline features will be made.

**Smith, Molly M** Arts and Sciences Ohio Room 10:30 - 12:00

*Bahamian Archaeology*

Our purpose is to discuss a personal account of what Bahamian archaeology was like. We will be talking about the Taino Indians (who were the first to meet Christopher Columbus when he landed in the New World) on the island of San Salvador, address what they ate, what tools they used, and essentially what it might have been like to live there during their time period. We will be using a poster board with pictures of the dig site on San Salvador and answering any questions that follow.

**Smith, Debbie Ann Marie** Arts and Sciences Jones Rm. 8:30 - 10:00

*Metal Analysis on the Island of San Salvador, Bahamas*

The purpose of this experiment was to determine what metals were present in the sand and soil on the island of San Salvador, Bahamas. The samples were collected from coral reefs, an estuary, and several lakes, including one that was once used as a landfill. These areas were chosen because of the unique ecology each displays. The samples were brought back to YSU for further analysis by irradiating the samples and then examining the energy given off to determine what metals were present. Metals we expected to find included lead, sodium, aluminum, manganese, cobalt, copper, arsenic, as well as trace amounts of other metals. Crystalline structure of the sand and sediment, especially calcite and aragonite, could also be identified using our methodology. The results were used in a quantitative analysis to compare the differences in metal composition and their biological impact between the inland lakes, coral reefs and estuary.

**Smith, Gerald R** Arts and Sciences Rm. 2068 1:30 - 3:00

*Should We Get Rid of the Electoral College?*

The electoral college is unfair, outdated, and irrational. The best arguments in favor of it are mostly assertions without much basis in reality. True, the electoral college has inertia on its side, but that's hardly a reason to resist reform -- especially when the system puts at risk the basic democratic ideal of equality and inclusion, the very ideal the U.S. is seeking to promote around the world.

**Smith, Mathew T** Health and Human Services Ohio Room 3:30 - 5:00

*What about Torture?*

This research seeks to understand how people feel about torture. A survey sent out to twenty respondents provided data that was then examined using frequency and cross tabulation analysis. Less than half of the respondents stated that they agreed with the usage of torture, and most wanted non-severe methods when possible. Many people, therefore, would be likely to not want torture to be used, no matter how many lives the information it reveals may save

Speece, Angela L

Education

Jones Rm. 1:30 - 3:00

*DYCE: Discover Youngstown Community Experience*

As president of YSEA (Youngstown State University Student Education Association), I was inspired to create and implement the DYCE (Discover Youngstown Community Experience) Program that provided YSU students with teaching and leadership opportunities. The main goal of DYCE granted eighteen underserved Youngstown City sixth graders a variety of enriching, hands-on opportunities to learn about their community resources, give service to others, while incorporating the arts into their lives. All of these quality experiences foster literacy skills among its' participants. This five week consecutive Saturday program (10/23/04 to 11/20/04) was funded by an NEA Grant, the SMARTS Center (where it was housed), YSEA, and several local donators. Research suggests that educators should strive to reach children at early stages in their lives to be community minded and future leaders. Some of the major activities of DYCE included: art lessons, making cards for Tod Children's Hospital, writing letters to troops in Iraq, decorating pumpkins for Salem Community Hospital and the Youngstown Children's Museum, decorating and donating cookies to the Second Harvest Food Bank, wrapping and donating school supplies to area school children, making wreaths and singing for nursing home residents at Park Vista, dance classes, Green Team visit teaching preservation of our environment, drum circles, writing thank you notes, tours of the Butler Art Institute, Arms Museum, YSU, Children's Museum, Ford Nature Center, Magic Carpet theatrical production (Edgar Allen Poe) and a culminating program for parents and friends. The DYCE program was very successful with nearly a hundred percent attendance rate. DYCE students felt a sense of accomplishment and compassion toward helping others. Students developed the all-important intrinsic component of self-esteem and pride, as they became aware and involved in their community. Students realized that you don't have to be an adult to help your community; as Martin Luther King Jr. said, "Everyone can be great, because everyone can serve."

