Wednesday 15 April 2009
Thursday 16 April 2009
Graphic Design:
  Kelly Bailey, ’09, UD Department of Visual Arts
  Michelle Stawicki, ’10, UD Department of Visual Arts

Web Design and Programming:
  Kelly Bailey, ’09, UD Department of Visual Arts
  Ben Czajkowski, ’10, UD Department of Computer Science
  Michelle Stawicki, ’10, UD Department of Visual Arts

Additional Support:
  Alex Kordik, UDit
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter from the President and Provost</td>
<td>1</td>
</tr>
<tr>
<td>Letter from the Co-chairs</td>
<td>2</td>
</tr>
<tr>
<td>About the Stander Symposium</td>
<td>3</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>4-5</td>
</tr>
<tr>
<td>Calendar of Events</td>
<td>7-8</td>
</tr>
<tr>
<td>Celebration of the Arts</td>
<td>9-11</td>
</tr>
<tr>
<td>Keynote Address: Majora Carter</td>
<td>13</td>
</tr>
<tr>
<td>Presentation and Poster Sessions 10:30AM-12:00PM</td>
<td>17-52</td>
</tr>
<tr>
<td>Unit Luncheons</td>
<td>53</td>
</tr>
<tr>
<td>Presentation and Poster Sessions 1:00PM-2:30PM</td>
<td>55-102</td>
</tr>
<tr>
<td>Presentation and Poster Sessions 3:00PM-4:30PM</td>
<td>103-148</td>
</tr>
<tr>
<td>Index of Participants</td>
<td>149-175</td>
</tr>
</tbody>
</table>
Letter from the President and Provost

April 2009

Dear Colleagues and Guests,

Welcome to the Annual Brother Joseph W. Stander Symposium, the University of Dayton’s annual celebration of academic excellence. This day-and-a-half event exemplifies our mission to be a “community of learners” here at the University of Dayton. Through exceptional undergraduate and graduate student research, artwork, and performance, the Stander Symposium epitomizes the tradition of Marianist education.

We would like to offer our gratitude to the University’s faculty and staff. Your lasting commitment and enthusiasm for success are the building blocks of this annual tradition. The road to student accomplishment is paved through your achievements.

On behalf of the University of Dayton, we thank you for joining us for this 2009 Stander Symposium, and we wish you an exciting and engaging learning experience.

Sincerely,

Daniel J. Curran, Ph.D.    Joseph E. Saliba, Ph.D., P.E.
President     Provost and Vice President for Educational Affairs
April 2009

Dear Members of the UD Community,

We are delighted to officially welcome you to the Annual Brother Joseph W. Stander Symposium at the University of Dayton. Celebration 20 years of achievement in student research, performance, and artwork, the Stander Symposium highlights the collaborations of students and faculty mentors.

This campus-wide tribute to Brother Joseph Stander is a celebration of academic excellence that exemplifies the Marianist tradition of learning in community. Both students and faculty are committed to honoring this great tradition, as is seen their achievements and collaborations on display throughout the day-and-a-half event.

The creativity and achievement displayed by our students, faculty, and staff is vital to the success of this event year after year. This event would not exist without extraordinary effort from the UD community as a whole. On behalf of the Stander Symposium Steering Committee, we thank you for your continued support of this great tradition.

Sincerely,

Frances Pestello, Ph.D.
Chair, Department of Sociology, Anthropology, & Social Work
Co-Chair, Stander Symposium

Sukh Sidhu, Ph.D.
Associate Professor, Mechanical & Aerospace Engineering Department
Co-Chair, Stander Symposium

About the Symposium
About the Stander Symposium

Honoring the late Brother Joseph W. Stander, S.M., Professor of Mathematics and Provost (1974-1989), the Stander Symposium celebrates academic excellence, rich collaborations and many forms of intellectual, artistic, and spiritual growth. The career of Brother Joe embodied the spirit of collaboration and the Stander Symposium stands as a continuing tribute to him and all who carry on the Marianist tradition of education through community.

A distinctive spirit permeates student research at the University of Dayton. The faculty and students of the University are determined that “a community of learners” is not a cliche but a realistic goal. Thus the University fosters an atmosphere that nurtures productive collaboration and a shared search for excellence in learning and in research. The Stander Symposium is a day-and-a-half long event and constitutes the University of Dayton’s principal annual celebration of academic excellence. The Symposium features a keynote speaker, poster sessions, hands-on activities, performances, exhibits, oral presentations and highlights of capstone course work.

All students at the university engaging in research, creative endeavors, and other forms of innovative thinking are encouraged to participate in this student research symposium. Student attendees are key members of a critically reflective audience for their peers. Faculty members serve as mentors and leaders for many of these projects and are the driving force behind scholarship in their fields. The efforts of students, faculty, and staff are critical to making this event successful year after year.
Acknowledgments

The Bro. Joseph W. Stander Symposium Steering Committee thanks the students, faculty, and staff for their many contributions and university-wide collaboration in the planning of this year’s symposium. With over 1,500 presenters, performers, artists, and faculty mentors participating, the Stander Symposium is a last tribute to Bro. Joe and to the Marianist principles of higher education.

For generous support, we specifically owe gratitude to the Office of the President, the Office of the Provost, the Offices of the Deans in the College of Arts and Sciences, School of Business Administration, School of Education & Allied Professions, School of Engineering, Graduate School, and University Libraries. We extend this gratitude to the Ryan C. Harris Learning Teaching Center, the University Honors and Scholars Program, the Research Institute, University of Dayton Information Technology (UDit), Enrollment Management, Roesch Library, as well as, Student Development, Campus Ministry, University Advancement, Kennedy Union, the Rec-Plex, and UD Box Office.

Finally, we extend our thanks to our community partners the Greater Dayton RTA, the Schuster Center, DP&L Foundation, ThinkTV, WHIO-TV, WYSO-FM, and WDPR-FM.

Committee Recognition

Co-Chairs
Frances Pestello, Chair, College of Arts & Sciences
Sukh Sidhu, Associate Professor, School of Engineering

Steering Committee
Deborah J. Bickford, Office of the Provost
Susan Byrnes, ArtsStreet
Pamela Gregg, University of Dayton Research Institute
Patricia M. Hart, Grants & Scholars Program
Amy D. Lopez, Kennedy Union
Mike O’Hare, College of Arts & Sciences
Alix Omori, SGA Representative
Patrick Reynolds, Music
Joey Sammut, Graduate Student
Susan Sauer, Advancement
Peter Tittlebaum, Stander Cup Advisor
Kathleen Webb, University Libraries

Unit Coordinators:
Don Chase, School of Engineering
Jayne Brahler, School of Education & Allied Professions
Elizabeth Gustafson, School of Business Administration
Kathryn A. Kinnucan-Welsh, School of Education & Allied Professions
Art Mosher, Humanities, College of Arts & Sciences
Ed Mykytych, Associate Dean, Graduate School
Jason L. Pierce, Social Sciences, College of Arts & Sciences
Joel Whitaker, Arts, College of Arts & Sciences

Celebration of the Arts Committee
Paul Benson, Dean, College of Arts & Sciences
Sharon Gratton, Chair, Department of Music
Frances Pestello, Co-Chair, Stander Symposium
Patrick Reynolds, Department of Music
Tori Razi, University Communications
Susan Sauer, Advancement Resources
Sukh Sidhu, Co-Chair, Stander Symposium
Kathleen Webb, University Libraries
Joel Whitaker, Chair, Department of Visual Arts
Sara Woodhull, Development

Stander Interns
Andrew Mitchell, ‘10
Tim Mould, ’99

Stander Coordinator
Andrea Meyer Wade
Calendar of Events
Wednesday, April 15

4:00 p.m. Opening Mass
Marianist Hall Chapel
The Opening Mass included during the Stander Symposium offers the opportunity to reflect on the God-given power and responsibility of all members of the world of higher education and beyond.

8:00 p.m. Celebration of the Arts: Opening Performance
Schuster Center
The University of Dayton presents an evening of inspiring and entertaining music, theatre, dance and visual art at the Schuster Center at 8 p.m. on Wednesday, April 15. Celebration of the Arts showcases excellence in creativity and performance -- all by University of Dayton students.

The 2009 annual Celebration of the Arts includes performances by the Noble Carneys dance ensemble; UD Text Theatre; Symphonic Wind Ensemble; Ebony Heritage Singers; Dayton Jazz Ensemble; and the University Orchestra, Chorale, and Horn Choir; scenes from the opera The Old Maid and the Thief, as well as student produced films. Paul Helfrich, President of the Dayton Philharmonic Orchestra, will serve as master of ceremonies.

Free transportation to the Schuster from UD’s campus will be provided by RTA chartered buses.

9:30 p.m. Stander Cup
RecPlex
The Stander Cup involves cooperative competition in challenging physical and intellectual events, allowing participants to exhibit and showcase their skills. The purpose of the Stander Cup is to challenge participants to focus on overcoming obstacles in each event. The goal is to foster communication and teamwork among students, faculty, and staff. The Stander Cup is organized and led by the Sport Management Club in conjunction with the Department of Recreational Sports.
Thursday, April 16

Calendar of Events

7:00 a.m.  Welcome and Keynote  RecPlex

This year’s keynote speaker is Majora Carter, Founder, Sustainable South Bronx. From 2001 to 2008 Majora Carter was Executive Director of the non-profit she founded: Sustainable South Bronx - where she pioneered green-collar job training and placement systems in one of the most environmentally and economically challenged parts of the US. This MacArthur “genius” is now president of her own economic consulting firm, a co-host on Sundance Channel’s The Green, and host of a new special public radio series called, The Promised Land.

10:30 a.m. to  Morning at the Stander  Kennedy Union & Various

12:00 p.m.  Campus Locations

The Morning at the Stander is a showcase of the scholarly efforts of our students. Hands-on learning opportunities, panel discussions, performances, presentations, and the first poster session will take place during the Morning at the Stander.

1:00 p.m. to  Afternoon at the Stander  Kennedy Union & Various

5:00 p.m.  Campus Locations

The Morning at the Stander continues into the afternoon with additional presentations, panel discussions, performances, and the second and third poster sessions will take place during Afternoon at the Stander.

5:00 p.m. to  Celebration of the Arts:  Rike Center

7:00 p.m.  Closing Exhibition & Reception

The Department of Visual Arts will be hosting a reception and evening of open studios as the closing event of the University’s annual Stander Symposium. The evening features the awards ceremony for the Department’s annual Horvath Exhibition, a juried exhibition highlighting student artwork on display March 26 to April 22. The awards ceremony will begin at 6:00 p.m.
Celebration of the Arts: Opening Performance
8 PM | Schuster Center

Festival Prelude, opus 6
Gottfried von Freberg

University of Dayton Horn Choir
Dr. Richard Chenoweth, Conductor

I Will Say of the Lord
Jim Hammerly
orch. Robert Streng, UD '02

Anthem of Praise
Richard Smallwood (b. 1948)
orch. Robert Streng, UD '02

Mary Carman, soprano

Dayton Jazz Ensemble
Dr. Willie Morris, Director

Ebony Heritage Singers
Dr. Donna Cox, Conductor

I Will Lift Up Mine Eyes: The Lord Is My Shepherd, Alleluia
Adolphus Hailstork (b. 1941)

Goldmine
Mervyn Warren (b. 1964)
Claude McKnight (b. 1962)
arr. Alan Billingsley

Dr. David Sievers, tenor

University Chorale
Dr. Donna Cox, Conductor

University Orchestra
Dr. Jiang Liu, Director

Jumping Up and Down
UD Text Theatre
Kay Bosse, Director

Karuna
Totus Tuus Op. 60
Henryk Gorecki (b. 1933)

The Noble Carneys
Sharon Leahy, Director
The Old Maid and the Thief: Scene I (excerpt) Gian-Carlo Menotti (1911-2007)

Caitlin Perlow: Miss Todd
Emily Taylor: Miss Pinkerton
Jacki Schneider: Laetitia
Sam Kreidenweis: Bob
Stage Director: David Sievers
Musical Director: John Benjamin
Vocal Coach: Linda Snyder

Rocky Point Holiday
Symphonic Wind Ensemble
Dr. Patrick Reynolds, Conductor

Visual Arts Display in Wintergarden
Kelly Bailey
Amanda Baker
Mark O’Brien
Ben Norton
Ellen Schneider
Melissa Starkowitz

Celebration of the Arts: Closing Exhibition & Reception
5 – 7 PM | Rike Center
6 PM Awards

The Department of Visual Arts will be hosting a reception and evening of open studios as the closing event of the University’s annual Stander Symposium. The evening features the awards ceremony for the Department’s annual Horvath Exhibition, a juried exhibition highlighting student artwork on display Mar. 26 through April 22.

Included in the open studios will be demonstrations, student films, and the exhibition of student art and design from across the Department.
Thursday, 16 April 2009

Keynote Address by

Majora Carter
Founder, Sustainable South Bronx
Born, raised, and continuing to live in the South Bronx, Majora believes you shouldn’t have to move out of your neighborhood to live in a better one, and that this notion has environmental and economic implications that span the globe.

In 2001, after the defeat of a noxious, Giuliani-era municipal waste handling scheme, she founded the non-profit environmental justice solutions corporation, Sustainable South Bronx (SSBx). Her first major project was writing a $1.25M Federal Transportation planning grant for the South Bronx Greenway with 11 miles of alternative transport, local economic development, low-impact storm-water management, and recreational space. This led to the first new South Bronx waterfront park in over 60 years.

While needed parks are highly visible manifestations of her work, the real focus is creating intensive urban forestation, green roofing/walls, and water permeable open spaces. This robust horticultural infrastructure cleans the air, reduces urban heat island effect, efficiently manages storm water runoff, calms the soul, and creates jobs — reducing poverty.

In 2003, SSBx started the Bronx Environmental Stewardship Training program (BEST): one of the nation’s first urban green-collar job training and placement systems. After 5 years it boasts an 85% employment rate with 10% now in college. Many of these success stories were formerly incarcerated, and all of them were on some form of public assistance before completing the nationally recognized 10-week course.

Her local and global environmental solutions rest on poverty alleviation through green economic development, because the local jobs they create can empower communities to resist bad environmental decisions by some short-sighted “leaders.”

In 2007, she and Van Jones co-founded Green For All to advocate for a national green-collar job agenda.

She is a MacArthur “genius”, one of Essence Magazine’s 25 most influential African-Americans for 2007, co-host of the Green on Sundance Channel, a board member of the Wilderness Society, and recording a special national public radio series called “The Promised Land” for 2008 release.
Thursday, 16 April 2009

Presentation & Poster Sessions
10:30 AM - 12:00 PM
The Benefits of Service-Learning in Youth Development

Oral Presentation
Course Project 09_WI_EDT_110_H1
Advisor(s): Patricia M Hart
Student(s): Leanne C. Bernardez

Using the research of multiple studies as well as firsthand accounts from educators who have documented their experiences in teaching, the researcher has assessed the value of service-learning in the educational, expressive, and religious aspects of youth development. This paper analyzes the importance of service in creating an avenue for building knowledge and the advantages of learning in the community outside of the classroom. It also presents evidence based on experts’ research that demonstrates the virtues that are fostered while performing service, including acceptance or tolerance for people considered “different,” responsibility for one’s role in the community, and empowerment to affect society.

Compassion and Community: Caring for Uganda’s Orphans: A Case Study of Raising Up Hope for Uganda

Oral Presentation
Independent Research
Advisor(s): David W Darrow
Student(s): Adrienne D. Hillman

With hundreds of thousands of orphans throughout the world, the question becomes how to accommodate and provide for these vulnerable children. This research project was conducted in order to expose the situation of orphans and other vulnerable children in Uganda. The purpose of this practicum was to obtain a critical understanding of the challenges of a newly established organization that is caring for orphans, and to evaluate the sustainability of a small project. The organization Raising Up Hope for Uganda serves as a case study on this topic and delves into the struggles of orphans, neglected children, and those who provide for them. This project did not strive to present a solution for providing for Uganda’s thousands of orphans. Rather, the goal was to gain a deeper comprehension of the rewards and difficulties of managing an organization and the enormity of responsibility that comes with caring for orphans. This presentation will discuss the history, daily life, current struggles, and future plans of this particular orphanage.

First Year Students’ Attitudes and Opinions on Sexual Assault and Rape

Oral Presentation
Senior/Capstone Project
Advisor(s): H Frances Geyer Pestello
Student(s): Emily J Bonistall

This presentation will provide a detailed understanding of the present study which evaluated the impact of a New Student Orientation sexual assault prevention presentation and self-defense classes on changing first year students’ attitudes and opinions on sexual assault and rape at a Midwestern University. In this study, data were obtained from 133 first year students using surveys, focus groups, and interviews. The analysis revealed that by the completion of the presentation and self-defense classes, (a) the male and female students had a clearer and more equal understanding of women’s sexual intention, helping to decrease the amount of sexual misperception, (b) students were less likely to place responsibility for rape on a woman and thus, less likely to engage in victim blaming, (c) the students were less accepting of situations of forced sexual encounters, regardless of whether the woman had “misled” the man, and (d) the women students who participated in the self-defense classes experienced an additional shift in attitudes about themselves. Additional conclusions and implications will be discussed.

Standing Rock: Sharing Stories, Looking to the Future

Oral Presentation
Independent Research
Advisor(s): Katherine M Anderson, Mary Anne Angel
Panel Discussion     10:30 AM - 11:30 AM

Student(s): William B. Blakeley, Kenneth J Farrell, Michael C Horwath

This spring marked the fifth year that students from the University of Dayton have traveled to Standing Rock Reservation on a service immersion trip. The immersion is organized by Alpha Phi Omega in cooperation with the nonprofit Two Trees Inc., and has returned to the Lakota town of Little Eagle in South Dakota each year. We have continued to build relations with the community, learn about the Lakota culture, and cooperate on projects. Our experiences of the realities on the reservation have ranged from the humorous to the inspirational to the tragic, and we would like to share these stories with the UD community. The presentation will also include background on the history of Native American reservations, issues facing reservations today, and our hopes for the future.

Student(s): Margaret A Hurlburt

In a continual effort to engage students academically, the Student Government Association (SGA) and the Office of the Provost sponsored a program titled the Academic Engagement Initiative to encourage student organizations to act upon the values outlined in the Habits of Inquiry and Reflection. Over the past semester, twenty-eight student organizations worked to better understand and live out the values of the Marianists. This presentation highlights the ten most outstanding organizations of the program and provides reflection as to how the University’s faculty and students can incorporate the Marianists’ values into their daily lives.

Catholic Sex Education and Sexuality Among Catholic College Students

Oral Presentation     10:30 AM - 11:30 AM

Student(s): Julia E Sandmann

This project examines first year college students and their perceptions of Catholic teachings on sexuality based on their Catholic high school sex education. The project focuses on the topics of pre-marital sex, homosexuality, and the use of artificial contraception, and how the attitudes, opinions, and behaviors of first year students regarding these topics is influenced by their Catholic sex education.

Classic Convention or Aesthetic Objection? A Juxtaposition of Public Art in Urban Environments and the Contemporary Installations of Spencer Tunick

Oral Presentation     10:30 AM - 11:30 AM

Student(s): Melissa A Starkowicz

Advisor(s): Brian S Turner

Since 1992 the contemporary artist Spencer Tunick has been shocking public audiences with his large-scale, public installations in which thousands of individuals pose nude for his photographs that are both public art of the moment and, through their documentation, of record. Public art is nothing new, yet what Tunick engages in is a public art that variously challenges time-honored perceptions and convictions about what public art is or ought to be. Tunick’s art has received an enormous amount of media attention due to the controversy surrounding his work. This thesis provides a look into the realm of public art throughout history, the contents surrounding such art, and Tunick’s intentions as an artist working in the public realm. It asks and answers the question whether Tunick is actually adhering to conventional public art practices or objecting to the traditional means of creating public art that has been established by artists before him!

Student(s): Laura M Buehrle

Besides all those factors, what really makes a person who is innocent confess to crimes that they did not commit? Is it because they are subjected to inhumane techniques when they are denied going to the bathroom or even food and drink? Answering these questions is extremely important to people who have made false confessions and are in jail right now because of doing so and it is also important to American citizens because this research could help them not make the same mistakes of the innocent people in the past. This topic is so interesting from the psychology aspect because it is so unbelievable to most people that a person would commit to crimes such as murder; when in reality they did not ever kill anyone. When most people think about what they would do in a situation like that, obviously they will say that they would never tell law enforcement officers they did something that they absolutely did not do. That is why it is important to take a closer look at the way police officers are questioning people or persons they consider suspicious. Do people confess because of the strain they are put under when being questioned? Some research says that police use different techniques such as not letting a suspect sleep, eat, or use the restroom; these conditions would presumably make most people tell police officers anything they want to hear as long as they can get some food and sleep.