Stadnik, Theodore J

Engineering and Technology

Humphrey Rm. 1:30 - 3:00

*Unmanned Terrain Vehicle*

The use of unmanned vehicles is rapidly becoming the best way mankind has to either go places that are otherwise unreachable or to solve problems or take data and measurements in places or areas that are hazardous to humans. In this reasoning, our team would like to research the creation of an unmanned terrain vehicle. This vehicle will move under its own power, controlled remotely by a personal computer though the use of radio frequencies. It will also be able to send messages back to the computer. All of the messages sent by this system will be transmitted in a secure manner. Most of the research in the area of unmanned vehicles is done in aerial vehicles; however, our project will not fly. This unmanned aerial vehicles, or UAVs, are outside of the realm of the time and budget constraints we have. Though the idea of aerial vehicle was not employed, our project could be changed from a terrain vehicle to an aerial vehicle, by adding the appropriate control systems, motors, and sensors required for flight. This project could be used for other applications by adding the sensor, camera, or other systems suitable for the application. In this project, the computer will be interfaced with a joystick and therefore human input can be used to make the vehicle go in any user-desired direction.

Staub, Justin A

Engineering and Technology

Gallery 8:30 - 10:00

*Human Powered Vehicle*

The American Society of Mechanical Engineers (ASME) Human Powered Vehicle (HPV) Competition is an annual student competition that requires student teams to design and build a student-engineered human powered vehicle that will be evaluated on design and performance parameters. During the annual competition, each HPV will be assessed on its ability to perform based upon the ASME HPV Rules. In the process of designing a HPV, it is convenient to divide the vehicle into subsystems that will be analyzed and designed separately. One of the most important physical features of the HPV is an aerodynamic covering called a fairing. Without a fairing, aerodynamic drag forces due to motion acting on a HPV can be very speed inhibitive and would pose a great handicap during evaluation of the design and performance of the HPV. However, an improperly designed fairing could pose much of the same consequences as no fairing at all. The main purpose of the fairing geometry optimization was to minimize aerodynamic drag forces due to air acting on the vehicle during the competition using appropriate available analyses. Therefore, in order to compete more effectively in the Human Powered Vehicle Competition, finite element analysis (FEA) was used as an aid to optimize the fairing design. The numerical FEA results were analyzed and compared with results obtained from theoretical and experimental results. Just as safety should always be the first priority of an engineer, safety was the number one factor in the fairing design. Consideration of visibility and ergonomics of the human driver are very important aspects of human comfort and were also incorporated into the fairing design.

Sybelnik, Amanda C

Health and Human Services

Ohio Room 3:30 - 5:00

*Food Safety Knowledge Among YSU Students*

The objective of this study is to evaluate the household food safety knowledge of Youngstown State University (YSU) students. Around 76 million Americans develop food borne illnesses each year. By evaluating the household food safety knowledge of YSU students, we will investigate the need for education and/or better awareness of food safety among college students. Since many college students are beginning to live more independently and prepare their own food, it is important that this population increases their knowledge of food safety. This cross-sectional study will be performed by surveying a convenience sample of YSU students over 18 years of age. Sociodemographic data will be collected from subjects in addition to information about their past food safety education and experience with food borne illnesses. Subjects will complete a food safety knowledge quiz (FDA, 2002) and data will be analyzed using the Statistical Package of Social Sciences, Version 11-5. T-tests and ANOVA will be used to compare groups categorized by sociodemographic characteristics. We anticipate that female YSU students will have a significantly ( $p < 0.05$ ) higher mean food safety knowledge score than male YSU students. Students who reported a food borne illness will have a significantly ( $p < 0.05$ ) higher mean food safety knowledge score than students who did not have a food borne illness. Students under the age of 21 will have a poor food safety knowledge ( $< 23$  points).