The Color of Incarceration: A Case Study of Montgomery County Jail

Panel Discussion     10:30 AM - 11:30 AM

Advisor(s): Arthur J Jipson, Theo J Majka

Student(s): Kacy L Carmichael

In today’s society it is common knowledge that there are far more African-Americans in jail than any other racial/ethnic group. This case study focuses on the community perceptions of racial disparity in Montgomery County Jail in comparison to factual data. Critical Race Theory is central to the development of this study in the attempt to discover to what extent racialization is normalized and accepted in society as a part of the criminal justice system. The ordinariness of racism is visible in the way that society regularly accepts racial disparity in jails because the crimes can be individualized. It is easier to blame each individual for their individual actions, and no doubt these persons did violate the law in some way. However, there is no logical reason why African-American people should be convicted of more crimes than whites, when white collar crime is estimated to happen more frequently than street crime (Delgado & Stefancic, 140, 2007).

Dress Code 101: How to Look Like a UD Student

Oral Presentation     10:30 AM - 11:30 AM

Advisor(s): Dan E Miller, Leslie H Picca

Student(s): Mary E Darrah

The on-going stereotype is that University of Dayton students all dress-alike. In this paper, I examine the validity to this claim, and the implications of a UD dress code on students collective identity. Relying on interviews and focus groups with UD women, I compare the identity of first year students compared to college seniors. The purpose of this study is to examine the influence of peer pressure, an adaption to college life, and how this changes throughout the students four years. The impact of social class and gender are highlighted in this analysis for examining the demonstrated identity of UD students.

Exploring Expressions of Vocation and Art

Visual Arts Exhibition     10:30 AM - 11:30 AM

Advisor(s): Angela Ann Zukowski, …

Student(s): Allison A. Craig, Lisa A. Finley, Amanda C. Hall, Timothy S. Herrmann, John C. Kurzawa, Antonio J. Mari, Elizabeth A. Markus, Lauren M. Monahan, Joseph A. Nentwich, Brian E. O’Toole, Michael A. Sievers, Hope L. Smalla, Michelle F Stawicki, Marie-Claire Tuszene

Student(s): Kathleen A. LaCroix, Kathleen M. O’Keefe, Eric J. Olk, Luke C. Reif, Megan L. Suchan, Grace A. Weybright, Brian R. Wing, Janet L. Zimba

Advisor(s): Angela Ann Zukowski, …

Student(s): Allison A. Craig, Lisa A. Finley, Amanda C. Hall, Timothy S. Herrmann, John C. Kurzawa, Antonio J. Mari, Elizabeth A. Markus, Lauren M. Monahan, Joseph A. Nentwich, Brian E. O’Toole, Michael A. Sievers, Hope L. Smalla, Michelle F Stawicki, Marie-Claire Tuszene

The on-going stereotype is that University of Dayton students all dress-alike. In this paper, I examine the validity to this claim, and the implications of a UD dress code on students collective identity. Relying on interviews and focus groups with UD women, I compare the identity of first year students compared to college seniors. The purpose of this study is to examine the influence of peer pressure, an adaption to college life, and how this changes throughout the students four years. The impact of social class and gender are highlighted in this analysis for examining the demonstrated identity of UD students.

Academic Engagement Initiative Student Organization Finalists

Oral Presentation     10:30 AM - 11:30 AM

Advisor(s): Roger J Crum, Judith L Huacuja

Student(s): Melissa A Starkowicz
Presentations 10:30AM-12:00PM

The Chamisade Scholars course, Vocation and The Arts addresses the motivation, passion and creativity expressed by artists from various disciplines. The students’ exhibition presents a creative interpretation and synthesis gleaned from the class’s encounter with artists from around the country. Each creative interpretation reflects student’s application for a deeper appreciation of vocation as art in their own lives. A variety of interpretations is being presented for conversation.

From Judith Baca to Mequitta Ahuja: The Transformative Power of the Arts on Young Adults

Oral Presentation
10:30 AM - 11:30 AM
St. Joseph’s Hall 023
Advisor(s): Roger J Crum, Judith L Huacuja
Student(s): Margaret H Fister

In the last several decades contemporary artists and art educators have come together in a philosophy that engages children and young adults in the making of art in and for the communities in which they live. Far from holding an art for art’s sake perspective, these individuals who have sponsored these projects and have worked with these young people have been motivated by a desire to provide uplifting and constructive experiences in people’s lives, sometimes even as necessary countermeasures to forces that might otherwise draw young people or hold them in lives of delinquency and crime. This thesis surveys the terrain of art education and opportunities for young people while focusing particularly on the efforts and successes of Judith Baca with the “Great Wall of Los Angeles,” a project that involved infancy youth chronoling the history of Los Angeles and its various people, and Mequitta Ahuja and her work with the Blue Sky, an experiential arts program that links professional artists with small groups of teens to produce work that is either exhibited or performed in public.

From the Local to the Global: Realizing the Human Rights of Resettled Refugees in Dayton, Ohio

Oral Presentation
Course Project
10:30 AM - 11:30 AM
St. Joseph’s Hall 231
Advisor(s): Natalie Florea Hudson
Student(s): Joseph C Adlard, Helen Daly, Lauren K. Etkorn, Zachary R. Parish, Stephanie A Zienionko

In the field of International Relations, the line between those who study human rights and those who advocate for human rights is increasingly blurred. Many academics engage in political activism, and many human rights activists are seeking out more formal training on the issues at stake and the strategies available for more effective advocacy. The creation of the Human Rights Studies degree at UD is reflective of this, particularly in terms of the University’s commitment to its Marianist ideals of community and to its Catholic tradition of social justice. The students in POL 334, The Politics of Human Rights, have spent the semester making this connection between theory and practice. As part of the requirements for this course, the entire class participated in a semester long service project with the Refugee Resettlement Program at Catholic Social Services. Alongside the study of international refugee law and of the international organizations working to protect and promote the rights of refugees, students were working with and assisting local refugees as they resettled in Dayton. In addition to this volunteering, the students in this course were charged with creating and delivering a group project that will benefit the work of Catholic Social Services. At the Sandler Symposium, students will be sharing their experiences from the semester as well as the project they developed for Catholic Social Services.

Grief and bereavement amongst college students: A qualitative study

Oral Presentation
Senior/Capstone Project
10:30 AM - 11:30 AM
St. Joseph’s Hall 023
Advisor(s): Paul J Becker, Jennifer Davis-Berman
Student(s): Caroline M Degnan

Grief and bereavement amongst college students has been referred to as a silent epidemic. A great deal of college students suffer the loss of a friend or loved one during their college careers, however very little research has been conducted to examine the grief patterns and reactions specific to college students. In this brief study qualitative analysis was conducted to explore what college students typically experience when dealing with grief and bereavement as well as how self help groups influence their experiences.

The Impact of Music Therapy on the Emotional Status of Youth in Residential Treatment

Interactive
10:30 AM - 11:30 AM
Humanities Center 112
Advisor(s): Susan C Gardstrom
Student(s): Rebecca C. Holloway, Kendra B. Strous

Two students received university grant monies to create and implement a music therapy program with troubled youth in residential treatment. A survey was designed to collect pre- and post-session data related to the clients’ emotional status. The project and results of the analysis of survey data will be described. This presentation is a description of an ongoing research project involving group Music Therapy with approximately eleven female residents, ages 14-18 who were being treated for emotional and behavioral disorders at a private, Lutheran-sponsored agency in Ohio. Research indicates that Music Therapy is an effective treatment modality for such clients (references available upon request). Music Therapy sessions were held twice weekly from February 3, 2009 to present. The sessions focused on the identification and healthy expression of feelings, development of positive self-esteem, and improved relationships with others. All four music therapy methods were utilized. Three Likert scales were used to determine the teens’ self-reported, transient emotional states, both pre- and post-session. At the end of the project (anticipated, April 2009), the data will be analyzed to determine whether Music Therapy had a significant impact on the emotional status of the young participants and, if so, what factors might be implicated in this impact. This presentation will highlight the logistics of the Music Therapy program development, the structure of the actual sessions, and the reporting of survey data to-date.

Protect This House: A look at the inter-workings between local and federal law enforcement to keep America safe

Panel Discussion
10:30 AM - 11:30 AM
Senior/Capstone Project
St. Joseph’s Hall 211
Advisor(s): Arthur J Jipson
Student(s): Patrick J Kelly

Public policy and laws have changed to fit the new definition of terrorist attacks. Now local police officers, not just special terrorist task forces, are trained better and are more equipped than ever before to take out new threats as they arise. With just several phone calls, joint task forces called fusion centers can be deployed to wherever a threat is believed to exist. Its sole purpose is to share information, manpower, and funding so that the threat can be taken out as efficiently as possible. With all of these advances no doubt, comes counter advances from criminal and terrorist organizations which is why it is so important that the agencies in power do not become complacent with the status quo. It is so important to agencies to share technology and keep cooperating after even after a threat is thought to be stopped. Throughout the rest of this piece, research will be done to examine the question of just what the role of local and state law enforcement is in homeland security. In depth examinations will be made into the policies, procedures, and technologies these agencies use to combat this ever growing threat, specifically explosives and nuclear devices. With help from the Department of Homeland Security an understanding will try to be reached of what is being done on a day to day level in order to keep Americans from harm. Through a series of personal interviews and official statements from local law enforcement agencies, the role and duties of the local police officer will be examined while the information and notes of other and agencies and researchers will provide a backbone to the analysis and review that will be done on current and prospective policies.

Quantitative Research and First-Year Composition

Oral Presentation
Course Project 08_FA_ENG_114_W1
10:30 AM - 11:30 AM
Humanities Center 110
Advisor(s): Barbara M De Luca, R Alan Kimbrough
Student(s): Louryn A. Berke, Jordan F. Gerowski, David M. Santez, Courtney L. Stevin

Interactive
10:30 AM - 11:30 AM
Oral Presentation
St. Joseph’s Hall 026
Advisor(s): Jennifer Davis-Berman
Student(s): Lauren L. Etkorn, Zachary R. Parish

Public policy and laws have changed to fit the new definition of terrorist attacks. Now local police officers, not just special terrorist task forces, are trained better and are more equipped than ever before to take out new threats as they arise. With just several phone calls, joint task forces called fusion centers can be deployed to wherever a threat is believed to exist. Its sole purpose is to share information, manpower, and funding so that the threat can be taken out as efficiently as possible. With all of these advances no doubt, comes counter advances from criminal and terrorist organizations which is why it is so important that the agencies in power do not become complacent with the status quo. It is so important to agencies to share technology and keep cooperating after even after a threat is thought to be stopped. Throughout the rest of this piece, research will be done to examine the question of just what the role of local and state law enforcement is in homeland security. In depth examinations will be made into the policies, procedures, and technologies these agencies use to combat this ever growing threat, specifically explosives and nuclear devices. With help from the Department of Homeland Security an understanding will try to be reached of what is being done on a day to day level in order to keep Americans from harm. Through a series of personal interviews and official statements from local law enforcement agencies, the role and duties of the local police officer will be examined while the information and notes of other and agencies and researchers will provide a backbone to the analysis and review that will be done on current and prospective policies.

Presentations 10:30AM-12:00PM
Stop, Drunk, then Under Arrest: Analyzing Sobriety Checkpoint Effectiveness

Panel Discussion
10:30 AM - 11:30 AM
St. Joseph’s Hall 211

Senior/Capstone Project

Advisor(s): Arthur J Jipson

Student(s): David E Stwarka

Sobriety Checkpoints effective? It is important that people challenged the strategies and tactics of police enforcement. If not, the methods can be used for many years without true knowledge of their effectiveness. If people wait too long, much money can be wasted and the main purpose of the strategy is not even accomplished. The researcher is trying to make sure that people stop and look at the effectiveness of sobriety checkpoints. By doing this, the researcher can make sure that money is not wasted. It allows the research and others to recognize whether they should be encouraging more checkpoints and what areas the practice is most effective. Are Sobriety and DUI checkpoints effective in reducing drunk driving and do rural and urban areas have similar effectiveness? This is the researcher’s question. The researcher will attempt to measure the deterrence of these programs. The researcher will also look at number of arrests per checkpoint. He will look at amount of money saved by spending it on these programs rather than spending it on the costs of fixing alcohol related car crashes. If research shows positive effectiveness of sobriety checkpoints, then police departments can use this information to get more money to conduct more checkpoints throughout the year. However, if research finds checkpoints are not effective and they lose money by not stopping any alcohol related car crashes, and that they do not make any arrest, then it would be greatly beneficial to the police departments to stop the programs immediately and look for another method to try to stop drunk driving. This can benefit police departments to understand which areas are most effective in stopping drunk driving. This would allow them to concentrate the checkpoints in the most effective areas to have the most success.

Eating Right: Home, Workplace, and Media Literacies in Contemporary America

Panel Discussion
10:30 AM - 12:00 PM
Kennedy Union 311

Course Project
Advisor(s): Akhila Ramnarayan

Student(s): Elizabeth L. Barba, Carolyn A. Brademeyer, Sarah E. Denk, Lauren E. Graehler, Christopher Joseph Morman

This panel highlights diverse literacies of food service workers, television audiences, business professionals, specialty coffee roasters, and Mexican American families, examining the role of food in their lives. Providing a more inclusive view of the contemporary American experience, the panel links food rituals to culture, identity, community, and the formation of new niche markets in the United States.

Visual Communication Design Senior Portfolio Preparation

Interactive
10:30 AM - 3:30 PM
Roech Library

Advisor(s): Jayne Mastlock Whitaker


Graduating seniors earning a degree in Visual Communication Design and who are currently enrolled in the senior capstone course VAD 499 Portfolio and Paper will be working in a studio classroom setting. Visitors are invited to come and observe and/or ask questions regarding the final process of putting together a design portfolio. These creative portfolios are the primary resource for students applying for positions in the professional field of design and or graduate school. The presentation is intended to be interactive and informal. Students will be in the process of working on a variety of projects as they prepare for the debut of their final portfolios at both professionally sponsored Portfolio Reviews and the VCD Senior Portfolio Review being held at Kennedy Union on Monday, April 20, from 5 to 8 p.m. and open to the community.

Issue Forum on Campus Energy Use

Interactive
10:30 AM - 1:00 PM, 3:00 PM
Roech Library

Advisor(s): Jason L Pierce

Student(s): Tracey L. Horan, Emily M Klein

The issue forum on campus energy use brings together students, faculty, staff and administrators to deliberate three questions: How should UD secure its energy? How can UD use its energy more efficiently? Who should pay for energy improvements?

SBA Distinguished Executive Speaker

Keynote Address
10:45 AM - 12:00 PM
Miriam Hall 119, O’Leary Auditorium

Advisor(s): Elizabeth F Gustafson

Corporate Social Responsibility (CSR) in Troubled Times - Opportunities for Corporate America to lead and regain trust and reputation: the components of CSR from a practitioner’s perspective, integration of leadership and programming opportunities for the next generation of leaders in business.

River Tour of Downtown Dayton with the UD River Stewards

Interactive
12:30 PM, 3:00 PM
Independent Research
Immaculate Concepcion Chapel

Student(s): Tracey L. Horan, Emily M Klein

Join the River Stewards on a river tour of downtown Dayton! The trip will put in at RiverScape MetroPark in downtown Dayton and paddle through the downtown areas of the Great Miami River. Tour guides will share information about the history of the rivers that run through Dayton as well as the environmental impacts of the city on the rivers. Appropriate dress is required—shoes that are sturdy and you don’t mind getting wet (NO FLIP-FLOPS!) and comfortable clothing. The first trip will Depart from outside the Chapel of the Immaculate Conception at 12:30 and the second will Depart at 3:00 from the same location. Only a limited number of slots are available. Advanced registration is required but not required. Email Tracey at RiverInstitute@notes.udayton.edu to sign up.
**Accuracy of Bertec Force Measuring Platform in terms of noise and drift over time**

Independent Research  
Undergraduate - Group  
Advisor(s): Kimberly E Bigelow  
Student(s): Gretchen A. Berkemeier, Alexander W. Frenz, Alexander P. Jules, Michael P. Malec, Mark D. Nelson, Mark V. Stercay, Erin E. Sutton, Nicholas R. Ulmer

Force plates are used clinically by physical therapists to quantify patient balance. In order for data to be correctly interpreted, it is necessary to determine the accuracy of the force plate. Research was conducted to measure the possible noise and drift of Bertec Force Measuring Platform. A forty pound weight was centered on the force plate, and the center of pressure in the medial-lateral and anterior-posterior direction and the force in the vertical direction were measured. Over a ten minute span data was analyzed at one minute intervals, with data for the first minute calculated every ten seconds. It was observed that in the vertical direction the noise and drift were insignificant. The center of pressure in both the medial-lateral and anterior-posterior direction were found to have no drift and negligible noise. It was concluded that the force plate is an accurate device to measure ground reaction force.

**An Animal in Need Deserves A Friend Indeed: A Social Justice Living Learning Community Project**

Course Project 09-singlePosting  
Undergraduate - Group  
Advisor(s): Monalisa McCurry Mullins  
Student(s): Tanner R. Adams, Kevin T. Collins, Angelo C. Fata, Craig D. Saum, Hayden S. Swegal

Our service learning with the Humane Society has given us a new respect for animals. Through this project we have been able to provide a sense of care and love to these once forgotten animals who have suffered from abuse, neglect and abandonment. We are relating this experience to Plato's teachings in The Republic; those who leave the cave and see the outside world are obligated to go back and share their new knowledge with the others still inside the cave. After going to the Humane Society and seeing these animals that are in need, we feel that it is our duty to enlighten others about this situation that we have experienced.

**An Empirical Analysis of a Reduced Form Discounted Cash Flow Model for Bull and Bear Markets.**

Independent Research  
Undergraduate - Individual  
Advisor(s): David A Sauer  
Student(s): Anthony W Sirabella

Most accounting based discounted cash flow models use all of the typical income statement and balance sheet entries to determine free cash flows and, hence, the intrinsic value of a company. This model uses only revenues, cash flow, and the ratio of the two to derive intrinsic stock values. Forecasts of revenues and cash to revenue ratios, based on regression analysis and geometric growth rate analysis, are used to determine the intrinsic value of three companies; Parker Hannifin, Proctor & Gamble, and Southern Company, for the years 2006, 2007, and 2008. The results indicate that actual stock prices do adjust to under and over valued conditions as expected under the efficient market hypothesis.

**An Event Study: The Impact on the SEC's Short Selling Ban**

Honors Thesis  
Undergraduate - Individual  
Advisor(s): Rong-Chin C Chen  
Student(s): Mary Jane J McInnis

This study takes a look at the SEC's short-selling ban, imposed in September 2008 and lifted in October 2008. Amidst troubling economic times, fear and volatility infected the stock market. Most stock prices experienced dramatic falls in the
first three quarters of 2008. The SEC attempted to curb volatility and restore investor faith by temporarily banning the short-selling of nearly 800 financial stocks. Using daily historical price and volume data from three periods (pre-, during and post-ban), this study attempted to determine whether or not the ban had an impact on stocks’ speed in processing market information.


**Graduate Research**

**Graduate - Individual**

**Advisor(s):** Carl F Friese

**Student(s):** Sarah E Steele

Loniceran maackii (Amur Honeysuckle) is an invasive, woody shrub that is well established in deciduous forests in southwestern Ohio and Kentucky. The deleterious effects of this shrub on native herbaceous plants and tree seedlings has been well documented; however, the mechanisms of competition are not fully understood. Through an examination of both above- and below-ground competition, we aim to better understand the mechanisms enabling L. maackii to successfully out-compete native flora and dominate forest systems. We studied various biaistic and abiotic variables at fifteen L. maackii shrubs and fifteen non-invaded sites in a deciduous forest near Dayton, OH (USA). These variables include measures of percent leaf cover, light intensity, canopy cover, and mycorrhizal colonization. Our preliminary results confirm published literature accounts of reduced tree seedlings and herbaceous cover under L. maackii shrubs. Additionally, there was decreased percent leaf cover under these shrubs compared to non-invaded sites. Light intensity was lower under the shrubs than in control sites; however, canopy cover between sites was similar. Preliminary mycorrhizal analysis indicates myophilic colonization under L. maackii shrubs. However, we have not yet determined whether a symbiotic association exists between the fungus and the roots of the shrub. By better understanding the mechanisms that enable L. maackii to out-compete native flora, restoration efforts can be enhanced to increase the biodiversity of forests degraded by invasive woody species.