- Sydney, Tara D** Health and Human Services Gallery 3:30 - 5:00  
*Preparing for the Future of Bullying Intervention: Prospective Early Childhood Educators' Knowledge and Attitudes on Bullying*  
 Many countries around the world experience problems related to violence and aggression. Bullying is a one form of aggression that occurs in schools that affects children today. Little is known about the attitudes and knowledge of prospective early childhood educators regarding bullying. This study was undertaken to answer the following questions: (1) What attitudes exist among prospective early childhood educators about bullying? (2) What knowledge do prospective early childhood educators have about bullying? (3) What intervention strategies are prospective educators more confident in using? (4) How much training have these prospective educators had regarding bullying and violence prevention? It was hypothesized that prospective early childhood educators saw bullying as an issue but the perceived seriousness of the situation would vary among incidents of physical and verbal bullying and social exclusion. It was also hypothesized that prospective early childhood educators would not have much knowledge about bullying due in part to a lack of training in the subjects of bullying and violence prevention. Furthermore, prospective early childhood educators would feel more confident intervening in bullying situations when dealing with the victim, than the bully. Quantitative and qualitative data are being collected from pre-service early childhood educators enrolled in Child and Family courses at Youngstown State University using a survey instrument. Results of the analysis and the implications will be presented.
- Thiemar, Martin** Engineering and Technology Gallery 1:30 - 3:00  
*General Electric Design Project II*  
 General Electric is trying to cut labor costs by changing their quartz removal and lead trim station to an automated process. Currently, GE is moving offline manual operations to an online process which is fed by a robot. The existing mechanics for the machine have proven reliable but changes are needed to automate the process. The biggest problem for this change is that the clearance of the robot end effector is inadequate for the existing machine. This requires a modification to the end effector to accommodate for the tube to complete the operation with the proper clearance. The first operation that needs to be accounted for is the spray wash. This spray wash removes a white coating of the cutting surface on the tube. Following this, a carbide wheel will score the tube by cutting a groove in the surface. Then a mechanism needs to be in place to snap the glass at the score. Next, the glass waste is removed by pulling them off using some mechanism. Finally, a wire cutting mechanism will cut the leads and dispose of them. One option that has been considered is implementing the existing, reliable mechanism with the robotic arm as the loading feature. This seems to be the most logical and simple change that would automate the system. For this method, the gripper bracket can hold two tubes by picking up the first and rotating ninety degrees to pick up a second. The minimum amount of moves for this process is desired for maximum efficiency. The final write up will include assembly drawings, parts details, a parts list, and the controls/pneumatics specs.
- Thompson, Andrea L** Fine and Performing Arts Pugsley Rm. 3:30 - 5:00  
*The Narrative Paradigm and Communication on the Appalachian Trail*  
 This presentation will take a look at communication that takes place among hikers on the Appalachian Trail. First, the use of hiker registers or "travel logs" will be explained. After reviewing current research on narration, this presentation will apply Walter Fisher's Narrative Paradigm to hiker entries in registers. The entries in the registers will then be evaluated in an attempt to gain understanding into a hiker's motivation to communicate.
- Treece, Erin R** Arts and Sciences Ohio Room 10:30 - 12:00  
*Characterizing Protein Expression in the Developing Mould Phase of P. marneffeii: a Dimorphic Pathogen*  
 In the past, fungi of the Penicillium classification were regarded as non-infectious to humans. This was believed true until a species of Penicillium, Penicillium marneffeii, was discovered. P. marneffeii has surfaced as an infectious agent for those individuals living in Southeast Asia that are immune deficient. The typical Penicillium species grows as a mould only, but P. marneffeii is unique because of its dimorphic nature. At room temperature P. marneffeii grows as a typical mould, infectious or non-infectious, but at body temperature it grows as an infectious yeast. One of the studies of P. marneffeii in our proteomic laboratory has focused on the differential protein expression between the mould and the yeast forms over a forty-eight hour time period. This particular study looks specifically at the P. marneffeii mould proteome for the time points of twelve, twenty-four, thirty-six, and forty-eight hours. These experiments will provide baseline protein expression data for the P. marneffeii mould proteome and will identify time dependent changes in protein expression that may occur in culture. In the future, the mould proteome can be compared with the P. marneffeii yeast proteome for the same time points, specific differences in these two proteomes will indicate potential protein products involved in dimorphism. Such protein differences will be further characterized and their possible role in morphogenesis explored.
- Turney, Joseph E** Engineering and Technology Gallery 8:30 - 10:00  
*A Numerical Model for Fluid Flow and Dynamics of a Knurled Bearing/Damper*  
 One way to improve the damping effects of journal bearings is to impose a surface roughness on the inner surface of the bearing. Von Pragenau proposed the application of such bearings and they are now being used in the main engine turbo pumps of the Space Shuttle. This study's purpose was to analyze the effects of an imposed surface roughness on the inner surface of a journal bearing. The analysis consisted of three parts; 1) a steady-state numerical simulation comparing various parameters, 2) a numerical analysis of the bearing on shaft dynamics, and 3) a comparison with an experimental analysis. Conclusions and recommendations were then drawn from the results. The computational fluid dynamics (CFD) program Fluent was utilized to perform both the steady-state and dynamic numerical analyses. For the steady-state models several different geometries were run at relative eccentricities of 0.3, 0.5, and 0.7. The rotational speed of the shaft was varied from 2 000 rpm to 5 000 rpm to 10 000 rpm. Additionally, several models were run with the bearing translating with respect to the shaft. Information from the numerical simulations was then used to generate pressure profiles and subsequently equivalent stiffness and damping coefficients for the fluid. These coefficients were used to create a mathematical model of the shaft dynamics. The oscillation of the shaft through one cycle was modeled by iterating between the mathematical model and the steady-state numerical model using a small time step.