Appropriate Technology in Togo

**Course Project**

**Undergraduate - Individual**

**Advisor(s):** Philip T Aaron, Margaret F Pinnell

**Student(s):** Michael W Doenges

I will be traveling to the village of Soutouboua in Togo, Africa this summer along with two other University of Dayton students to assist a Maranist community providing aid to the village farmers. Agriculture is the primary way of life for the villagers and the Maranist Agricultural Center assists them in acquiring seeds, fertilizer, and advice to better help them manage their crops. We have been told of a need for the village to build and sustain an irrigation system to supply water to the fields during dry times. Our goal will be to design and construct a feasible system to bring water to the farmer’s crops.

Assessing the Mind behind the Man: A Background Study of E.O. Wilson, a Secular Humanist

**Course Project**

**Undergraduate - Group**

**Advisor(s):** Daniel E Martin

**Student(s):** Kylie S Hemmelgarn, Molly M McCormack, Carolyn A. Pantle, Joshua M Siefring, Lauren M. Ugan

E.O. Wilson is a world renowned evolutionary biologist who is highly praised for his research in the ecological world and widely studied for his religious and ethical views. This study seeks to analyze the scientific contributions of E.O. Wilson along with his religious outlook and impacts of his beliefs. Most of his contributions to science came about from his years of studying the behavior of insects. Extending his research to vertebrates and humans, he came up with his most famous concept, sociobiology; the study of the biological basis of social behavior among different organisms. Sociobiology evoked much controversy because many people thought he was misusing biology to justify discriminating and immoral human behavior. Some feared that sociobiology would become a religion of scientific materialism, even though Wilson believed that scientific humanism is the only philosophical approach compatible with science. Despite the controversy that followed his work, many people now view his ideas as fundamental to biology.

Big Brothers Big Sisters, Big Impact: A Social Justice Living Learning Community Project

**Course Project**

**Undergraduate - Group**

**Advisor(s):** Monalisa McCurry Mullins

**Student(s):** Lauren M. Hunt, Louis D. Kocevar, Jessica A. Lovell, Elizabeth A. Reeves, Cynthia M. Schmidlin

Big Brothers Big Sisters is an organization that strives to teach youth the importance of virtue and self-worth through tutoring, mentoring, and playing. By developing personal relationships with disadvantaged children, we hope to encourage a lifestyle focused on helping others, rather than on obtaining material items. Meanwhile, our time spent with the children has helped enlightened us to the value of service to others, and to the meaning of Aristotle’s dictum that we are social beings by nature. It is through this process that we are carrying out the University of Dayton’s mission to learn, lead, and serve.

Bioresorbable Carbon Foam as Orthopedic Implants in Ambystoma Mexicanum

**Career Project**

**Undergraduate - Individual**

**Advisor(s):** Khalid Lafdi, Panagiotis A Tsonis

**Student(s):** Timothy P Fox

Current bone reinforcements commonly use titanium, a non-porous metal that is stiff and immunogenic, hindering complete bone healing. By utilizing bioreinforable carbon foam, our aim was to allow for temporary structural support that degraded as bone heals. To do this, we employed in vivo testing in the axolotl, Ambystoma mexicanum, by amputating the forearm, removing the humerus, and implanting a bone-shaped carbon foam composite. We studied 13 carbon materials, each one chemically and reactively distinct. The carbon composite implants either remained inside the limb or were rejected; regeneration of the limb was either inhibited or induced. We found composites with free radicals were rejected and inhibited regeneration. To determine the mechanism, we utilized an implant activated with oxygen free radicals. Superoxide dismutase (SOD) was intraperitovenously injected in a fraction of the implanted axolotls. In those axolotls not injected with SOD, the implants were rejected; conversely, axolotls injected with SOD retained their implant and regeneration was induced.

Career Fields Projected 10 Years Into the Future

**Course Project**

**Undergraduate - Group**

**Advisor(s):** Marvin D Ganote

**Student(s):** Bethany A. Demars, Timothy J. Lynn, Ryan L Nevill, Victoria L. Oelschlager

The goal of this project is to select and elaborate on three major elements (tasks/functions) of the Pre Physical Therapy, Dietetics and Exercise Science Majors. Project ten years into the future will be used to relate how the nature, content, scope and associated technology will change the job and career field in ten years. The discussion will include one significant technology and the potential pros and cons it may have in the future.

Career Projections for HSS Majors: Physical Therapy, Exercise Science, Nutrition and Fitness, and Dietetics

**Course Project**

**Undergraduate - Group**

**Advisor(s):** Marvin D Ganote

**Student(s):** Amanda C. Bachman, Brian S. Blasik, Sara J. Mrowzinski, Jared A. Phillips, Jessica N. Wolanin
The careers of physical therapy, exercise science, nutrition and fitness, and dietetics are ever-changing. This research explores those changes that will occur over the next ten years, and the roles that technology plays in the transformation. It will break down each of the careers listed and their projections individually.

**Chromatin Staining Method for Canine Oocytes**

*Graduate Research*

**Advisor(s):** Shirley J. Wright  
**Student(s):** Rital B Bhavsar

During meiotic maturation in mouse oocytes, chromatin is rearranged, and transcription is inactivated. Whether similar changes occur in canine oocytes has not been investigated. Dogs have unusual reproductive physiology in that meiosis occurs in the ovuduct, rather than in the ovary as in mice and humans. As a first step to investigate chromatin arrangement in dog oocytes, a method was developed to detect chromatin. For the study, ovaries from 12 dogs aged 6 to 36 months were obtained from a local veterinarian. The ovaries were stored in phosphate-buffered saline, pH 7.3 (PBS) and within 24 hr minced in fresh PBS to release cumulus-oocyte-complexes (COCs). Some COCs were stained with 10 µM Hoechst 33342 to reveal DNA; however, the cumulus cells obscured the chromatin. Instead, COCs were first mechanically stripped of cumulus and placed in fresh PBS. This yielded zona-intact oocytes that appeared black due to a dark lipid pigment. Unfortunately, this pigment obscured visualization of the oocyte chromatin. To remove the pigment, oocytes were fixed in 70% ethanol for 10 min and rehydrated in PBS. After rehydration, COCs and oocytes were stained for 30 min with either 10 µM Hoechst 33342, or 100 µg/ml propidium iodide (PI). After staining, oocytes were extensively washed in 0.2% bovine serum albumin in PBS to prevent them from sticking to surfaces, and mounted on slides in 100% glycerol. Hoechst-stained oocytes were viewed with a conventional epifluorescence microscope and UV illumination, whereas PI-stained oocytes were examined with a confocal microscope and 1022 nm laser line. Chromatin appears as bright spots within the germinal vesicle (nucleus) with both stains. In conclusion, we have established that Hoechst 33342 and PI can be used to image chromatin of canine oocytes. This research was funded in part by a University of Dayton Graduate Student Summer Research Fellowship.

**A Comparison of Lattice and Monopole Steel Towers for Medium-Power Wind Turbine Generators**

*Honors Thesis*

**Undergraduate - Individual**  
**Advisor(s):** Steven L. Donaldson, Patrick J. Fortney  
**Student(s):** Andrew D McMorrow

The rapid growth of wind energy production across the United States demands the design and production of cost efficient wind turbine systems of all sizes. The supporting tower serves a critical role in the wind turbine system and accounts for a significant portion of the initial system cost. While large megawatt generators are typically supported by monopole steel towers and small generators rated less than 100 kilowatts usually rest on lattice steel towers, the appropriate tower type for medium-power wind turbines, rated approximately between 100 and 500 kilowatts, was investigated. Under assumed loading conditions and typical dimensional constraints for a medium-power turbine system, lattice and monopole towers capable of carrying the applied turbine and environmental loads were modeled and analyzed. Due to the variation in thrust among different turbines, tower models were developed for a range of possible thrust loads. For each tower, a cost estimate which included material, fabrication,galvanizing, delivery and construction of both foundation and tower and tower was calculated. Regardless of the thrust load considered, the lattice tower was more cost efficient than the monopole tower subjected to the same loading conditions. Other characteristics which factor into the decision of tower type such as aesthetics, zoning requirements, accessibility, and protection of mechanical and electrical equipment were not considered in this analysis. The results of this project serve as a starting point for turbine owners deciding on tower type, particularly when initial cost is a high priority.

**A Confocal Laser Scanning Microscopy Study of the penetration of Fluorescent Nanospheres through the Canine Zona Pellucida**

*Graduate Research*

**Advisor(s):** Matthew Lunn

Mammalian oocytes are surrounded by an extracellular glycoprotein matrix called the zona pellucida (ZP). Sperm must bind to and penetrate the ZP to fertilize the oocyte. In addition to its role in sperm-egg binding, the ZP may function as a barrier to pathogens even though it may contain pores. ZP structure and composition varies depending on the species. Surprisingly little is known about the ultrastructure of the ZP in companion animals. The objective of this study was to determine whether the canine ZP prevents nanospheres the size of canine viruses from penetration the ZP. Oocytes (n = 184) were isolated from ovaries from 21 dogs aged 6 months to 9 years. Oocytes were exposed to fluorescent nanospheres (24, 100, 210 nm), and confocal microscopy was used to determine how far the nanospheres penetrated the ZP. The 210 nm nanospheres penetrated the entire width of the ZP in only 24.6% of the oocytes (n = 57), whereas the 100 nm and the 24 nm nanospheres penetrated the ZP more often, 41.5% (n = 53 oocytes) and 86.3% (n = 74 oocytes), respectively. In some oocytes, most of the ZP was resistant to penetration, however the nanospheres penetrated the ZP in discrete patches reminiscent of the path of transzonal processes of cumulus cells. Since the ZP inconsistently blocks nanospheres, in vitro fertilization is not a means to consistently produce viable, virus-free offspring from infected dogs and endangered canids. Funded by the AKC Canine Health Foundation.

**Developing Valuation Models for Healthcare and Consumer Staples Sectors: An Econometric Approach**

*Independent Research*

**Advisor(s):** David A. Sauer

The purpose of this study is to develop three stage econometric valuation models for the Healthcare and Consumer Staples Sectors. The models are specified as follows: R=f(GDP), EPS=f(R), Ps=f(EPS) where R=Sector Revenue, GDP=Gross Domestic Product, EPS=Earnings per Share, and Ps=Sector Share Price. Regression equations were developed and forecasts were made for the period 2001-2007, plus the 1st quarter of 2009. The forecasts were compared to actual share prices to determine forecasting accuracy. The results indicate the equations had strong predictive power over time.

**Developing Valuation Models for Industrials and Consumer Discretionary Sectors: An Econometric Approach**

*Independent Research*

**Advisor(s):** Britney E Lewis

The purpose of this study is to develop three econometric valuation models for the Industrials and Consumer Discretionary Sectors. The models are specified as follows: R=f(GDP), EPS=f(R), Ps=f(EPS) where R=Sector Revenue, GDP=Gross Domestic Product, EPS=Earnings per Share, and Ps=Sector Share Price. Regression equations were developed and forecasts were made for the period 2001-2007, plus the 1st quarter of 2009. The forecasts were compared to actual share prices to determine forecasting accuracy. The results indicate the equations had strong predictive power over time.

**Developing valuation models for the Utilities, Telecom, and Information Technology Sectors: An Econometric Approach**

*Independent Research*

**Advisor(s):** Anna C Sorg

The purpose of this study is to develop three econometric valuation models for the Utilities, Telecom, and Information Technology Sectors. The models are specified as follows: R=f(GDP), EPS=f(R), Ps=f(EPS) where R=Sector Revenue, GDP=Gross Domestic Product, EPS=Earnings per Share, and Ps=Sector Share Price. Regression equations were developed and forecasts were made for the period 2001-2007, plus the 1st quarter of 2009. The forecasts were compared to actual share prices to determine forecasting accuracy. The results indicate the equations had strong predictive power over time.
The purpose of this study is to develop three stage econometric valuation models for the Utilities Telecom, and Information Technologies Sectors. The models are specified as follow: \( R_{GDP} = a \times R_{EPS} + b \times R_{PS} + c \times R_{SEP} \). Regression equations were developed and forecasts made for the period 2001-2007, plus the 1st quarter of 2009. The forecasts were compared to actual share prices to determine forecasting accuracy. The results indicate the equations had strong predictive power over time.

The Dividend Discount Model: A Stochastic Approach

Furthermore, if they do work, would optimizing the used parameters over a period of time allow me to earn higher rates? Over the years, people have developed various strategies, categorized as western and eastern, to take advantage of certain situations, such as five or ten minutes intervals and that price follow certain patterns because investors act on emotion and not logic. The formation that the market already knows. Furthermore, the market follows a random walk since information in the future is not available and the range of intrinsic values was produced. The actual stock prices at different points within a given year were compared to the range of intrinsic values. The results suggest that stock prices and intrinsic values converge over time indicating the efficient market hypothesis works but not instantaneously.

Does Body Composition Play a Role in Sub-maximal Oxygen Consumption during Weight Bearing and Non-Weight Bearing Exercise in College-Age Females?

 Advisors: Paul W Eloe, Leonard J Schneck

The purpose of this study is to determine if reliable estimates of the intrinsic value of common stocks can be obtained by systematically varying the key parameters of the Dividend Discount Model. These parameters are (1) the risk free rate, (2) beta, and (3) the expected growth rate in dividends. Three companies were evaluated: (1) Parker Hannifin, (2) Procter and Gamble, and (3) Southern Co. Regression equations were developed for each company with dividends as a function of time. Forecasts of dividends were made for the years 2005-2008. The key parameters of the dividend discount model were varied based on historical patterns and a range of intrinsic values was produced. The actual stock prices at different points within a given year were compared to the range of intrinsic values. The results suggest that stock prices and intrinsic values converge over time indicating the efficient market hypothesis works but not instantaneously.

Earning Money in Day-Trading - Fact or Fiction?

 Advisors: Lloyd L Laubach

In finance, the efficient market hypothesis states that all financial markets are “informational efficient”, meaning the price reflects all known information. Under this hypothesis, it is impossible to consistently outperform the market by using information that the market already knows. Furthermore, the market follows a random walk since information in the future affects the current price randomly. Day-traders ignore this by assuming that the market is not “efficient” in short term, such as five or ten minutes intervals and that price follow certain patterns because investors act on emotion and not logic. Over the years, people have developed various strategies, categorized as western and eastern, to take advantage of certain patterns and behaviors. The objective of this project is to test the effectiveness of these strategies over a period of 10 years. Furthermore, if they do work, would optimizing the used parameters over a period of time allow me to earn higher rates of return in the future?

Environmental Injustice: Global Warming in Low-Income Minority Communities

 Adisor(s): Umesh K Haritashya

The United Church of Christ’s Toxic Wastes and Race at Twenty: 1987-2007 found that 57% of residents within two miles of hazardous waste facilities are minorities (African American, Hispanics/Latinos, and Asians/Pacific Islanders) and that 23% of residents in areas with clustered facilities are in the same category. Forty-four states with hazardous waste facilities have high percentages of minorities in their communities and nine of the ten EPA regions have some form of environmental injustice problem. Considering these facts, our objectives were to assess how global warming negatively affects the water quality of minority and lower class neighborhoods. Our results are based on how the St. James Environmental Justice Resource Center’s 1998 Convent Reports, the United Church of Christ’s Toxic Wastes and Race at Twenty, case studies, water quality reports, and the Environmental Protection Agency’s Toxic Release Inventory show that minorities are likely to suffer disproportionately.

ETHOS Project: Building a Water Distribution System in Boa Bakundu, Cameroon

 Adisor(s): Julius A Amin, Margaret F Pinnell

Three students, Benjamin Simcik, Mark Ewalt, and Brian Baker, will be going to Cameroon to build a water distribution system in the village of Boa Bakundu. Currently, close to 4500 villagers drink water from springs or streams that are either polluted or dry up as some point throughout the year. The main goal of the project is to build a storage tank so that the community will have easy access to clean water year round. In addition, pipes will also be laid for connections to various distribution points throughout the village. Studies have been completed regarding the feasibility of the project in the village. These studies included whether the terrain of the land between the village and the proposed storage tank is suitable to laying pipe as well as if the tank can be built in the expected location. Also, the acceptance and willingness of the locals to help with the project must also be considered because it will not be successful without their support. Students have also researched construction of the tank and pipeline. Cameroon does not have the same quality concrete that is available in the United States, which will offer extra difficulties in building the tank. However, there are certain techniques to seal the edges of the tank and make it watertight so no water is wasted. Over three kilometers of pipe needs to be placed and connected to the system. The three students may not have the time involved as all of the work involved for the full system, but will ensure that the villagers are capable of completing the project on their own and having easy access to clean, safe water.

Evaluating Hope in Adolescents Participating in Outreach Programs

 Adisor(s): Brigitte D Beale

Hope has been shown to be a critical construct within the emerging field of positive psychology. Research has shown that there is a positive relationship between hope level and psychological adjustment. There is also a body of research demonstrating that adolescents living in areas of lower socioeconomic status tend to have lower hope levels and as a result poor ability to adjust to psychological stressors. This study considered the Upward Bound Program as a hope intervention that may increase hope in adolescent students who are considered to be at higher risk to experiencing low hope due to socioeconomic disadvantage. There were a total of 27 participants in the study. Of which, demographic factors were considered for family income, parents highest level of education, marital status of parents, as well as the total number living in the home. This study measured changes in hope levels and healthy psychological adjustment over the period of time spent participating in the Upward Bound program. Both Pearson correlations and a one way ANOVA were performed, revealing a significant correlation between hope and psychological adjustment in the areas of school problems, internalization problems, inattention, externalization problems, and depression.
Evaluating how the private business has changed over recent years.

Independent Research

10:30 AM

Undergraduate - Individual

Kennedy Union Ballroom

Advisor(s): Robert D. Dean, David A Sauer

Student(s): Robert W Green

The purpose of this study is to conduct a comprehensive review of how the private equity business has changed over the past few decades. Additionally, the study will evaluate some of the issues and challenges the industry is currently facing given the economic downturn. The analysis will involve interviewing and researching various private equity fund managers to learn how their respective strategies are used, what they mean, and how they impact the market. Further, by assessing these strategies, the study will aim to learn how private equity brings efficiency and delivers value to shareholders.

Filial Piety in Practice: A Social Justice Living Learning Community Project

Course Project 09_WI_PHL_103_B1

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): Monalisa McCurry Mullins

Student(s): Julie A. Strunk, Madison E. Sullivan

The purpose of our presentation is to relate the service learning of Pet Therapy to the philosophical importance of respect for the elderly. Interacting with the aged members of society, we bring puppies from SICSA animal shelter to a retirement home where we facilitate visits in the rooms of the patients. Much like the high regard ancient Greek society held for the elderly, respecting them for their experience and wisdom, we are able to witness first hand the knowledge that demands such honor and respect.

Finding intrinsic value estimates for companies, industry groups, and sectors in bull and bear markets: the Dividend Discount Model approach

Independent Research

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): David A Sauer

Student(s): Christina L. Council, Melissa A. Janicke, Matthew L. Verryer

The purpose of this study is to find estimates of intrinsic value for companies, industry groups, and sectors. Using the Gordon Dividend Discount Model, and three different forecasting methods (regression analysis, geometric growth rates, and dividend payout ratios), estimates of intrinsic value were determined for General Electric, Emerson Electric, the Electrical Equipment industry, and the Industrials sector for the years 2005-2007 (the bull market), and also for 2008-2009 (the bear market). The results indicate for this subset of companies, industry groups, and sectors, that relative undervaluation persisted throughout the years.

Forecasting Price Per Share for S & P 500 Sectors using relative valuation methods

Independent Research

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): David A Sauer

Student(s): Robert W Green, Stephen C. Scheuble, Michael F Witt

The purpose of this study is to determine the forecasting accuracy of Price to Earnings (P/E) and Price to Sales (P/S) multiples for the consumer staples, consumer discretionary and industrials sectors. Forecasts of year ahead sales and earnings are used to estimate year ahead share prices. The forecasting periods are the years 2004-2008 plus the first quarter of 2009. The forecasted share prices are then compared to actual end-of-year share prices to determine the percent forecasting error. The results indicate that price to multiples provide reliable year-ahead forecasts for the above sectors. The size of the forecasting error appears to be a function of the stability of the P/E and P/S ratios over time.

Friendship, Leadership, Service: Social Justice Living Learning Community Project

Course Project 09_WI_PHL_103_B2

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): Monalisa McCurry Mullins

Student(s): Emily A. Duffy, Kelsey M. Dworkin, Michael A. Hauschild

Through Alpha Phi Omega’s three principles of friendship, leadership, and service, we have learned much more than the benefits of helping others. We have made friends and taken leadership roles, and we are sharing our gifts, talents, and knowledge to create a better world. Like Socrates, who lived his life sharing his knowledge and talents to help others, we too are striving to make a positive difference in peoples lives. Through our various service experiences in the local community, we have served dinner at a soup kitchen, spent time with the mentally handicapped, and helped children make artwork. Just as importantly, we have made lasting friendships in our journey to help others.

Future 10 Year Career Projection of Health and Sport Science Majors: Dietetics, Exercise Science, and Sport Management

Course Project 08_WI_HSS_226_01

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): Marvin D Ganote

Student(s): Scott M. McAdams, Alexandra C. Olivo, Amanda J. Paul, Karen A. Ryan

Our goal is to analyze the career paths of our different majors and project the future in 10 years. Three different majors in the Health and Sport Science Department will be represented in our display: Dietetics, Exercise Science, and Sport Management. This scholarly research project will elaborate on our future positions out of college.

Future Job Projections: Occupational therapist, Physical Therapist, Athletic Director

Course Project 08_WI_HSS_226_01

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): Marvin D Ganote

Student(s): Andrew R. Bogner, Carolyn A. Brademeyer, Shaelyn E. Burns, Emily E. Gilb, Brittany M. Hughbanks, Emily A. K Zones

Each group member will present research on our future careers.

The Future of Careers as Dietitians and Physician Assistants in Ten Years

Course Project 09_WI_HSS_226_02

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): Marvin D Ganote

Student(s): Amy K. Austin, Erin L. Flanagan, Julia L. Pohlman, Christine M Verst

This presentation will explore careers as Dietitians and Physician Assistants ten years from now. Aspects of the careers such as job description, salary, and technology will be presented.

The Future of Health and Sport Science Careers in 10 Years

Course Project 09_WI_HSS_226_01

10:30 AM

Undergraduate - Group

Kennedy Union Ballroom

Advisor(s): Marvin D Ganote

Student(s): Rachel C. Hoying, Aundrea L. Lindsey, Catherine A. Looby, Kaitlyn D. Paxton, Alison R. Roell

Research was conducted to make a projection of the significant factors that will shape the future of Health and Sport Science careers in the next ten years. Three major elements of these careers were studied. The nature, content, and scope of such careers in the future were determined.
element were looked at in detail to include how one significant technology with its pros and cons would have impact in the future.

The Future of the Field of Physical Therapy
Course Project 09_WI_HSS_226_01
10:30 AM
Undergraduate - Group
Kennedy Union Ballroom
Advisor(s): Marvin D Ganote
Student(s): Patricia A. Lehman, Ashley A. Miller, Jillian K. Walter

Like many careers in the health field, physical therapy is continuing to grow and advance. This field is providing more and more opportunities for those interested in pursuing this career. First of all, there are many different areas of physical therapy for one to choose between. These different areas include orthopedic, geriatric, pediatric, acute, neurological, and cardiovascular rehabilitation. Having all these different areas allows for one to choose a specific interest, while always having the opportunity the change. Also, in this new age of health consciousness, many people are taking the path of physical therapy to rehabilitate instead of taking medications. So, there is even more of a need for physical therapists. This field is advancing in terms of technology as well. NASA has used technology used for mechanical isolation of sounding rockets to create a Secure Ambulation Mode walker to aid in the rehabilitation of soldiers with spinal cord injuries. The next ten years will see much growth and advancement in the career of physical therapy.

Future Projection of Dietetics and Physical Education careers beyond 2011
Course Project 08_FA_HSS_341_01
10:30 AM
Undergraduate - Group
Kennedy Union Ballroom
Advisor(s): Marvin D Ganote
Student(s): Alexandra E. Doyle, Emily R. Nolan, Sarah E. Russell, Stephanie L. Wiggton

This project is a group project that is based on careers in the Health and Sport Science Department at the University of Dayton. Specifically, dietetic and physical education jobs are described. With obesity becoming an overwhelming epidemic in the United States, careers targeted towards the health of individuals is expected to increase significantly throughout the next decade. According to the Health and Sport Science Department website, the profession of Dietetics focuses on food consumption and how one’s diet can affect one’s health throughout his/her life. Exercise Physiology focuses on one’s body responds and adapts to exercise including interaction with diet, body composition, environment, training, and certain disease conditions. Physical Education is an essential part of a child’s early life and values taught in physical education courses should stick with one throughout his/her life. Dietetics, Exercise Physiology and Physical Education are three majors in which students learn the science behind diet and exercise. This project will focus on how future technology will affect these three jobs.

Galicia, Spain
Course Project 08_FA_SPN_341_01
10:30 AM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Maria Teresa Tello Sanchez
Student(s): Christopher J. Lemon

This small display and powerpoint (English and Spanish available) provides general information on Galicia, a province or “co-munidad autonoma” in northwestern Spain. The presentation gives an overview of the region’s geography, language, history, and culture with accompanying images.

Guardian Muon Drift Tube Detector
Graduate Research
10:30 AM
Kennedy Union Ballroom
Advisor(s): John G Weber
Student(s): Eduardo A Arroyo, Andres A. Calvo, Ronald A. Zesurat,

This poster is focused on aspects of a Health Monitoring System for a nuclear material detection system powered by Muon Drift Tube arrays. This technology was developed with the purpose of providing a safer, more effective volume imaging technique to detect threat material. By using an array of these tubes to enclose a scan area one would be able to detect the entrance and exit vectors of the muons going across in order to generate an accurate 3-D representation of the matter where colors would denote density levels (correlating to a material’s nuclear number). Each of these tubes on the detector array have a tungsten wire going across its center and are filled with a mixture of gases that are designed to be sensitive to the path of muons in a high voltage environment. The small pulse generated by the cascading electrons would then go through electronics where it will be amplified, time tagged and sent to a computer system for 3-D image generation.

The relevance of the research subject comes from the fact that the performance of these detectors is very sensitive to variations in both physical and environmental conditions in terms of accuracy and consistency in operation. These variables include but are not limited to conditions such as temperature, pressure, humidity, gas composition/magnetic field, wire gravitational effects and other factors that come from detector aging. As a result of these constraints, it is essential to understand the behavior of the detector when affected by these conditions. Through research and experimentation one can generate enough data to not only analyze detector performance under these variables but also possibly develop a control system that could adjust the electronics to achieve more consistent results.

Nuclear terrorism ranks high on the top threats to humanity in the next century. Muon tomography technology represents a leap in a field of ever increasing importance since not only it presents a safer scanning technique, but also allows one to detect threat material hidden in dense containers made out of material such as lead. Any terrorist organization that has the technology to represent a nuclear threat in the future will ultimately also have the resources to develop better ways to hide their material from detection. This technology when implemented right, could ultimately help upset those efforts. With such an important duty in its shoulders and millions of dollars ultimately spent to implement the technology, it is essential to guarantee the lowest percentage of detector error regardless of variation in the conditions.

Gender Differences in Self-Affirmation When Anticipating Performance Impairment
Graduate Research
10:30 AM
Graduate - Group
Kennedy Union Ballroom
Advisor(s): David W Biers, Charles E Kimble
Student(s): Susan F. Folger, Luke J. Hampel, Timothy J. Hawk, Lauren M. Koehler, Sunwoo Park, Angela R. Stark, Allison J. Welden

Self-handicapping occurs when people are uncertain about how they will perform on an important task, so they create an excuse for poor performance. For example, drinking heavily the night before an exam may become a person’s excuse for poor performance on the test. Previous research on self-handicapping has found that, in general, males are more likely to self-handicap than females (Hart, McCrae, & Kimble, 2000). One way to prevent self-handicapping is to give people a chance to be reminded of or reflect on their own positive values (Kimble, Dietrich, Couchey, & Wittenberg, 2007), which is defined as self-affirmation. After affirming their positive values, people face problems directly rather than retreating disadvantages for themselves and excuses for poor behavior. This study aimed to test this logic backwards. In other words, we examined the extent to which people self-affirm when they expect impairment to their performance (or when given a chance to make excuses for poor performance), with a focus on gender differences. Participants were told that they would take either a simple word test or an integration-orientation test which predicts success from interpersonal relationships. Also, some participants were told that they would listen to a performance impairing sound while taking the test, and some were not told this. Before taking the test, participants were asked to write an essay about an important value. The number of first person pronouns and the extent to which the essay was personal were used as the dependent measures, which indicated the degree of self-affirmation. The results show that females were more likely than males to self-affirm when they thought they would take an important test, regardless of presence of sound. This implies that females try to perform their best on an important task rather than depend on possible excuses for poor performance.

Grading Adaptations: Helpful or Hurtful?
Course Project 09_WI_EDT_110_H1
10:30 AM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Patricia M Hart

This poster is focused on aspects of a Health Monitoring System for a nuclear material detection system powered by Muon Drift Tube arrays. This technology was developed with the purpose of providing a safer, more effective volume imaging technique to detect threat material. By using an array of these tubes to enclose a scan area one would be able to detect the entrance and exit vectors of the muons going across in order to generate an accurate 3-D representation of the matter where colors would denote density levels (correlating to a material’s nuclear number). Each of the tubes on the detector array have a tungsten wire going across its center and are filled with a mixture of gases that are designed to be sensitive to the path of muons in a high voltage environment. The small pulse generated by the cascading electrons would then go through electronics where it will be amplified, time tagged and sent to a computer system for 3-D image generation.
In today's society, over 80% of schools utilize letter grades as the means of evaluating a student's progress and achievement. This system is clearly heavily implemented into our society and often left unquestioned. However, due to the letter grading scale, 70% of students with learning disabilities are receiving below a C- grade, while putting forth the same amount of effort as mainstream students, which is greatly affecting their futures. This has raised the issue of the use of grading adaptations in order to resolve this flaw within the world of education. Grading adaptations acknowledge the uniqueness of each student, and encourage the will to learn in each child despite his or her learning disability.

**Helping Children to Find Their Inner Wisdom: A Social Justice Living Learning Community Project**

Course Project 09_WI_PHL_103_B3
Undergraduate - Group
Advisor(s): Monalisa McCurry Mullins
Student(s): Deven N. Deal, Radiance A. Lunsford, Natasha N. Niemiller, Andrea N. Paxson

We have been tutoring children in Dayton's Public Schools this semester. We are working with special needs students at the elementary and middle school levels. This type of service is connected to philosophy and Plato's Republic. Plato advised that those who have left the cave need to return and help those still in need of enlightenment. This semester we have reentered the Cave in an effort to help the children in Dayton's Public schools become wiser in their lives.

**A Helping Hand to Stop Violence: A Social Justice Living Learning Community Project**

Course Project 09_WI_PHL_103_B1
Undergraduate - Individual
Advisor(s): Monalisa McCurry Mullins
Student(s): James P. Fritchman

Through tutoring at Cleveland Elementary School, I have taken on an active role to nurture and protect children in our community. My hope is that by serving as a role model for these students, I am helping them to step out of Plato's “cave” and see the world's true form through learning. With one on one tutoring, these children will not only improve their basic skills, but they will also gain someone who believes in them unconditionally. I hope to demonstrate the correlation between one on one tutoring and improved conflict resolution for children.

**Helping Hands: A Social Justice Living Learning Community Project**

Course Project 09_WI_PHL_103_B1
Undergraduate - Group
Advisor(s): Monalisa McCurry Mullins
Student(s): Andrew J. Hammes, Christopher J. Lucke, Gregory M. Williams

It is only through working with St. Vincent De Paul Society that we truly learned what it means to help fallen friends and get them on their way. Often in life we search aimlessly to achieve something great, but we never know what we want to achieve. The people of St. Vincent De Paul Society have chosen the simplest tasks of helping someone truly in need, and just being there to offer support and encouragement. Their actions have shown us that greatness can be achieved everyday just by volunteering to help those in need. Through our service learning experience at St. Vincent De Paul Society, we have learned that a small role is still a great achievement, and that it makes a world of difference to those in our community who help out those in need.

**HSS Career Fields and Their Future**

Course Project 08_FA_HSS_226_02
Undergraduate - Group
Advisor(s): Marvin D Ganote

Our poster presents research about the future of each of our career fields within the Health and Sport Science Department.

**Importance of Incorporating Media Literacy in the Classroom**

Course Project 09_WI_EDT_110_H1
Undergraduate - Group
Advisor(s): Patricia M Hart
Student(s): Samantha E. Buckner

Media literacy is the knowledge and confident ability to utilize electronic and technological communication tools effectively in work, school, or social environments. This skill has become a necessity for people applying for jobs. On resumes and applications it requests applicants to list their computer skills, such as Microsoft Word, Excel, and PowerPoint. Because of the dire importance of this ability, teachers need to implement as much media into their classrooms as possible. Due to the rapid development of technology being incorporated into our society, it is essential for students to be fostered in a classroom environment that promotes media literacy. Media can be incorporated into any classroom despite the license area or concentration. It can be especially utilized in Adolescent to Young Adult Social Studies classrooms through documentaries, movies, and video projects. However, the challenges of creating media literate students are the funding of schools, literacy of the faculty, and quality of equipment. Despite these factors, it is extremely important to the future success of students to be taught in an environment that promotes media literacy.

**The Importance of Music Education in Sparking the Intrinsic Desire to Learn**

Course Project 09_WI_EDT_110_H1
Undergraduate - Individual
Advisor(s): Kristin A. Mullen-Muhr
Student(s): Deven N. Deal, Radiance A. Lunsford, Natasha N. Niemiller, Andrea N. Paxson

Music education. Based on the implications of Howard Gardner's theory of multiple intelligences, it is crucial that educators today educate all of the intelligences, not only the mathematical and linguistic intelligences. As a result of educating musical intelligence, students gain a number of social and academic benefits which aid in establishing an intrinsic motivation. Some include increased self-confidence, interpersonal skills, self-motivation, family investment in education, and increased standardized test scores.

**Interdisciplinary Methods with Science and Mathematics**

Course Project 09_WI_EDT_110_H1
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Danielle M. Bott

Using the research of teachers implementing such programs, the researcher discovered several ways to connect multiple levels of mathematics and science. From Algebra to Calculus and Biology to Physics, many mathematical concepts can be better understood by using scientific applications. Furthermore, the combination of these subjects gives students concrete examples from science that they learned abstractly in their math classes. This way the usual common-asked question, “When am I ever going to use this?” is given an answer that students can see and accept. While the license of teachers that believe that integration is the best way to teach specific concepts, it is important to choose which can be taught more effectively together and which should still be taught separately. Moreover, many of these teachers or researchers have found that students are more likely to demonstrate a thirst for knowledge that at times is often lacking if they are interested in the subject they are learning. Some students like mathematics and do not like science, and vice versa, but by integrating the subjects, students are often unconscious of which subject they are doing at any given time, so they do not feel a dislike for what they are learning.
It's A Dog Eat Dog World: A Social Justice Living Learning Community Project  
Course Project 09_WI_PHL_103_B3  
Undergraduate - Group  
Advisor(s): Monalis McCurry Mullins, Chad D. Androulison  
Student(s): Chad D. Androulison, James M. Baas, Aaron P. Berry, David C. Faber, Jarred J. Huey

Volunteering at the Humane Society is very beneficial in many different aspects. By working with animals that have been abused or abandoned, one can gain a better respect for all of God's creations. Through our experience with these animals at the Humane Society, we have developed a clearer understanding of our human obligation to care for all of God's creatures.

La Proxima Generacion de Patterson Kennedy: A Social Justice Living Learning Community Project  
Course Project 09_WI_PHL_103_B2  
Undergraduate - Group  
Advisor(s): Monalis McCurry Mullins  
Student(s): Andrew L. Bouquet, Michelle M. Brousseau, Jorge J. Lopez

There are many children in the Dayton public school system that need extra help and support in the classroom to feel more comfortable. At Patterson Kennedy Elementary School, we have served as volunteer tutors for Spanish-speaking and hearing-impaired children. We help the children with their school work, talk to them, play with them, protect them, and just try to show them that someone cares. Since we have all had great opportunities for education and a lot of help along the way, we feel it is our responsibility to return and give back some of what we have learned. Like the person in Plato's Cave parable who left the cave and saw the light, we too have gained considerable knowledge through our interaction with these young children.

Learning through Experience: A Social Justice Living Learning Community Project  
Course Project 09_WI_PHL_103_B2  
Undergraduate - Individual  
Advisor(s): Monalis McCurry Mullins  
Student(s): Joshua D. Moran

After experiencing the loss of a close friend in a car wreck, my life began to change. A few months went by and I, myself, was involved in a car accident, yet another self-realization moment. Being a resident of Butler County, the court sent me to 4-H Cartoons: a teens-teaching-teens safer driving habits program. Cartoons was an organization that enlightened me and my driving awareness. Like Plato's "Cave" metaphor I was brought into the light, and by joining Cartoons I could go back in the cave and bestow my acquired experience, enlightenment, and knowledge to those still in the dark.

Lego Robotics Program, Kiser Elementary PK-8  
Course Project MEE-499  
Undergraduate - Group  
Advisor(s): Margaret F. Pinell  
Student(s): Kathryn E. Gray, Marielle C. Spangler, Abigail R. Vaughn, Michelle L. Whelan

Students in the School of Engineering organized and facilitated the Kiser Elementary PK-8 Lego Robotics program during the University of Dayton's winter semester 2009. The program, developed in 2008, is a service-learning based 3-credit hour class in which students prepare lessons and challenges for 7th and 8th grade students to complete using LEGO MIND-STORM kits and software. Students of the "School of Engineering" also prepared, in conjunction with various professional, social, and service groups at UD, a five-day engineering camp for Kiser students. The purpose of the camp was to inspire interest in S.T.E.M. fields and for Kiser students to develop basic engineering knowledge in a fun environment.

Lock Them Up And Throw Away The Key? A Social Justice Living Learning Community Project  
Course Project 09_WI_PHL_103_B1  
Undergraduate - Group  
Advisor(s): Monalis McCurry Mullins  
Student(s): Adam B. Bozeman, Annamarie G. Filippo

When reviewing our criminal justice system it is necessary to consider the implications for prisoners sitting in jail as well as everyone that they have affected. This presentation will help to show the benefits and necessity of half-way houses in order for prisoners to break their cycle of crime. We have learned that negative environments have a major impact on their decisions and choices, and that the system in which prisoners are tried and convicted is not perfect. By suspending our negative judgment and prejudices, we may come to see the humanity of these prisoners, and recognize their potential to become productive citizens. We believe that the best solution to help facilitate their re-entry into society is with half-way houses. Thus is it ultimately up to us to help these people become valued members of our shared community.

A Look into the Future at the Dietetics and Physical Therapy Professions.  
Course Project 08_WI_HSS_226_01  
Undergraduate - Group  
Advisor(s): Patricia E Dolan, Marvin D. Ganoite, Paul M Vnderbergh  
Student(s): Jacqueline A. Adams, Julia A. Adams, Alyssa L. Buckingham, John P. McCulloch, Sarah E. Picklo

Five group members will be presenting information based on their specific major. Dietetics and Physical Therapy are the two majors researched for this particular project. The research will include specific outlooks of the major in the next ten years. The presentation will consist of a poster and a brochure created by each student individually. The students will share the findings of their research in their presentation. The students look forward to sharing with you their knowledge of their specific major.