- Urban, Stephanie N** Arts and Sciences Jones Rm. 10:30 - 12:00  
*Impacts of Hurricane Frances on the Pigeon Creek Delta: Implications for Predicting Storm-Related Sediment Displacement*  
 The Pigeon Tidal Estuary is a major feature on the Island of San Salvador, the Bahamas. The estuary covers an area of approximately seven square miles and fills during high tides and subsequently drains during the intervening low tides. The discharge of water from draining transports a tremendous amount of sediment that is deposited as a large submerged delta inside of Snow Bay at the mouth of the estuary. The location of the delta on the eastern side of the island makes it particularly susceptible to reworking and displacement by tropical storms and hurricanes. In September, 2004, Hurricane Frances passed directly over San Salvador. The category five hurricane with sustained wind speeds of 250 kph pushed tremendous volumes of sand inland from the delta. The project has several intended outcomes; 1) characterize the morphology of the delta by creating a bathymetric map using a high density grid of GPS position coordinates and bathymetric soundings, 2) determine the volume of displaced sand from the delta by comparing the bathymetric map to preexisting maps, and 3) investigate evidence for historical storm-related changes to the delta by extracting and examining sediment cores. The project results have implications that reach far beyond the island of San Salvador. The quantification of sand displacement can be used to predict impacts of hurricanes on the natural environment of similar island settings and the numerous shallow bays of the United States eastern seaboard and the Gulf of Mexico.
- Utterback, Kari I** Engineering and Technology Gallery 10:30 - 12:00  
*Design of a Plastic Layer Machine Using the Finite Element Method*  
 To farmers who plant early sweet corn, it is crucial to protect the young corn in the cool, early spring. A piece of equipment is (a plastic layer machine) will lay a film of plastic to act as a greenhouse. This project includes the design, analysis, fabrication, testing, and evaluation of a plastic layer machine for the rural farm market. Currently, there are various models of plastic laying machines commercially available; however, none of these machines meet the farm market's needs in an efficient manner. Therefore, this design will exhibit features of current machines in conjunction with new characteristics that will distinguish it from the rest. The design challenge is to take the desired functions and propose a frame design to which the necessary components may be attached to efficiently accomplish the task at hand. In general, a plastic layer machine is designed to remove the dirt in its path, lay the sheet of plastic, and replace the dirt to hold the plastic in place. There are two desirable roll sizes of plastic to be used; the plastic will either be 1.524 m or 1.829 m (5 ft or 6 ft) wide enabling it to cover two rows of corn at a time. Ultimately, finite element analysis software and manual calculations will provide the necessary assurance to show the design effectiveness before fabrication begins. Field testing will lead to the evaluation of the machine and confirmation of the design.
- Valnes, Matthew B** Fine and Performing Arts Pugsley Rm. 3:30 - 5:00  
*Music Past and Present: The Changing Roles of Pedal Points in Twentieth-Century Music*  
 In tonal music, composers use myriad ways to establish a tonal center; one method of establishing this tonality is the pedal point technique. Pedal points, in either the tonic or dominant, resemble drones as one pitch is repeated or held continuously. This helps to ground the tonal center while simultaneously fading into the background. Composers continued to use this technique throughout music history; however, in twelve-tone and modern jazz, pedal points assume different roles. In my paper, I will argue that the pedal point technique has changed from its common practice music function of establishing tonal stability while fading into the background. In the twentieth-century, the pedal point technique moved from the background into the foreground, providing an aural "anchor" that grounds the listener as the musical structures become increasingly complex. In this light, Arnold Schoenberg, a composer who broke from traditional harmony, nonetheless incorporated a pedal tone to create an aural element of stability in the "Musette" from his Piano Suite, Op. 25. Likewise, Brad Mehldau, one of the leading jazz pianists, uses a pedal point to help ground the listener as the improvised lines of his solo move farther away from the implied tonic, particularly in his composition, "29 Palms." In conclusion, I will argue that with this new role as a foreground aural "anchor," pedal points allow listeners to engage in increasingly complex musical structures.
- Verlezza, Ricardo F** Engineering and Technology Humphrey Rm. 1:30 - 3:00  
*Microprocessor Delay Systems*  
 Together we are to work with Canfield Connector for all aspects of this project. We first must develop algorithms for twelve delay functions. Assembly code must be written to implement these algorithms. We must also write code for various time delays. Once written the time delay code must be combined with the algorithm code to form a microprocessor delay system. All code will be transferred to a microprocessor and tested using a circuit which we built. These systems together will replace an existing twelve function Multi-Block Timer, which is already produced by Canfield Connector.
- Verostko, Pete J** Engineering and Technology Gallery 10:30 - 12:00  
*Design of a Quartz Removal and Lead Trim Station I*  
 Thus far in the G.E. Design Project we are in the early stages of doing research part of our design. We are currently in the process of evaluating the designs that we have come up with and eliminating the ones that are not going to work well. We have tried to get in contact with Jeff Burns to ask him about the overall sequences of operation that the arc tube has to go thru before and after the processes that we are redesigning. Currently we have not received a response from him. This is not that big of a concern because we do have many contingency plans that we could use depending on his response. The main idea that we are hoping to pursue is to invert all the parts of the existing machine so that they function from the bottom. One of the biggest challenges of doing this will be the relocating of the pneumatic lines so that they still function the same as the original design. There will also be work in creating the new brackets that are going to be used to mount the parts to the frame of the machine. We are planning on having the cutter head mounted at the end of the line so that when the arc tube reaches that point, cutter comes directly out and cuts the off the leads. This design would eliminate the problem of having the excess pieces of crystal fall into the cutter possibly creating a jam. We would ultimately like to reuse as many of the existing parts from the original machine that we can and are currently in the process of determining what we can and cannot reuse.

- Vitale, Aaron M** Health and Human Services Ohio Room 3:30 - 5:00  
*Campus Automobile Theft*  
 In this presentation I would like to talk about vehicle theft and vehicle break-ins on campus. I chose this to do as a presentation because this, in my opinion poses a problem on campus for students mainly because most students are not taking appropriate steps in preventing criminals from targeting their vehicles. In this presentation I want talk about why people steal and break into vehicles. I am going to use the Routine Activities Theory to support this. I would also like to show some statistics about vehicles that have been broken into or stolen on campus. Also, I would like to show people ways to protect themselves through the uses of devices that are on the market today and things not to leave in plain sight. In addition to the presentation I will have vehicle safety devices on hand courtesy of the YSU Police Department.
- Vogt, Kelli L** Arts and Sciences Pugsley Rm. 10:30 - 12:00  
*Geographic Analysis of Alzheimer's Association Public Policy Website Review*  
 This presentation will show the results of a study carried out to evaluate the effectiveness of Alzheimer's Association chapter public policy websites, as well as a geographical analysis of the results.
- Vogt, Kelli L** Arts and Sciences Rm. 2068 1:30 - 3:00  
*Should We Get Rid of the Electoral College?*  
 The electoral college is unfair, outdated, and irrational. The best arguments in favor of it are mostly assertions without much basis in reality. True, the electoral college has inertia on its side, but that's hardly a reason to resist reform -- especially when the system puts at risk the basic democratic ideal of equality and inclusion, the very ideal the U.S. is seeking to promote around the world.
- Walker, Julia** Health and Human Services Humphrey Rm. 3:30 - 5:00  
*World AIDS Day Project*  
 Members of the YSU chapter of Eta Sigma Gamma, the National Health Education Honorary, and the HSC 3702 Health Education Theory and Methods class shared responsibility to plan, conduct and evaluate the World AIDS Day Education Project, which was conducted December 1, 2005. The campaign was planned based on health education theory and the National Health Education Standards. The project consisted of several activities: a staffed poster display in Kilcawley Center Arcade, from which verbal information, print literature, condoms and bottled water with project logo and HIV/AIDS resource information labels, were distributed; two educational games were conducted in Peaberry's : a "Who Wants to be a Millionaire" type game and a "Wheel of Fortune" type game in which participants tested and increased their knowledge about HIV/AIDS facts and prevention, and received prizes; a raffle for large, donated prizes was held; and non-perishable products needed by individuals living with AIDS were collected and provided to the AIDS pantry. From this project, community and school health majors learned how to design interactive and fun learning activities, and how to document participant learning. The majors also increased their skill in effective teamwork, collaboration with other campus programs and community agencies. They also participated in public health advocacy and used multiple communication channels. Consumers learned or had reinforced HIV/AIDS facts and prevention methods.
- Westerburg, James R** Engineering and Technology Gallery 1:30 - 3:00  
*General Electric Design Project II*  
 General Electric is trying to cut labor costs by changing their quartz removal and lead trim station to an automated process. Currently, GE is moving offline manual operations to an online process which is fed by a robot. The existing mechanics for the machine have proven reliable but changes are needed to automate the process. The biggest problem for this change is that the clearance of the robot end effector is inadequate for the existing machine..This requires a modification to the end effector to accommodate for the tube to complete the operation with the proper clearance. The first operation that needs to be accounted for is the spray wash. This spray wash removes a white coating of the cutting surface on the tube. Following this, a carbide wheel will score the tube by cutting a groove in the surface. Then a mechanism needs to be in place to snap the glass at the score. Next, the glass waste is removed by pulling them off using some mechanism. Finally, a wire cutting mechanism will cut the leads and dispose of them. One option that has been considered is implementing the existing, reliable mechanism with the robotic arm as the loading feature. This seems to be the most logical and simple change that would automate the system. For this method, the gripper bracket can hold two tubes by picking up the first and rotating ninety degrees to pick up a second. The minimum amount of moves for this process is desired for maximum efficiency. The final write up will include assembly drawings, parts details, a parts list, and the controls/pneumatics specs.
- Wilkerson, Lindy R** Health and Human Services Ohio Room 3:30 - 5:00  
*The Effect of a Therapeutic Dose of Cinnamon on Fasting Blood Glucose Levels in Type 2 Diabetes*  
 The study will evaluate glycemic control in a female subject with type 2 Diabetes Mellitus and the effect a one-gram therapeutic dose of Cinnamomum cassia on fasting blood glucose (FBG) control in the same subject. This study will use an experimental case study design where the participant serves as her own control. During baseline the participant will self-report dietary intake, physical activity, and two measurements of blood glucose daily for seven days. The participant will continue the same diet and physical activity patterns followed in the baseline phase but add one gram of Cinnamomum cassia per day for 21 days. On completion of the experimental phase, the subject's FBG is expected to decrease by 18-20% compared to baseline. The outcomes of this study may be valuable to both diabetics and pre-diabetics since Cinnamomum cassia may prove to be an acceptable alternative or complementary treatment in blood glucose management.
- Wilson, Elaunah A** Engineering and Technology Humphrey Rm. 10:30 - 12:00  
*Digital/Analog Synthesizer*  
 Our ECEGR 4899 final project for Spring 2005 is to design a digital/analog monophonic synthesizer. The intention of the synthesizer will be to emulate the sound of various musical instruments. The keyboard we used is a computer keyboard in order

to easily control the analog design with the computer. It will be a great educational too for combining the principles of electrical engineering and the physics of sound.