Macroinvertebrate Community Response to Water Diversion in Torridal, Tropical Habitats  
Graduate Research  
Advisor(s): Mark E Benbow, Albert J. Burky  
Student(s): Megan E Shoda

A legacy of water diversion exists in Hawaii, where water originally used to support native population needs has been co-opted for development, agriculture and tourism. This change in water usage has resulted in up to 97% of freshwater being diverted from natural stream flow in some Hawaiian streams. This study assesses the impact of reduced flow from water diversion on cascade habitats of four Maui streams: Waikapu, Iao, Waihe‘e and Waiehu. Cascade habitats are characterized by shallow, torrential flow and support several endemic insect species. In July 2007 and May 2008, six cascades were sampled upstream and downstream of the first water diversion from the four streams; collections were made from a benthic, an im-
phibian and aerial microhabitat in addition to riparian locations. For 2008 there was lower total invertebrate abundance in
downstream sites and an alteration in community structure associated with each sampling zone. Benthic macroinvertebrate
density decreased significantly from upstream to downstream in Waikapu River (t = 2.472; df = 10; p = 0.0330), with a
similar pattern found for Waikapu Stream amphipod communities (t = 2.06; df = 10; p = 0.0526). Although not significant,
there was 75% and 19% decrease in downstream amphipod and benthic communities, respectively, in Waikapu River and a
29% decrease in downstream benthic communities of Waikapu Stream. These data provide a better understanding of
endemic insect community structure changes in cascade habitats which are often neglected when assessing the overall
effects of water withdrawal on stream ecosystems of Hawaii and other tropical archipelagoes.

Males in Early Childhood Education: Obstacles and Benefits in Having a Male Teacher
Course Project 09_WI_EDU_110_HI 10:30 AM
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Cory E. McClain

The teaching profession of young children has typically associated with the care and nurturing of those same children.
Through different ideologies and several historical examples, female teachers have been the expected care-giver for both
their own children and the pupils they have in class. However the gender of the teacher is, for the most part, irrelevant to
the development of most children (Drudy, 2008; Rodriguez, 1997). This raises an issue of why men do not consider teaching
in an early childhood setting. Men in primary teaching positions have faced many hardships due to stereotypes and negative
media influences. Many of the stereotypes and negative media influences are no less qualified to teach than women (Weist, Olive, & Oberschmidt, 2003). Farquhar, 1997). A direct result of these stereotypes is a female-dominated profession; ninety-seven to ninety-eight percent of educators for grades K-2 are women (Drudy, 2008; Weist et al., 2003). The desired goal should be that an even number of men and women teach in an early childhood classroom, not only because it will bring diversity to the students in their educational experience, but also because the males that would be good candidates for teaching are not encouraged to teach, which deprives students
of a good educator.

A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project
Course Project 09_WI_PHL_103_B3 10:30 AM
Undergraduate - Group
Advisor(s): Monalisa McCurry Mullins
Student(s): Bryce J. Hueltsman, Isaac G. Niekkamp, Louis H. Sitler

Our presentation of our service project, Wheels For Kids, will describe how we as engineers used our knowledge and
resources at the mechanical engineering building to reconstruct broken bikes and give them to children who cannot afford
them. By rebuilding these bikes and giving them to children who don’t have the opportunities to buy their own, we are em-
bracing Socrate’s mission to help the young people in our community. We wish to share with these children the joys of hav-
ing their own bicycle to ride in their neighborhood, and to promote a stronger sense of community with their neighbors.

Music Education for Underprivileged Youths: Trends, Challenges, and a Lifetime of Benefits
Honors Thesis 10:30 AM
Undergraduate - Individual
Advisor(s): Linda A Hartley
Student(s): Heather C Goertemiller

Although music education arguably has a positive impact on any student, its effects are poignantly felt on the lives of under-
privileged youths. Utilizing a compilation of scholarly research, individual teacher interviews, and personal experiences, this
thesis dictates how music instruction uniquely and deeply impacts underserved students of both urban America and devel-
oping countries. Specific examples of the Dayton Public Schools and the Jamaican Schools are the focus of the research, with
personal accounts and results of the respective music education programs I participated in for each setting. The written por-
tion of the thesis observes the means by which music, whether obtained through school courses or alternative programs,
enhances learning and life for children beyond their struggling socioeconomic setting and how and why society must help to
ensure future growing success of such opportunities. The project also includes an accompanying video documentary entitled
“Jamaica: Land We Love,” which depicts coursework and experiences offered by the JAFSP as well as the positive impact the
program has not only on the Jamaican students but all parties involved. Both materials reach the same overall conclusion:
students and teachers alike for there was a correlation between mental toughness and GPA. The correlations were too decreased if mental toughness is a factor of success.

Methods for modeling and remediating contaminat-
ed groundwater: an analysis of southern California
Course Project 09_WI_GEO_308_01 10:30 AM
Undergraduate - Group
Advisor(s): Umesh K Haritashya
Student(s): Megan I Pike, Barbara G Schnurr, John M Shiner

Groundwater is a vital resource needed to sustain life. When groundwater is contaminated it can have many harmful results,
therefore, our objective is to analyze various methods used for modeling and remediating contaminated ground water. Two
correlated methods that are studied in detail in this analysis are the city of Santa Monica and San Gabriel Valley, both located
in the Southern California. Santa Monica is contaminated with MTBE which is a gasoline additive that has been linked to
cancer; San Gabriel Valley is a superfund site contaminated with perchlorate which is a component to rocket fuel and has been linked
to cancer. The processes currently being used to clean up these areas are pump and treat methods. Alternative methods and
models to treat groundwater contamination are soil vapor extraction, air sparging, and bioremediation. This analysis compares the current methods being used at two sites with alternative methods that could be used at the sites in the future to gain an understanding of what methods work the best for a certain type of contamination.

Moving the Young: A Social Justice Living Learning Community Project
Course Project 09_WI_PHL_103_B3 10:30 AM
Undergraduate - Group
Advisor(s): Monalisa McCurry Mullins
Student(s): Linda A Hartley
Student(s): Heather C Goertemiller

We wish to share with these children the joys of hav-
ing their own bicycle to ride in their neighborhood, and to promote a stronger sense of community with their neighbors.

Music Education for Underprivileged Youths: Trends, Challenges, and a Lifetime of Benefits
Honors Thesis 10:30 AM
Undergraduate - Individual
Advisor(s): Linda A Hartley
Student(s): Heather C Goertemiller

Although music education arguably has a positive impact on any student, its effects are poignantly felt on the lives of under-
privileged youths. Utilizing a compilation of scholarly research, individual teacher interviews, and personal experiences, this
thesis dictates how music instruction uniquely and deeply impacts underserved students of both urban America and devel-
oping countries. Specific examples of the Dayton Public Schools and the Jamaican Schools are the focus of the research, with
personal accounts and results of the respective music education programs I participated in for each setting. The written por-
tion of the thesis observes the means by which music, whether obtained through school courses or alternative programs,
enhances learning and life for children beyond their struggling socioeconomic setting and how and why society must help to
ensure future growing success of such opportunities. The project also includes an accompanying video documentary entitled
“Jamaica: Land We Love,” which depicts coursework and experiences offered by the JAFSP as well as the positive impact the
program has not only on the Jamaican students but all parties involved. Both materials reach the same overall conclusion:
students and teachers alike for there was a correlation between mental toughness and GPA. The correlations were too decreased if mental toughness is a factor of success.

Methods for modeling and remediating contaminat-
ed groundwater: an analysis of southern California
Course Project 09_WI_GEO_308_01 10:30 AM
Undergraduate - Group
Advisor(s): Umesh K Haritashya
Student(s): Megan I Pike, Barbara G Schnurr, John M Shiner

Groundwater is a vital resource needed to sustain life. When groundwater is contaminated it can have many harmful results,
therefore, our objective is to analyze various methods used for modeling and remediating contaminated ground water. Two
correlated methods that are studied in detail in this analysis are the city of Santa Monica and San Gabriel Valley, both located
in the Southern California. Santa Monica is contaminated with MTBE which is a gasoline additive that has been linked to
cancer; San Gabriel Valley is a superfund site contaminated with perchlorate which is a component to rocket fuel and has been linked
to cancer. The processes currently being used to clean up these areas are pump and treat methods. Alternative methods and
models to treat groundwater contamination are soil vapor extraction, air sparging, and bioremediation. This analysis compares the current methods being used at two sites with alternative methods that could be used at the sites in the future to gain an understanding of what methods work the best for a certain type of contamination.

Moving the Young: A Social Justice Living Learning Community Project
Course Project 09_WI_PHL_103_B3 10:30 AM
Undergraduate - Group
Advisor(s): Monalisa McCurry Mullins
Student(s): Linda A Hartley
Student(s): Heather C Goertemiller

Although music education arguably has a positive impact on any student, its effects are poignantly felt on the lives of under-
privileged youths. Utilizing a compilation of scholarly research, individual teacher interviews, and personal experiences, this
thesis dictates how music instruction uniquely and deeply impacts underserved students of both urban America and devel-
oping countries. Specific examples of the Dayton Public Schools and the Jamaican Schools are the focus of the research, with
personal accounts and results of the respective music education programs I participated in for each setting. The written por-
tion of the thesis observes the means by which music, whether obtained through school courses or alternative programs,
enhances learning and life for children beyond their struggling socioeconomic setting and how and why society must help to
ensure future growing success of such opportunities. The project also includes an accompanying video documentary entitled
“Jamaica: Land We Love,” which depicts coursework and experiences offered by the JAFSP as well as the positive impact the
program has not only on the Jamaican students but all parties involved. Both materials reach the same overall conclusion:
students and teachers alike for there was a correlation between mental toughness and GPA. The correlations were too decreased if mental toughness is a factor of success.
My Career in Ten Years as a Dietitian, Physical Therapist, Physician's Assistant and College Athletic Director
Course Project 09_WI_HSS_226_02
Undergraduate - Group
Advisor(s): Lloyd L Laubach
Student(s): Robin W. Darr, Sarah C. Edwards, Lisa C. Klenk, Kelsey S. Williams

We will research what the future will be like ten years from now including a major impacting technology for the job each individual group member hopes to have after graduation. We will select and elaborate on three major elements [tasks] functions] of each job. Our group will project into ten years the nature, content, and scope of each element and relate how technology will change the job and career field in ten years. The discussion will include one significant technology with its pluses and downs as well as ten year impacts on any of the selected job elements.

A New Jersey State of Mind: A Social Justice Learning Community Project
Course Project 09_WI_PHL_103_B2
Undergraduate - Individual
Advisor(s): Monalisa McCurry Mullins
Student(s): Sean M. Wilson

How do we treat those who are least among us, who are the poor and vulnerable? During this project, that very concept was taken into consideration by a group of UD college students. We went to the poorest of the poor in Trenton, New Jersey to see how the people there live, and to aid them in any means possible. We helped the people by doing manual labor, tutoring, and the upkeep of the Martin House. We found that there are many people in dire need of any help that they can receive, and we learned that we are all interdependent parts of a nationwide and global community. As Aristotle suggested, we are social beings by nature, and we need to understand how interwoven our lives are. This project helped to make that lesson very clear for all of the UD participants.

The Other Place is Their Place: Social Justice Living Learning Community Project
Course Project 09_WI_PHL_103_B1
Undergraduate - Group
Advisor(s): Monalisa McCurry Mullins
Student(s): Amy L. Benchek, Danielle M. Glaser, Jennifer M. Hurtubise, Lauren O. Papp, Kerri L. Roper

At The Other Place, we have helped serve marginalized local citizens in a place they call home. Socrates said to fulfill our life purpose, we must "attend to our souls" and follow our calling. As children of God, we feel the calling to help those less fortunate than us. At The Other Place, we have met many new people and have assisted the staff in every way we could. Through this service, we have learned not only about the people we helped, but we also learned a great deal about ourselves.

Overcoming Standardization
Course Project 09_WI_EDT_110_H1
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Stephanie L Pugar

A common question among educators today involves how to truly teach students quality material while also ensuring that they pass the expected standardized tests. While this is a challenging focus, integrating students with special needs into the education, one may come to more fully grasp, understand, and work to implement improvements in the education of students with special needs for standardized tests.

Overconfidence in Exercise Goals
Honors Thesis
Undergraduate - Individual
Advisor(s): Susan T Davis
Student(s): Caitlin M Garvey

In this psychological study, I am looking at the relationship between overconfidence and accomplishing exercise goals. Past research has shown that people tend to be overconfident in their perceived ability to achieve goals they have set. For this Honors Thesis, participants described their personal goal for a weight lifting or conditioning course in which they are enrolled at The University of Dayton. They set this goal at the beginning of the course. Participants also completed a confidence inventory, in which they rated how confident they are in their perceived ability to meet that goal, among other goals related to health. The study lasted approximately 12 weeks over two different semesters, during which time the participants attempted to achieve their goal. At the end of the course, I asked the participants if they had reached their personal goal for the course and, if so, how they did it. They did not achieve their goal, they were to explain what they could have done better to do so. In the final assessment, participants indicated how much prior training they had before the course. They also were asked to rate their knowledge in their ability to complete a similar goal if they were to take the course again. In addition, depression, need for achievement, and self efficacy inventories were given to the participants at the beginning of the course and again at the end of the course. Past research has shown that exercise affects mood; in addition, people who are more depressed tend to be more realistic in setting goals. The present results indicated that only 11% of the participants were calibrated, meaning goal achievement matched confidence level. Those who were overconfident (29%) were significantly so, and those who were under-confident (4%) were also significantly so.

Photodegradation of Beta-Carotene in Chloromethane Solvents and Characterization of Photoproducts
Course Project 09_WI_CHM_499_P3
Undergraduate - Individual
Advisor(s): Mark B Masthay
Student(s): Aaron E Beach

Beta-carotene, a highly conjugated molecule from the carotenoid family, is an important biological molecule with photochemical processes associated with it. The experiments performed focused on the photolysis of purified beta-carotene dissolved in carbon tetrachloride solutions, and the characterization of the photoproducts from solutions exposed to air or degassed with a stream of argon gas. This photolysis leads to the solution changing from a bright orange to a colorless solution, indicating photochemical reactivity. Spectrophotometric characterization of the photoproducts allows visualization above a UV-Visible cutoff of 310 nm because of the CC4 absorption properties. To enhance the characterization, the solvent was evaporated with a stream of N2 and then the remaining solid was redissolved in hexane, a solvent transparent in the UV-Visible spectrum below 310 nm, and thus more suitable to see the photoproducts of beta-carotene. In hexane, the photoproducts show a distinct narrow absorption band centered at 210 nm in both air exposed and degassed samples, with deoxygenated samples also showing additional broad absorption bands extending to 310 nm. Gravimetric analysis of a similar UV-induced product after removing the solvent suggests a significant increase in molecular weight, indicating the production of degraded beta-carotene species having undergone addition most likely of CI and CC3I originating from the solvent. Characterization of photoproducts should help reveal mechanistic details of beta-carotene and other similar conjugated molecules photoactivity to pulsed laser light under conditions similar to those used in photodynamic therapy.
Our project is on the career outlook for students studying to become Physical Therapists, for our Health and Sport Science Computer Applications class. We will look at the individual outlooks for our specific fields within Physical Therapy and different opportunities we have when we graduate with a degree in Pre Physical Therapy.

Physiological Study of ADHD Drugs for Enhanced Academic Achievement and Prevalence on UD’s Campus
Course Project 09_WI_BIO_403_01 10:30 AM
Undergraduate - Individual
Advisor(s): Carissa M Krane
Student(s): Kristen M. Rock, Elizabeth R. Trenn, Justin M. Ericson

Any given day we see countless numbers of faces on television, in person, or in a magazine. Some of these faces we find more pleasing to look at than others. Previous research suggests that people prefer faces that are symmetrical rather than those that are not. In addition, attractiveness is perceived very quickly (Olsson & Marshuetz, 2005). Based on these findings, the present study hypothesized that participants would find symmetrical faces more pleasing even when given a limited amount of time to view them. Participants were assigned randomly to one of three conditions timed for the rate of presentation of each of a set of stimulus faces: 100ms, 300ms, or 500ms. A control condition with no time restrictions was also used. Employing a computer, researchers presented two concurrent photographic versions of a single stimulus face to the participants. Sixteen unique faces were used for the stimuli. Each face had three different versions: the original photograph of the face, the right side of the face mirror-imaged, and the left side of the face mirror-imaged; each of the last two versions produced with computer software. Every possible combination of the three versions of a unique face was presented to the participants. For each pair, the participants chose which version was the most pleasing. Analysis of the data indicates that, using this method for measuring aesthetic preferences (a) original faces were judged to be more pleasing than the mirror-imaged faces; (b) particularly when given an unlimited amount of time to make the decision; and (b) there was a slight advantage in preference for the left-mirrored face in comparison with the right-mirrored face, again when more time (500 milliseconds) was allowed to make the decision.

The Power to Heal: Stem Cells, the Church, and the UD Community
Course Project 09_WI_REL_367_X1 10:30 AM
Undergraduate - Group
Advisor(s): Nikki Coffey Tousley
Student(s): Bradley V. Clark, Ryan D. Jackson, Lauren M. MacCormick, Lauren C. Maybury, Nanditha A. Ranaganathan, Sandra M. Tilton

For our Christian Ethics and Healthcare class, our group decided to explore a common topic from a different angle. We focused on the relationship between the University of Dayton community, the Catholic Church, and stem cell research. We distributed surveys to approximately 160 students in introductory religion courses. The surveys assessed student's basic knowledge of stem cells, their knowledge of the Church's stance, and their own opinions on the ethical implications and true potential of stem cells. Our work was designed to assess how Catholic identity impacts student opinion. Our project takes a national issue, stem cells, and makes it more local. It shows how educated UD students are on the biological and ethical implications of stem cells and whether students overestimate the current potential of stem cell development. Also, a Maristian university, it will show how important the Church's view is to students when they form opinions on ethical issues.

Predicting the job opportunities of our careers in ten years. Focusing on Physical Therapy, Physicians Assistants and Dietetics
Course Project 09_WI_HSS_226_02 10:30 AM
Undergraduate - Group
Advisor(s): Marvin D. Ganote
Student(s): Caitlin M. McKnight, Lauren E. Radkiewicz, Sandra L. Shephard, Caitlin Arleen Sipes

Each team member will be focusing on their career opportunities ten years into the future. Both Caitlins will be focusing on physical therapy, Lauren will be looking into the opportunities for Physician Assistants. Lastly, Sandra will be focusing on Dietetics.

Processing and Characterization of Barium Strontium Titanate Thin films
Graduate Research
Undergraduate - Individual
Advisor(s): Guru Subramanyam
Student(s): Sreekanth Vemulapalli

During the summer research period, Barium Strontium Titanate (BST) thin films were prepared by solgel, and using our new area large pulsed laser deposition (PLD) system. For the solgel process, the starting materials were Barium acetate, Strontium acetate and Titanium isopropoxide with mole ratios of Ba:Sr:Ti=0.6:0.4:1.0 and small portions of Glacial acetic acid, Acetic anhydride and Propylene glycol. BST solution was thus obtained after calcining the gel at 800 °C for 2 hrs and with constant stirring. Later, this BST solution was added drop by drop to the wafer placed on the rotating plate of the spin coater. Different film thicknesses were obtained for different spin times and temperatures. Later, this film is heated to a pre-determined temperature and time in a furnace. Various test-structures (parallel plate varactors and inter-dig capacitor-IDs), were designed using AWRs software. These test structures were patterned on silicon wafer using photolithography process. A HP 8720 vector network analyzer was utilized to measure the scattering parameters S11 and S21, which were used to characterize the thin films. Measured results were matched to an equivalent electrical circuit model. The electrical equivalent circuits helped in assessing the dielectric tunability and the quality factor of the varactors and IDCs.

Project-based Learning in Foreign Language Classrooms
Course Project 09_WI_EDT_110_H1 10:30 AM
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Jennifer E. Zorich

Foreign language teacher's methods change with the times and as such, teachers must be willing to use new methods. These consistently changing methods develop new ways to accomplish the Standards for Foreign Language Learning especially in second-language acquisition. One of these new and upcoming methods is project-based learning. This paper discusses the many positives and negatives of project-based learning in all classrooms. The effects of project-based learning affect the students and teachers on all levels including both mental and social development. The increase in both integrative and intrinsic motivation is also another benefit of project-based learning. Therefore, the steady growth of project-based learning will eventually result in better foreign language acquisition in students. The information documented is based on thorough studies and experiments from various researchers on the benefits of project-based learning.
Providing Education for Inmates: A Social Justice Living Learning Community Project
Course Project 09_WI_PHL_103_B1 10:30 AM
Undergraduate - Individual Kennedy Union Ballroom
Advisor(s): Monalisa McCurry Mullins
Student(s): Kathleen G. Cotner

For this project, I have connected my experience tutoring inmates through PAGES (Prison Action Group for Education and Service) to Plato’s Republic and Aristotle’s Nicomachean Ethics. Just as Plato suggested in the Republic, we must leave the comfort zone of our caves and go out to what we do not know. Through this experience, I have learned so much about my potential to help others. I have also taken some of the inmates out of their own caves and helped them to better understand the world that waits outside when they are released.

The Psychological Effects of Pediatric Illness on Healthy Siblings
Graduate Research 10:30 AM
Undergraduate - Group Kennedy Union Ballroom
Advisor(s): Keri J B Kirschman
Student(s): Heather E. Gresh, Courtney M Ryan

Researchers have examined the effects of pediatric chronic illness (PCI) on siblings through multiple study designs considering a range of variables. Conclusions have been wide-ranging in regards to relevant factors as well as positive and negative outcomes of this experience. The literature, however, is unifed in finding PCI to be a significant life stressor on healthy siblings. In the current study, the researchers attempt to determine whether young adults who have experienced PCI in their siblings have overcome the psychological distress associated with the experience. We examine negative impacts that remain as well as benefits from the experience including increases in empathy. We also are investigating a population that has not formerly been considered: 18-25 year olds. Survey data of individuals with siblings who have a PCI are compared to a control group with siblings who do not have a PCI. Data collection is ongoing. Preliminary findings are discussed.

A Quantitative Model For Selecting Growth at a Reasonable Price (GARP) Stocks: A Bull and Bear Market Appraisal
Independent Research 10:30 AM
Undergraduate - Group Kennedy Union Ballroom
Advisor(s): David A Sauer
Student(s): Andrew J. Gerbetz, Kenneth D. Wittenberg

The purpose of this study is to evaluate the performance of a quantitative based GARP portfolio in both bull and bear markets. The thirty-one stock portfolio, using an equal weight approach and $1,000,000 invested, was evaluated for price performance in the bull market periods of 2006 and 2007 and the bear market period of 2008. The results indicate outperformance in the bull market and underperformance, so far, in the bear market period.

REACH for Mental Health: A Social Justice Living Learning Community Project
Course Project 09_WI_PHL_103_B3 10:30 AM
Undergraduate - Group Kennedy Union Ballroom
Advisor(s): Monalisa McCurry Mullins
Student(s): Evan M. Jenis, Michael W. Owens, Bradley R. Stricker

For many college students, the experience of campus life can be challenging, exhilarating, daunting, and sometimes overwhelming. REACH is a student organization dedicated to promoting best practices for good mental health for college students. By supporting the M-fest event sponsored by REACH, we have learned how to relate mental health issues to our philosophical discussions about how people think and learn.

The Rebirth of Science Curricula in the United States
Course Project 09_WI_EDT_110_H1 10:30 AM
Undergraduate - Individual Kennedy Union Ballroom
Advisor(s): Patricia M Hart
Student(s): James E. Elliott

In 1892, the National Educational Association created a committee of knowledgeable individuals who were experts in pedagogy and professionals in areas of academic studies working together to bridge the gap between high school curricula and college level classes---The Committee of Ten (Pasero 2008). The Committee of Ten convened to rework and unify high school curricula. The debate focused on the order in which the sciences should be taught. The committee decided on a physics-chemistry-biology order; yet, over a hundred years later, 99% of America is still teaching the reverse; biology-chemistry-physics (Sheppard 2005). Once again, the discussion of high school science curricula has mounted due to the high demands of science technology in global competition. During this new era where the sciences are the driving factor in developing countries, it is now more important than ever to critically debate about reevaluating the order.

Removal of a Bittering Agent Potentially Released to Water Supplies: Implications for Drinking Water Treatment
Graduate Research 10:30 AM
Undergraduate - Group Kennedy Union Ballroom
Advisor(s): Garry Crosson, Kenya M Crosson
Student(s): Hatem Abdulrahman Alhazmi, Smileysusiana Gaddie, Xuying Li

The “Antifreeze Bittering Act of 2009” (H.R. 615) was introduced to the U.S. House of Representatives in January 2009 and it mandates the addition of 30-50 mg/L denatonium benzoxate, a bittering agent, to antifreeze and engine coolant. At 1-10 mg/L, denatonium benzoxate bitter taste can be detected, and water with 30-100 mg/L denatonium benzoxate (DB) is unpalatable. Concern exists that the unintentional or intentional release of DB spiked products could render drinking water supplies unpalatable. This project addresses concerns related to the potential release of DB to water supplies, by determining if powdered activated carbon (PAC) treatment, a common method employed to remove taste and odor contaminants from water, is suitable for DB removal. Adsorption studies were completed with commercially-available lignite-based PAC A and bituminous-based PAC B. Constant adsorbate tests were conducted at 25°C in 40-mL amber vials with no headspace using Millipore water spiked with DB to achieve a 5 mg/L or 70 mg/L concentration. PAC doses ranged from 2.5 mg/L to 50 mg/L. After 24 hours of rotary mixing, sample aliquots were filtered and the DB concentration was measured at 270 nm with a Shimadzu 1201 UV-VIS spectrophotometer. For 5 mg/L DB spiked water, PAC A and PAC B achieved 70-72% DB percent removal at 2.5 mg/L and 5 mg/L PAC doses. With a 10 mg/L PAC dose, PAC B achieved almost 80% DB removal; about 5% more removal than PAC A. PAC B exhibited better DB adsorption than PAC A at all doses on a “mg DB/g PAC” basis. Thus, bituminous PAC B would be more useful for treating water contaminated with 5 mg/L DB. For 70 mg/L DB spiked water, PAC B performance decreased, and average percent removals were 13%±4, 16%±1.4, and 25%±8.5 for 10 mg/L, 50 mg/L, and 50 mg/L PAC B doses, respectively.

The Sorption of Denatonium Benzoate, n-Butylpyridinium Chloride, and 3-Methyl-n-butylpyridinium Chloride to Kaolinite and Montmorillonite Clay Minerals
Independent Research 10:30 AM
Undergraduate - Individual Kennedy Union Ballroom
Advisor(s): Garry Crosson, Bradley Stricker
Student(s): Stephanie L. Pulsifer

The constant temperature adsorption of organic salts, denatonium benzoate (DB), n-butylpyridinium chloride and 3-methyl-n-butylpyridinium chloride, to two clays, montmorillonite and kaolinite were studied under varied solution conditions. Ultraviolet-Visible spectroscopy was used to evaluate the salt adsorption capacities.
Variable pH (4 – 13) studies of DB absorption were conducted. Generally, the results suggest that absorption increases with increasing initial concentration of DB at each pH value for both clays. Langmuir adsorption isotherms (mass of DB absorbed/mass of clay vs. aqueous concentration of DB) were different for all clays, with kaolinite tending to have S shaped curves and montmorillonite tending to have a C shaped curve. A Freundlich analysis of DB adsorption to montmorillonite suggested that pH influences DB adsorption. Kaolinite isotherms results were inconclusive due to indigenous clay organic matter which competed with DB for clay adsorption sites at low initial concentrations of DB. However, some insight was gained from kaolinite studies. Namely, a concave up Langmuir isotherm was observed suggesting that DB is not initially attracted to the surface until a large amount of surface sorption occurs effectively modifying the surface. Variable pH studies of n-butylpyridinium chloride and 3-methyl-n-butylpyridinium chloride adsorption to montmorillonite indicate that adsorption does in fact take place. These experiments are on-going but preliminary results appear to suggest that montmorillonite has a large capacity to adsorb both ionic liquids. In sum, our initial results indicate that organic salt sorption to kaolinite and montmorillonite occurs with the adsorption process being complex and not dependent on a single environmental variable. The implications of this work are discussed in the framework of environmental stewardship.

**Stream Size Effects on Benthic Community Response to Water Withdrawal.**

Graduate Research

Undergraduate - Group

Advisor(s): Mark E Benbow, Albert J Burky

Student(s): Anna L Diaz, Margaret M. Ernst, Kathleen R Jennings, Megan E Shaq

Around the world aquatic ecosystems are negatively affected by freshwater demands. On Maui, Hawaii, stream diversions historically used for sugarcane production are now further providing for economic growth and tourism. Four major West Maui streams, differing in size, were chosen to study the response of benthic communities to water withdrawal. It was hypothesized that flow velocity and variation would be inversely related to benthic macroinvertebrate densities. In August 2007 and May 2008, a modified Surber sampler was used to randomly collect six riffle benthic samples within 100m study reaches upstream and downstream of the highest diversion in each stream. Water column velocity profiles above and along 10 transects were measured using a SonTek Flowtracker, and also used to estimate total stream discharge. For overall stream discharge, two-way ANOVA found significant differences among watersheds (F=1857, df=3, p<0.0001), between upstream and downstream sites within each watershed (F=7670, df=3, p<0.0001) and an interaction effect (F=4.607, df=3, p=0.0073). These results are possibly driven by flow riffle habitat velocities which significantly differed between upstream and downstream sites of each watershed (all p<0.001). These data suggest the importance of studying individual watersheds, as effects vary according to stream size and discharge, affecting communities via changes in riffle habitat velocity and variation.

**Studying Resilience:The Development of the HALL Inventory of Resilience**

Course Project 07_FA_PSY_133_01

Undergraduate - Group

Advisor(s): Joseph P Tedesco

Student(s): Jaime L. Anderson, Jonathan A Hentz, Amanda Nicole Lewis, Christen E. Lopez

The HALL Inventory of Resilience is a personality and aptitude test designed to analyze resilient personality characteristics and predict the resilience potentiality of an individual. The test consists of 61 test items from eight different subscales (religiosity, optimism/pessimism, determination, locus of control, self-efficacy, insight into self and others, stress and adaptation, family/social network) scored on a seven-point Likert scale. The purpose for test administration is to determine any individual’s potential to deal with highly stressful situations, including high-stress occupations.

**Taking the Plunge in Appalachia: A Social Justice Living Learning Community Project**

Course Project 09_WI_PHL_103_B1

Undergraduate - Individual

Advisor(s): Monalisa McCurry Mullins

Student(s): Lauren M. Wargacki

Through participation in the University’s Appalachia Plunge, I learned to build relationships with other volunteers with whom I worked and worked, as well as with local residents in the impoverished Appalachian community. My hope is to share my reflections about Appalachia with our UD community, and to help them understand how we can make a meaningful difference in our world by joining together in solidarity with our neighbors.

**A Ten Year Look into the Future of Physical Education**

Course Project 09_WI_HSS_226_02

Undergraduate - Group

Advisor(s): Marvin D Ganote

Student(s): Michael M. Hyde, Lindsey M. Thompson

Physical Education will become more important as the wellness of the American public is a major part of controlling health-care costs. This study deals with the field ten years into the future.

**Understanding Overconfidence**

Independent Research

Undergraduate - Group

Advisor(s): Susan T Davis

Student(s): Anna E Heink, Carly R. O’Halloran, Andrea L. Hennel

Consistently demonstrated throughout research in Cognitive Psychology, the Overconfidence Effect describes the general bias in which one is more certain of their estimation in making incorrect judgments than their actual ability demonstrates. Many factors have been thought to influence overconfidence, including task difficulty and type of task. This study investigated the Overconfidence Effect across the dimensions of task difficulty, cognitive dissonance reduction, and personality variables. Overconfidence was measured in participants by asking them to estimate their ability to complete some sample word puzzles correctly. Their performance was then tested against similar word puzzles alongside the completion of a series of surveys measuring personality characteristics such as need for achievement and self-efficacy. Certain conditions of this study implemented instructions aimed at reducing cognitive dissonance in order to investigate their effect on recalibrating overconfident individuals. Findings from this research indicated that 74.0% of individuals displayed overconfidence in the tasks, 17.5% of individuals displayed underconfidence, and 8.5% displayed calibration. Overconfident individuals showed strong overconfidence. Underconfident individuals were most underconfident in their abilities with regard to Wuzzle word puzzles. Information presented by this poster also addresses other variables investigated in this research and their contribution to overconfidence.

**The Value of an Education:A Social Justice Living Learning Community Project**

Course Project 09_WI_PHL_103_B3

Undergraduate - Individual

Advisor(s): Monalisa McCurry Mullins

Student(s): Nora P Ruddy

By working with children at the Dakota Center, I have come to realize how important an education truly is and how much this sacred privilege is taken for granted. The children I tutored were eternally grateful for the simple service that I was providing them. These children live out Socrates’ message from The Apology that knowledge and virtue are much more valuable than material possessions. They value their education and want to learn all that they can. Through this service learning project, I have come to realize how lucky I am to have the opportunities that have been given to me, and my obligation to give back to my community.

**“Voices of Girls in Urban Schools: Collaborative Team Research”**

Independent Research

Undergraduate - Group

Advisor(s): Michael M. Hyde

Student(s): Michael M. Hyde, Lindsey M. Thompson

58

59
Advisor(s): Sheila Hassell Hughes, Carolyn Ridenour
Student(s): Shayla Brown, Nora Jennings, Corinna Lansangan, Allison Nary, Lauren Roberts, Jennifer Schwertman, Elizabeth Whitman

For an extended research project sponsored by the Humanities Fellows Program, seven undergraduate students joined into a research team with two faculty members (one from Women’s and Gender Studies/English and one from Educational Leadership) and a graduate research assistant to conduct a study of the lives of girls in Dayton city schools. The team worked together to study and practice feminist field research methods and to construct the particulars of the research design. Then, over the course of the next year, they conducted a series of three individual interviews with a total of 23 girls, between 4th and 8th grades. The interviews were radically open-ended, inviting girls in schools to shape the direction of the inquiry with their own stories, in their own voices. All interviews have been completed, transcriptions are underway, and the analysis and interpretation are beginning. This poster lays out the goals and design of the project, highlights the learning process for research team members, and points to some preliminary observations about girls lives in and out of urban schools.
Integration Bee Luncheon
Luncheon 12:00 PM - 1:00 PM
Advisor(s): Arthur H Busch, Vicki L Withro
Science Center Atrium
The Mathematics Department will host a pizza lunch in the Science Center Atrium prior to the Integration Bee.

School of Business Administration Stander Symposium Luncheon (Invitation Only)
Unit Luncheon 12:00 PM - 1:30 PM
Advisor(s): Elizabeth F Gustafson
Miriam Hall Atrium
Invitation only SBA Luncheon Buffet and Distinguished Speaker on Sustainability and Corporate Social Responsibility: Kevin Martinez, KPMG Executive Director of Corporate Social Responsibility.
Thursday, 16 April 2009

Presentation & Poster Sessions
1:00 PM - 2:30 PM
In 1891, The Catholic University of America established an experimental psychology laboratory, making it one of only a handful of such universities in the United States prior to 1900, and the first Catholic institution, to have done so. Over the succeeding decades, the study of psychology flourished at Catholic University, augmenting an already strong emphasis on the growing fields of social sciences at the nation’s first Catholic graduate school. Among the most notable Catholic proponents of psychiatric study was priest and psychologist Thomas Verner Moore, a professor at Catholic University and eventual Carthusian monk. For Moore, the proper method of psychological inquiry required an acknowledgement of the existence of the human soul. Moor saw the purpose of psychology as the treatment of human beings who suffered from mental illness so that they would be able to attain to a proper spiritual fulfillment and, ultimately, eternal life. This concern led him to construct a “cognitive psychology” that sought to achieve a balanced unity in the patient between the coexisting mental and the spiritual dimensions. The most prominent Catholic critic of the psychology during that period, radio priest and fellow Catholic University professor Fulton Sheen, openly attacked the practice of psychoanalysis in speeches, radio broadcasts, and even during a homily at St. Patrick’s Cathedral in 1947. Furthermore, in 1949 Sheen published “Peace of the Soul,” a book primarily written against secular psychiatry and the activity of psychoanalysis in particular. In the course of these attacks, Sheen had several minor confrontations with Thomas Verner Moore, particularly over the question of psychoanalysis, which indicate that both Sheen and Moore saw Moore’s own work as significantly related to the kind of psychological procedures that Sheen was trying to dismiss as contrary to legitimate Catholic tradition.

In the last forty years, environmental policy in the United States has exploded into the forefront of politics. A major instigator of this new public awareness and support for environmental policy was the realization of the poor quality of the surface water in the United States. Improving water quality has been a high priority goal for legislators, the EPA, and state governments since the 1970s. Along with most realms of environmental policy, command and control regulation directed at pollution control dominates most water quality control measures. Although the current methods of water quality management have been somewhat effective, there is still much improvement necessary; it is clear that policy needs to shift to focus on pollution prevention. This can be best achieved by introducing economic incentives to encourage voluntary pollution reduction that results in both environmental and economic benefit. This presentation will examine how the existing water quality regulations in Ohio can be replaced/supplemented with market-based policy consisting of a tradable water emissions program and instituting pollution charges.

This study will describe the life of the running legend Steve Prefontaine more commonly known as Pre. Pre is thought to be one of America’s greatest long distance runners which can be seen by the records he set in everything from 2,000 meters to 10,000 meters. Pre was known for being cocky, but then backing up everything he said on the track. Pre competed in the 1972 Olympics, but came in fourth place which made him determined to return for the 1976 Olympics and take home a medal. Pre died tragically at the age of 24 in a car crash just a few months before he was supposed to compete in the 1976
Past research investigating the relationship between video game usage and violence and aggressiveness, Massively Multiplayer Online Role-Playing Games, and academic performance has found significant results. For instance, those who spend much time playing videogames, especially MMORPGs, may result in an increase in creativity, spatial intelligence, and social interactions. On the other hand, some negative results are changed personalities, an increase in aggressiveness and/or violent nature, sleep deprivation, a decrease in overall health, and a decrease in academic performance. This study of 40 participants examined whether or not playing videogames has an influence on the academic performance in first-year, male college students. Participants completed a survey consisting of both open-ended and closed-ended questions, designed to assess both academic performance and time spent playing videogames. The results indicated that there was in fact a relationship between playing videogames and academic performance.

Sustainability in Design: From Process to Product.
Oral Presentation
Independent Research
Advisor(s): Suki Kwon
Student(s): Nicholas G Kastner, Michelle P Stawicki

Working with adviser Suki Kwon, students Nicholas Kastner and Michelle Stawicki are designing a new newsletter for the Department of Visual Arts. Through the process of creating this, these students are examining the topic of sustainability in design. Historically, design has been a field that produces significant paper waste. Through their research, these students and their adviser want to show how design can be sustainable through the process of designing the Visual Arts newsletter.

Visualization of "Living Water World Ministries Campus" in conjunction with the Civil Engineering Department - 2009 Senior Design Project.
Oral Presentation
Senior/Capstone Project
Advisor(s): Timothy A Wilbers
Student(s): Nathan A Christopher, Aaron M Glett

A Visual Arts presentation of a 3D computer modeling and animation concepts and techniques utilized in the visualization of the proposed "Living Water World Ministries Campus" in conjunction with the Civil Engineering Department, 2009 Senior Design Project. The presentation will highlight a proposed new family center and church complex, new roads and parking layout, and ancillary buildings and walkways. The new church interior, exterior and environment will be depicted as well key features of the family center by means of a "peek-away" and "walk-through" animation techniques.

Altruistic Behaviors of Genocide Movie Characters Depicted In Hollywood Movies
Oral Presentation
Senior/Capstone Project
Advisor(s): H Frances Geyer Pestello
Student(s): Monica F DiGiandomenicco

My project will focus on the German Holocaust and Rwandan genocide movies. Research has emphasized anger and aggression in relationship to genocide. However, in the midst of brutal violence, there are examples in which people transcend difference and reach out to marginalized others. This project will examine one of them. I will examine genocide films and their contribution to the understanding of genocide, the impact of these films on the perception of these events among college students, and the ways in which these films portray issues of guilt and responsibility. I will focus on altruistic behaviors, roles, and emotions of characters in genocide movies. In particular, Schindler's List and Hotel Rwanda will be examined in terms of their presentation of both the origins and consequences of genocide. The method for this research will be a multifaceted approach incorporating content analysis of the films and survey research focused on student perceptions of genocide. The questionnaire will address the perceptions of the general public on several topics and knowledge of genocide. Understanding how people understand genocide and the ways in which films depict genocide will provide insight into the impact of genocide on society. The project will focus and examine how Hollywood genocide movies have contributed and impacted student perceptions and awareness of genocide.

Christ, suffering, and the Question of Evolution
Oral Presentation
Graduate Research
Advisor(s): M Doyle
Student(s): Daniel E Martin, Susan K Sack

Hans Jonas is an important 20th century philosophical writer as he was a pupil of Martin Heidegger. Jonas was a German born Jew who turned his work to the question of how the twentieth century developed an ontology of death leading to the tragedies that surrounded World War II. Jonas also sought to understand if the concept of the good could be revived in the twentieth century. In doing so, Jonas focused on a philosophical investigation of humanity as living biological beings. This presentation will present Jonas’ philosophical biology as it offers an important counterpoint to the work of Pierre Teilhard de Chardin. Teilhard was a twentieth century Jesuit priest-scientist, and a stretcher-bearer in the trenches of the First World War. For Teilhard the entire universe is stamped with the character of Christ, and evolution can be equated with christs’ movement toward the Omega Point or the Cosmic Christ. This endpoint is the purpose of creation and of human existence. Teilhard contends that our tragedies, suffering, or diminishments of any kind, as well as all our work and activity, can contribute to this Christogenesis. In his recent book, Cardinal Christoph Schoenborn of Austria draws upon the work of Teilhard in order to clarify and justify some controversial points concerning scientific evolution, particularly intelligent design, as well as the meaning of creation. Schoenborn is attempting to reconcile faith with Scripture and with an understanding of biological evolution. But, Teilhard has much to contribute to the contemporary conversation beyond Schoenborn’s usage, and perhaps beyond that of Jonas’ usage. Teilhard’s thought on creation and evolution extends Jonas’ thought on creation and evolution extending Jonas’ thinking meaning behind the world’s suffering as he considers this as intricately interwoven with the very purpose of human existence.

Cruisin' for a Brusin'? An analysis of college student's perceptions on transportation services and the decision to drive and drive on college campuses.
Panel Discussion
Senior/Capstone Project
Advisor(s): Arthur J Jipson
Student(s): Andrea M Ross

The decision to drive or drink is one that can be so easily prevented. It is hard to wonder if a friend or a loved one would still be here today if someone would have not made the decision to drive while under the influence or if there was a transportation service set in place to prevent drinking and driving. About three in every ten Americans will be involved in an alcohol-related crash at some time in their lives; many of them are college students or teenagers between the ages of 16-25. Many college campuses have student shuttle or taxi services to instill safety and prevention of drinking and driving and other instances that could cause endangerment to students. This paper will examine whether or not a transportation service on college campuses deters students from driving while under the influence. The focus will be on the decision-making process and if a taxi shuttle service on campus actually deters students from making the choice to drink and drive. Research will be done on the decision to drink and drive and why it has become a prevalent issue in Criminal Justice today. In order to fully understand the severity of drunk driving, one must first understand the effects of alcohol on the body and mind. This research will allow my work to be used as a guide for the future researchers. A sample survey will be used to conduct the methodology portion of the thesis. The sample survey will be given to junior and senior students among an estimated 160 Criminal Justice majors who attend a Midwest private university in the United States. Coupled
with research, the results will be compiled and analyzed into a thesis paper on college students’ choice to drive while under the influence of alcohol.

The Culture of Firefighting
Oral Presentation
1:00 PM - 2:00 PM
Kennedy Union 207
Advisor(s): Teresa L Thompson
Student(s): Michelle L Wintertime

I have grown up around firefighters and firehouses; dinners at the firehouse, the distinct smell of my dad’s clothing after a day at work, dad’s 24-hour shift schedule, and the extended family of the firefighting world. What makes firefighting a unique culture? How do the narratives they tell define the culture of firefighting? Is my experience similar to that of other firefighters and their families? This paper is a qualitative analysis of a myriad of experiences. Through an in-depth discussion of my experiences growing up as the daughter of a firefighter, conversations with my father, interviews with career and volunteer firefighters in Ohio and London, England, and firefighters’ family members, I have attempted to define the culture of firefighting as it exists for the people who are touched by it. My paper serves as an application of communication and psychology theories to the firefighting culture I have come to know, respect, and identify with. Some photography has been included as a visual representation of the culture of firefighting.

Domestic Violence: Police Response
Panel Discussion
1:00 PM - 2:00 PM
St. Joseph’s Hall 230
Advisor(s): Arthur J Jipson, Claire M Renzetti
Student(s): Caroline M Miller

Domestic violence is a crime that has been around for as long as humans have formed intimate relationships. Although it has been happening for a long time, legislation and police interference is relatively new. Recent statistics have stated that one in four women will experience domestic violence at some point in their lifetime. This is a very high statistic and demonstrates that is a nationwide issue. Another part of the issue is, if women do call the police for help when they arrive, do they have a negative or positive experience. This can affect whether or not they will call again if they need more help from their abuser. Domestic violence is a hard crime to try to handle because it is personal and police must receive special training in how to handle the situations since usually it’s his word against her word. Research has shown that many police officers do not like to respond to domestic violence cases because they view it as a “private matter.” The research question is how effective is police response to domestic violence cases in protecting women?

The Fate of Fantasy: Engaging the Fiction of J.R.R. Tolkien and Philip Pullman
Panel Discussion
1:00 PM - 2:00 PM
Humanities Center 110
Advisor(s): Thomas A Wendork
Student(s): Spencer L Hargadon, Adam M Hornbacher, Emily E Howson, Megan E McGrath, Michael D Stanley, Amanda J Tootle

Philip Pullman, contemporary British author of the fantasy series HIS DARK MATERIALS, has been a vocal critic of writers C.S. Lewis and J.R.R. Tolkien, particularly for the explicit and implied Christian moral and theological dimensions of their fiction. When studied together, however, the fantasies of the avowed atheist Pullman and the Roman Catholic Tolkien have much to say to each other. This panel of students from a senior capstone class for English majors (ENG 490—Fairy and Fantasy) will compare Pullman’s HIS DARK MATERIALS with Tolkien’s THE LORD OF THE RINGS and THE SILMARILLION to reveal their respective complexities and differences as well as some surprising convergences.

Reviving a Village: Community Action through Networking and Building Trustful Partnerships
Interactive
1:00 PM - 2:00 PM
LTC Meeting Space
Advisor(s): Natalie Florea Hudson

Over the past decade, higher education faculty and students have ventured further and further into their local communities. As students become more involved in service and experiential learning it is becoming increasingly relevant that the University of Dayton recognizes the lack of communication between students and service leaders in the city of Dayton. By taking the initiative to engage with various community members, civic organizations, and city officials, students can gain a better understanding of what services are needed to help improve the condition of the city of Dayton, Ohio. This community based research provides avenues for students to participate, network, and build effective relationships with agencies and non-profit organizations. Through building these relationships via social participation community partnerships are strengthened and furthered. Unfortunately, the lack of proper funding for experientially-based social and educational programs that would benefit and create a successful safe community is overwhelmingly ignored. This program addresses that limitation by creating a situation for faculty and students of the University of Dayton to give a helping hand and take action in improving the city of Dayton.

Shake your Money Maker: Black Women Oppression displayed in Hip Hop Music Videos Stemming from Historical Structures and Gendered Racism
Panel Discussion
1:00 PM - 2:00 PM
St. Joseph’s Hall 023
Advisor(s): Paul J Becker, Leslie H Picca
Student(s): Emily B. Mumma

Just in the past 10 years, Black women have made historic progress in politics, business, entertainment, and other prestigious fields, including Michelle Obama as the first African American First Lady, and Oprah Winfrey as a leading respective talk show host, actress, and author. However, despite the achievements of many Black women, they still tend to be overly stereotyped in the media, notably in hip hop videos. Using content analysis of music videos, I analyze the prevalent themes in contemporary popular hip hop music videos, as defined by DJBooth.net “Top Hip Hop Picks chart” with the top 10 hip hop songs, which are updated each week. My hypothesis is that Black women are oppressed by being portrayed as symbols of sexuality in hip hop music videos and this can explained through historical structures and gendered racism. Black women are displayed as sex symbols to help define manhood for the artists in hip hop music videos. The roles and representations of Black women in these videos can be connected to the roles and representations of Black women that were created during the slave era and civil rights movement.

Panel Discussion
1:00 PM - 2:00 PM
St. Joseph’s Hall 230
Advisor(s): Arthur J Jipson, James Carter (Community Activist & Urban Organizer, YMCA, Dayton, Ohio)
Student(s): Bernard D Jones

The main focus for this research thesis is to measure the change of crime rate, if any that may have occurred in the Dayton Ohio, in the past eight years. The research will also focus on if crime rates have decreased in the past three Presidential years. Other questions to be answered from the research is what types of crimes have increased or decreased and if there is a trend related to the increase or decrease of crime. The method for the research will be to analyze and gather crime data related to the Dayton Ohio area. The crimes that will be measured in the course of this research are known as index crime or part one crimes as stated by the uniform crime report (UCR). The index crimes include the crimes of murder and non-negligent manslaughter, robbery, forcible rape, aggravated assault, burglary, larceny, theft, motor vehicle theft, and arson. By doing this a predictable pattern can be discovered and future crime prevention measures can be taken. Through out the course of this research many different crimes will be covered to determine change or lack of change in the rate in which crime is committed.

Women and War: Gender Issues in Contemporary Conflict
Panel Discussion
1:00 PM - 2:00 PM
LTC Meeting Space
Advisor(s): Kevin J Young

Advisor(s): Arthur J Jipson, James Carter (Community Activist & Urban Organizer, YMCA, Dayton, Ohio)
Student(s): Bernard D Jones

Over the past decade, higher education faculty and students have ventured further and further into their local communities. As students become more involved in service and experiential learning it is becoming increasingly relevant that the University of Dayton recognizes the lack of communication between students and service leaders in the city of Dayton. By taking the initiative to engage with various community members, civic organizations, and city officials, students can gain a better understanding of what services are needed to help improve the condition of the city of Dayton, Ohio. This community based research provides avenues for students to participate, network, and build effective relationships with agencies and non-profit organizations. Through building these relationships via social participation community partnerships are strengthened and furthered. Unfortunately, the lack of proper funding for experientially-based social and educational programs that would benefit and create a successful safe community is overwhelmingly ignored. This program addresses that limitation by creating a situation for faculty and students of the University of Dayton to give a helping hand and take action in improving the city of Dayton.
Presentations 1:00PM - 2:30PM

Students: Helen Daly, Anna R. Danese, Sean T. Kaschak, Kathleen M. Kennedy

As part of a research project for the course, Gender and International Relations, this panel of students will be exploring the gendered impact of contemporary conflict on the world’s women and men. From gender-based violence to women in the military, the gendered impacts of conflict are vast and varied. Several participants on this panel will be examining the gender dynamics of the war on terror and resource wars, in the United States and Sierra Leone respectively. This panel will examine these issues from a gender-sensitive lens highlighting the ways in which men and women experience conflict and post-conflict situations differently as well as how the power of gender influences the scope and nature of violence, the conduct of war, and its aftermath across any given society.

7th Annual Integration Bee

The students compete in teams of 2-3 people. This is organized in a similar way to the traditional spelling bee; however, students will be evaluating integrals. Teams will be evaluating integrals that are projected on a screen. If a team incorrectly evaluates an integral, the team is eliminated from the competition. After the elimination rounds, we will hold the lightning rounds. The first “y” many teams to correctly evaluate the given integrals will proceed to the next round. We do this until there is a 1st, 2nd and 3rd place team. First, second, and third place teams will receive math t-shirts.

The Bicycle

Oral Presentation/Virtual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Michael Blake

The Wright brothers discovered flight. Henry Ford created the first car but who created the first bicycle? As gas prices rise and the state of the economy gets worse and worse, bicycles are slowly becoming a more prevalent viable mode of transportation in our society. Bicycles are no longer being considered as toys but rather as a cost efficient transportation device. I intend to inform faculty and students of the University of Dayton on the creation, the anatomy and the social effect of the bicycle through an installation piece placed within The Hangar in Kennedy Union at UD.

The Development of the Book

Oral Presentation/Virtual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Kelly Bailey

An abridged history of the development of the modern day book. This project illustrates the intertwining relationship of how the development of materials, printing technology, binding methods, and typography have all contributed to the development of the physical book.

Food Matters: The Importance of Nutritional Literacies in College-Age Populations

Panel Discussion
Course Project 08_FA_ENG_114 HA
Advisor(s): Akhil Ramnarayan
Student(s): Kathryn R. Hayes, Jessica C. Johnson, Seetha Sankaranarayan, Jonathan C. Schneider

The panel examines college students’ nutrition literacies, and the communication practices and networks producing these literacies, in a range of arenas: dietary supplement usage among athletes, the slow food movement, food sustainability efforts at the University of Dayton, and emotional eating. Presenting original research conducted in fall 2008, the panel calls for systematic consciousness raising efforts at the University of Dayton on aspects of nutritional literacy that are vital to the overall health and wellness of student populations.

Issue Forum on Campus Energy Use

Interactive
Advisor(s): Jason L Pierce
Roehs Library

The issue forum on campus energy use brings together students, faculty, staff and administrators to deliberate three questions: How should UD secure its energy? How can UD use its energy more efficiently? Who should pay for energy improvements?

Small Group Communication - Promotional Video for Prospective UD Students and Parents

Oral Presentation
Independent Research
Advisor(s): Heather R. Parsons

Students in the Communication Small Group Decision Making course were placed in groups of five members. The groups worked with each other throughout the semester on various projects, learning the dynamics of groups, how to work effectively, how to manage conflict and how to develop strong relationships. Their main project for the semester was to create a promotional video for prospective UD students and parents. After learning throughout the semester how to communicate effectively in a small group, they were faced with the dilemma of creating an interesting, professional, yet fun, video promoting the University of Dayton. The goal was to demonstrate the positive aspects of UD. Students were encouraged to be creative and think “outside the box.” In order for a small group to be effective, members of each group had to set their goal, meet all requirements and limitations of the project, brainstorm ideas, narrow them down and choose the best ideas to be included in the video and finally to implement their creativity. The students of this class will present their semester-long project and let the audience view their video. In addition, each group will present the step-by-step process they took to accomplish their goal and the obstacles they faced in the decision-making process.

Competition Recital for the 2009 Department of Music Honors Recital

Performance
Honors Recital
Advisor(s): Carolyn N. Gross
Student(s): Anna Bumiller, Jessica Cole, Royce Files, Evan King, Sam Kreidenweis, Shannon LaRue, Quentin Marsh, Brian Panetta, Josh Paulus, Christine Pellester, Jacki Schneider, Joy Willenbrink

This event will feature 12 music students in performance, competing for one of six spots on the annual Department of Music Honor’s Recital.

Pentagram: International Design Consortium

Oral Presentation/Virtual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Kevin Sullivan

This installation details the history of the international design studio Pentagram from its inception in 1972 until its contemporary state. The breakdown of information is organized to describe the history, philosophy, areas of practice, studios, and partners. Furthermore, it will highlight specific partners, those most influential over the past 37 years of Pentagram, and their impact within design culture and the greater world for which they produce design.

Photography Senior Thesis Project Presentations

Oral Presentation
Advisor(s): Arthur H. Busch, Vicki L. Withrow
Student(s): Helen Daly, Anna R. Danese, Sean T. Kaschak, Kathleen M. Kennedy

As part of a research project for the course, Gender and International Relations, this panel of students will be exploring the gendered impact of contemporary conflict on the world’s women and men. From gender-based violence to women in the military, the gendered impacts of conflict are vast and varied. Several participants on this panel will be examining the gender dynamics of the war on terror and resource wars, in the United States and Sierra Leone respectively. This panel will examine these issues from a gender-sensitive lens highlighting the ways in which men and women experience conflict and post-conflict situations differently as well as how the power of gender influences the scope and nature of violence, the conduct of war, and its aftermath across any given society.

7th Annual Integration Bee

Interactive
Science Center 255, Chudd Auditorium
Advisor(s): Arthur H. Busch, Vicki L. Withrow

The students compete in teams of 2-3 people. This is organized in a similar way to the traditional spelling bee; however, students will be evaluating integrals. Teams will be evaluating integrals that are projected on a screen. If a team incorrectly evaluates an integral, the team is eliminated from the competition. After the elimination rounds, we will hold the lightning rounds. The first “y” many teams to correctly evaluate the given integrals will proceed to the next round. We do this until there is a 1st, 2nd and 3rd place team. First, second, and third place teams will receive math t-shirts.

The Bicycle

Oral Presentation/Virtual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Michael Blake

The Wright brothers discovered flight. Henry Ford created the first car but who created the first bicycle? As gas prices rise and the state of the economy gets worse and worse, bicycles are slowly becoming a more prevalent viable mode of transportation in our society. Bicycles are no longer being considered as toys but rather as a cost efficient transportation device. I intend to inform faculty and students of the University of Dayton on the creation, the anatomy and the social effect of the bicycle through an installation piece placed within The Hangar in Kennedy Union at UD.

The Development of the Book

Oral Presentation/Virtual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Kelly Bailey

An abridged history of the development of the modern day book. This project illustrates the intertwining relationship of how the development of materials, printing technology, binding methods, and typography have all contributed to the development of the physical book.

Food Matters: The Importance of Nutritional Literacies in College-Age Populations

Panel Discussion
Course Project 08_FA_ENG_114 HA
Advisor(s): Akhil Ramnarayan
Student(s): Kathryn R. Hayes, Jessica C. Johnson, Seetha Sankaranarayan, Jonathan C. Schneider

The panel examines college students’ nutrition literacies, and the communication practices and networks producing these literacies, in a range of arenas: dietary supplement usage among athletes, the slow food movement, food sustainability efforts at the University of Dayton, and emotional eating. Presenting original research conducted in fall 2008, the panel calls for systematic consciousness raising efforts at the University of Dayton on aspects of nutritional literacy that are vital to the overall health and wellness of student populations.

The senior civil engineering capstone design project for 2009 is a comprehensive church campus. The concept arose from Living Water World Ministries' desire to expand its current operations in west Dayton. The students' design includes a family life center, A new church building, and all necessary modifications to the current project site. This capstone project combines all previous civil engineering coursework into an intensive, interdisciplinary venture completed over a seven month period.

Got Growth? Got Development? A Tour of Development Predicaments in Developing Nations

Oral Presentation 1:00 PM - 5:00 PM
Kennedy Union, Boll Theatre
Advisor(s): Donald V Chase

Senior/Capstone Project

ArtStreet Studio B
Kohout, Diane C. Korte, Joanna S Maier, Christopher M. Martinez, Meaghan R. Pilarcik, Sarah A Schlingman, Jeong Won Shin, Candace C Treasure, Melissa A Trof, Marie-Claire Tuzeneu, Brian L VonDrasek
Economic growth has often been advanced as a necessary if not a sufficient condition for development. But as Nobel Lau- reate Amartya Sen pointed out, growth is a means not an end, and sometimes not a very good means at that. While some nations sport impressive advances in health and education despite poor growth performances, other nations with better growth statistics fail to achieve commensurate advances in development indicators. In this series, each student in ECO 460 (Economic Growth and Development) will provide a short powerpoint presentation on a particular development predicament to clarify the distinction between growth and development.

3rd Annual University of Dayton Business Plan Competition

Panel Discussion 1:30 PM - 2:20 PM
Miriam Hall 103
Advisor(s): John J Janney
We'll display some of the winning elevator pitch entries (one minute each), followed by an introduction to each of the five finalist teams, as well as the 1st alternate. Finalists from the third annual UD Business Plan Competition will talk about their experiences in the competition. They will discuss how they identified their ideas, and the challenges they faced in developing their plans. Since multiple finalist teams were from the SCOL-SBA collaboration, they'll discuss the additional challenges they faced working on a multidisciplinary team. They'll also discuss what it was like to work on teams, and with a mentor. Questions from the audience are welcome. The five finalist team topics are (in alphabetical order): Free Copying 101/Guardian ConeKVD's Greenhouse Lighting/Musky Fever/Sample Scan 1/Alternate: Hoffman Patella Alignment

Automating Server Deployment at a Fortune 500 Data Center

Oral Presentation 1:30 PM - 2:20 PM
Miriam Hall 214
Advisor(s): Harvey G Enns, Arthur R Sartoianni
Student(s): Christopher M. Fogle, Scott E Klingman, Kevin M Schultz
There are about 1.304 tasks that need to take place before a computer server reaches the production floor at NCR Corporation's Data Center. Prior to this MIS Senior Project, disparate groups of people managed this complex process entirely with huge spreadsheet and a lot of e-mail. Working with ASP and Oracle, this project developed a new module, within a system management infrastructure already in place at NCR, in order to automate the tracking of tasks related to server deployment.

Equity Valuation Modeling

Oral Presentation 1:30 PM - 2:20 PM
Miriam Hall 118, Davis Center
Advisor(s): Robert D. Dean, David A Sauer
Student(s): Christina L. Council, Robert W Green, Melissa A Janicke, Stephen C. Schaeuble, Matthew L. Verryser
The Davis Center for Portfolio Management Excel and Valuation Team will present several methods for determining the expected value of an equity security. The Davis Center for Portfolio Management Excel and Valuation Team will present several methods for determining the expected value of an equity security.
Green Communication and Dayton
Oral Presentation
1:00 PM - 1:30 PM
Kennedy Union 207
Advisor(s): Usha Harirahan
Student(s): Brian B. Grawunder

How do we communicate green? In a constantly changing work environment, a new focus is taking shape. More companies are taking an interest in becoming greener in their energy consumption and waste output. This research project examines ways that this new movement is being communicated as well as its effectiveness. Especially in a radical time of change and development, creating a conversation within the Dayton corporate community around becoming more green and efficient could potentially be extremely beneficial.

Nature and Grace in the Early English Baptists
Oral Presentation
1:00 PM - 1:30 PM
LTC Studio
Advisor(s): William Portier
Student(s): Derek C Hatch

This presentation will explore the ideas of the late seventeenth-century General Baptists in England, specifically Thomas Grantham’s Christianisms Primitivus, St. Paul’s Catechism, as well as the Orthodox Creed. The theology that emerges from these texts will be shown to resonate with Catholic theology, notably regarding issues surrounding the theological problematic of nature and grace. Because of this, these Baptists stand as a significant challenge to contemporary Baptist theological discourse, especially regarding ecclesiology.

Paley Graphs: Exploring Transitive Subtournaments and Cliques
Oral Presentation
1:00 PM - 1:30 PM
Kennedy Union 311
Advisor(s): Arthur H Busch
Student(s): Jennifer L Diemunsch

The Paley graph P(q) is a graph with vertex set GF(q) with an edge from a to b if and only if b-a is a quadratic residue of GF(q). The properties of Paley Graphs have broad applications to graph theory, number theory, and theoretical computer science. When q is a prime congruent to 1(mod 4), P(q) is an undirected graph and when q is a prime congruent to 3(mod 4), P(q) is an orientation of the complete graph on q vertices, better known as a tournament. Let L(P(q)) denote the largest clique or transitive subtournament of the Paley graph P and let L(q) denote the smallest positive integer that is not a quadratic residue of q. In this talk we investigate the inequality L(q) ≤ L(P(q)) for q ≤ 1000 and how L(q) could be used to bound or determine L(P(q)). In addition we consider how this inequality might give insight to two related open problems, one number theoretic and the other graph theoretic.

“The Poem of the Universe: The Theological Aesthetic of Augustine’s “De Musica”
Oral Presentation
1:00 PM - 1:30 PM
Graduate Research
Advisor(s): John A Inglis
Student(s): Dennis M Cox

This presentation will explore the theological aesthetic of Augustine’s “De Musica,” focusing on the relationship between the work’s central concepts: number, proportion, order, and harmony. The presentation will suggest that, by (1) integrating the temporal and spatial, (2) combining vertical notions of harmony and order with horizontal themes of development and variation, and (3) emphasizing the value of created beauty as an image of the divine, Augustine’s work provides a valuable corrective to contemporary discussions in modern philosophy and aesthetics.

The P&G Marketing Challenge: Competing to Develop & Present a Holistic Campaign to P&G Brand Managers
Oral Presentation
1:00 PM - 2:00 PM
Miriam Hall 214
Advisor(s): Harvey G Enns, Arthur R Sanojanni
Student(s): Jordan E Barth, Jason P Tieman, Kristopher R Turkaly

The Proctor & Gamble Corp., a leader in marketing and consumer packaged goods and University of Dayton students come together in this unique and intense competition where 4 teams of students compete to research, develop and present a Holistic Campaign to P&G Brand Managers. The competition is intense, substantial, and is a significant academic AND real-world experience for everyone that comes in. In this paper, the supply chain of pharmaceuticals will be reviewed and the new technology supporting it will be explored in order to foresee where the industry is going to achieve even higher standards.

Advisor(s): Jim Kanet
Student(s): Andrew T Blankemeyer, Tyler D Deutsch, Matthew E Kaucher

THE LIFE LINE OF HOSPITALS: PHARMACEUTICAL SUPPLY CHAIN - Healthcare is a complex and highly regulated industry. With patient safety in the front of all employees’ minds, health facilities must be able to provide rapid and safe patient care for everyone that comes in. In this paper, the supply chain of pharmaceuticals will be reviewed and the new technology supporting it will be explored in order to foresee where the industry is going to achieve even higher standards. About the Wills China Always Be the Low Cost Leader! A Study on Current Supply Chain Trends of the Red Dragon, Tyler Deutsch. Undoubtedly, with the recent Olympic Games in China and the frantic growth there, China has created an impression on the world. Chinese are realizing the implications of supply chain management and have started using third party logistics to handle their transportation. The following report is an overview of the current supply chain trends in China as they become more aware of their place in the world.

Intermodal transportation is a key weapon for supply chain managers in this globalized market as they try to juggle capacity, planning, lead-time, and supply. The purpose of this paper is to analyze the different modal options for international shipments and present a breakdown of industry best practices based on need, product type, and overall business structure.

Flyer Enterprises 2.0: Managing the Assets
Oral Presentation
1:30 PM - 2:00 PM
Miriam Hall 109
Advisor(s): Irene J Dickey, William F Lewis, Tracy K Miller, Martin R Sparks, Timothy D Wood
Student(s): Chelsea M Ashe, Craig A Eiting, Christine E Ferraro, Nicole M Luisi

The Flyer Enterprises representatives worked with an MIS senior project team to create an asset management program that tracks Flyer Enterprise assets. See how the MIS senior project team was able to leverage technology to effectively track and manage assets within Flyer Enterprises. The extensive hours of development will save managers the agony and trouble of managing assets by hand.

Nature and Grace in the Early English Baptists
Oral Presentation
1:00 PM - 1:30 PM
LTC Studio
Advisor(s): William Portier
Student(s): Derek C Hatch

This presentation will explore the ideas of the late seventeenth-century General Baptists in England, specifically Thomas Grantham’s Christianisms Primitivus, St. Paul’s Catechism, as well as the Orthodox Creed. The theology that emerges from these texts will be shown to resonate with Catholic theology, notably regarding issues surrounding the theological problematic of nature and grace. Because of this, these Baptists stand as a significant challenge to contemporary Baptist theological discourse, especially regarding ecclesiology.

Paley Graphs: Exploring Transitive Subtournaments and Cliques
Oral Presentation
1:00 PM - 1:30 PM
Kennedy Union 311
Advisor(s): Arthur H Busch
Student(s): Jennifer L Diemunsch

The Paley graph P(q) is a graph with vertex set GF(q) with an edge from a to b if and only if b-a is a quadratic residue of GF(q). The properties of Paley Graphs have broad applications to graph theory, number theory, and theoretical computer science. When q is a prime congruent to 1(mod 4), P(q) is an undirected graph and when q is a prime congruent to 3(mod 4), P(q) is an orientation of the complete graph on q vertices, better known as a tournament. Let L(P(q)) denote the largest clique or transitive subtournament of the Paley graph P and let L(q) denote the smallest positive integer that is not a quadratic residue of q. In this talk we investigate the inequality L(q) ≤ L(P(q)) for q ≤ 1000 and how L(q) could be used to bound or determine L(P(q)). In addition we consider how this inequality might give insight to two related open problems, one number theoretic and the other graph theoretic.

"The Poem of the Universe: The Theological Aesthetic of Augustine’s “De Musica”
Oral Presentation
1:00 PM - 1:30 PM
Graduate Research
Advisor(s): John A Inglis
Student(s): Dennis M Cox

This presentation will explore the theological aesthetic of Augustine’s “De Musica,” focusing on the relationship between the work’s central concepts: number, proportion, order, and harmony. The presentation will suggest that, by (1) integrating the temporal and spatial, (2) combining vertical notions of harmony and order with horizontal themes of development and variation, and (3) emphasizing the value of created beauty as an image of the divine, Augustine’s work provides a valuable corrective to contemporary discussions in modern philosophy and aesthetics.

Accounting Ethics Case
Panel Discussion
1:30 PM - 3:20 PM
Miriam Hall 119, O’Leary Auditorium
Advisor(s): Ronnie J Burrows

The ethics case will be related to sustainability, reporting on sustainability efforts, including related audits, of corporations is getting big in Europe and we are starting to see it in the U.S. The presenters of the earlier SBA presentation and luncheon presentation from KPMG will join us for the cases, along with some SBA alumni from the same firm.
Sustainability Within Local Governments: How cities across the U.S. can reduce expenditures with environmental solutions

Oral Presentation
Course Project 09 WI_MPA_555_01
Advisor(s): Michelle C Pauz
Student(s): Kyle W Moorman

Municipalities both large and small face a common enemy: unsustainable service costs. In a climate of economic and environmental uncertainty, local governments must provide more services with less revenue. By creating sustainable services and facilities, city officials can reduce overall costs to taxpayers and the environment. Two cities emerge with very different approaches to this issue. Chicago, Illinois created a citywide campaign for green building design and energy efficiency. Austin, Texas focuses their efforts on renewable energy avenues for residential and commercial entities. Both cities offer a very different approach to becoming sustainable cities; however, which approach is more practical for cities across the U.S.? My research will define which practice will work for cities across the country. I will also illustrate the impact these initiatives could have on cities depending on their size and available resources.

American Media Coverage of Genocide

Panel Discussion
Senior/Capstone Project
Advisor(s): Arthur J Jipson
Student(s): Monica F. DiGiandomenico

The project will examine the role of the North-American media during the Holocaust (1933-1945) and the Rwandan Genocide (1994). The talk will explore newspaper coverage during genocide, accuracy in reporting, and the ethical responsibilities of the media for promoting or discouraging international intervention; and activism and compassion in the general public. The project will evaluate how local radio and print media were used as a tool of propaganda and hate, encouraging neighbors to turn against each other. Bringing together journalists, new stations, commentators, and public opinions to identify and probe the extent of the way that the United States media shapes and packages news about genocide is obviously critical so history will not continue to repeat itself.

Barren Bowls

Oral Presentation
Honors Thesis
Advisor(s): Kathryn A Kinnucan-Welsch, Kyle E Phelps
Student(s): Ellen M Schneider

Ellen Schneider explores the research question "What learning activities support students in the artmaking process?" Ellen planned and implemented unit lessons in an urban Catholic grade school that helped the 7th grade students learn and create over the course of fourteen weeks. The lessons primarily focused on African pottery and were based on the thematic concept of hunger awareness. A review of the instructional process and the final products indicate that the process ultimately supported students in their own African inspired vessels and bowls.

Battered Women: Why Doesn’t She Leave?

Panel Discussion
Senior/Capstone Project
Advisor(s): Paul J Becker, Claire M Renzetti
Student(s): Caroline O McInerney

Student(s): Caroline O McInerney
Advisor(s): Paul J Becker, Shawn A Cassiman

The methodology used is content analysis and interviews with workers of the Artemis Center for women and women that sought help. This will help support determinations of why women either stay or leave their abusive relationships.

The Future of Physical Education

Oral Presentation
Course Project 09 WI_HSS_226_02
Advisor(s): Gerry J Gallo
Student(s): Michael M. Hyde, Lindsey M. Thompson

We will be presenting one of the future of the field of physical education. We will present predictions of how the jobs will either grow or decline in the next ten years.

Just Say Yes: An Investigation of Campus Drug Abuse

Panel Discussion
Senior/Capstone Project
Advisor(s): Arthur J Jipson
Student(s): James G Hollwedel

The University of Dayton has long been known for its parties and alcohol consumption. In 2002, in its first party school ranking since 1987, Playboy magazine gave the University an “honorable mention”, along with Penn State, OSU, and Texas. Students and faculty alike are very aware of the campus culture revolving around alcohol. However, not many people are aware of the other substance abuse that occurs on campus. During final weeks, it may be common practice for procrastinators to pop a Ritalin or Adderall pill before heading to the library for the night. Many students walking through the ghetto or past Serenity Pines encounter the distinct smell of marijuana drifting through the air. The administration focuses heavily on curbing students’ alcohol abuse, while little is mentioned about substance abuse. However, most students are unaware of the extent of drug use on our campus. As mandated by the Department of Education, the University conducts a similar survey every two years. However, the survey is administered by the University and therefore may alienate or intimidate students into not responding. The students who do in fact misuse or abuse drugs are less likely to participate in a survey about their illegal activities when the University itself conducts the research. They may fear reprisal from the University, law enforcement, or both. However, these same students may be more willing to take part in a similar survey when the researchers is a fellow student with no ties to the administration. In addition, a student researcher may be more in tune with the target population. The researcher hopes to find a more accurate picture of campus drug use and student perceptions and compare the results to the University’s own reports.

Media Portrayal and Societal Views of Single Motherhood

Panel Discussion
Senior/Capstone Project
Advisor(s): Paul J Becker, Shawn A Cassiman
Student(s): Caroline O McInerney

My Senior Project is focused on analyzing how contemporary films depict the family structure of single mothers. The percentage of births to unmarried women had steadily increased over the past decades and the trend may soon no longer be viewed as “nontraditional.” Through the analysis of an assortment of movies, I will attempt to understand if mothers varying in age, race, ethnicity and social class are depicted differently through their onscreen roles based on these demographic differences. I expect that my study’s findings will show that non-minority mothers are generally depicted with higher incomes, thus making their single parent status less of a significant struggle.

The New Slavery: Sex Trafficking in the United States

Panel Discussion
Senior/Capstone Project
Advisor(s): Arthur J Jipson
Student(s): Colleen S Bradrick

The project will examine the role of the North-American media during the Holocaust (1933-1945) and the Rwandan Genocide (1994). The talk will explore newspaper coverage during genocide, accuracy in reporting, and the ethical responsibilities of the media for promoting or discouraging international intervention; and activism and compassion in the general public. The project will evaluate how local radio and print media were used as a tool of propaganda and hate, encouraging neighbors to turn against each other. Bringing together journalists, new stations, commentators, and public opinions to identify and probe the extent of the way that the United States media shapes and packages news about genocide is obviously critical so history will not continue to repeat itself.

Barren Bowls

Oral Presentation
Honors Thesis
Advisor(s): Kathryn A Kinnucan-Welsch, Kyle E Phelps
Student(s): Ellen M Schneider

Ellen Schneider explores the research question “What learning activities support students in the artmaking process?” Ellen planned and implemented unit lessons in an urban Catholic grade school that helped the 7th grade students learn and create over the course of fourteen weeks. The lessons primarily focused on African pottery and were based on the thematic concept of hunger awareness. A review of the instructional process and the final products indicate that the process ultimately supported students in their own African inspired vessels and bowls.

Battered Women: Why Doesn’t She Leave?

Panel Discussion
Senior/Capstone Project
Advisor(s): Paul J Becker, Claire M Renzetti
Student(s): Caroline O McInerney

Society believes that the simple solution would be just to leave, and usually looks down on women who stay in abusive relationships. This research project addresses the issue of why or why don’t women leave their abusive relationships. It discovers the factors of a battered woman’s decision to stay or leave their relationship. There are many factors that contribute to a woman’s decision and leaving is a much more difficult decision to make. The methodology used is content analysis and
Sex trafficking is no longer just a problem in foreign, troubled countries. It has transcended borders and is now a bigger problem in the United States than most citizens realize. There are factions of trafficking in just about every major city in America, and many small towns. Women are being abducted or lured from their poor native countries, and being sold to men in the U.S. where they are sold to work in strip clubs or pimped out to other men for profit. These women are trapped into believing that they have no other option but to do what these men tell them. Additionally, more and more young, American women are being trafficked. In most cases, it begins the same: the young girl falls in love with an older man, who then takes advantage of her. Whether the woman is foreign or domestically born, the outcome is the same: she is severely abused mentally, physically, and sexually.

**Women and International Development: Understanding the Gendered Impacts of the Economy and the Environment**

Panel Discussion
2:00 PM - 3:00 PM
Course Project 09_WI_POL_340_01
LTC Meeting Space
Advisor(s): Natalie Florea Hudson
Student(s): Mary E Aggazio, Christine J Back, Lindsey A. Engle, Susan M Gilbert

As part of a research project for the course, Gender and International Relations, this panel of students will be exploring the gendered complexities that underscore the most urgent challenges facing the global economy and the global environment, from women in the labor force to climate change. Student panelists will examine economic and environmental issues from a gender-sensitive lens, highlighting the ways that men and women are affected differently and how gender roles significantly impact these global phenomena. The topics covered by this panel will be particularly relevant as the international community adapts to a shifting political economy— one where some of the most detrimental consequences are suffered disproportionately by the world’s women.

**Women’s Experiences of Rape in Times of War and Conflict**

Panel Discussion
2:00 PM - 3:00 PM
Senior/Capstone Project
St. Joseph’s Hall 013
Advisor(s): Paul J. Becker, Claire M Renzetti
Student(s): Pam J. Morelli

The experiences of women during times of war are often extremely violent; however, these stories are often not told due to the normalization of these experiences throughout the history of militarized conflicts. One such experience that does not usually receive attention on either a local or world stage is that of the rape of women by enemy combatants during such conflicts. Such rapes may occur for a multitude of reasons, but at the base it is just a way of playing into already existing cultural and societal norms that celebrate the dominance of men and the subjugation of women. This paper seeks to explore how women's experiences are explained and set down into recorded through and examination of two different news sources and their reports of rapes during conflicts. A mainstream news source, The New York Times, and a feminist news source, Women’s enews, will be compared on their reportage of similar news events to see if there are differences in how they report women’s experiences in war.

**The Challenges of Diplomacy and Peacemaking in Contemporary Conflicts: The Roles of Third Parties**

Oral Presentation
2:00 PM - 4:30 PM
Course Project 09_WI_POL_300_02
Mariannet Hall 217
Advisor(s): Margaret P. Karns

This session features presentations of individual and group projects examining diplomacy and peacemaking efforts in a number of difficult contemporary conflicts. Cases include the war in the Democratic Republic of Congo that has claimed more lives than any war since World War II, involved horrific and widespread violence against women as well as extensive looting of DRC’s rich natural resources, and at its height drew in armies from nine other African countries; the long-running conflict between India and Pakistan over Kashmir; and the conflicts in Uganda, Cote d’Ivoire, Sierra Leone, Colombia, Nicaragua, El Salvador, and Guatemala. Other presentations will focus on the role of prominent individuals and ad hoc groups of countries as mediators and peacemakers such as former US President Jimmy Carter, former US Senator George Mitchell, and Sir David Owen in the former Yugoslavia, Northern Ireland, and the Middle East, and the Six Party Group dealing with North Korea.

**Davis Center for Portfolio Management Team**

Oral Presentation
2:30 PM - 3:20 PM
Module Hall 118, Davis Center
Advisor(s): Robert D. Dean, David A Sauer
Student(s): Joseph W Recker, Anthony W Sirabella, Anna C Sorg

Members of the Davis Center for Portfolio Management Team will talk about the various opportunities that are available within the Davis Center for Portfolio Management. The presentation will highlight the various resources that are available within the Davis Center, the $80.0 million Flyer Investments Fund and the University of Dayton and United Nations Global-Compact R.I.S.E. (Redefining Investment Strategy Education) Forum.

**Fifth Third Bank Dashboard Project**

Oral Presentation
2:30 PM - 3:20 PM
Senior/Capstone Project
Miriam Hall 214
Advisor(s): Harvey G. Enns, Arthur R. Santoianini
Student(s): Jameelah A. Abdul-Zahir, Allison L. Leonard, Jefferson A. Webster

The UD MIS Senior project team built three executive dashboard prototypes for three Fifth Third Bank lines of business (LOBs): Merchant LOB, Commercial LOB and Financial Institutions LOB. The student team designed these informational dashboards with Xcelsius (a software development tool owned by Business Objects). Each dashboard differs based on specific customer requests. The dashboards allow business customers to have a high level view of relevant data, as well as enable them to “drill down” into lower-level data. The project objective was to deliver valuable tools to Fifth Third’s business customers. The dashboards are expected to help improve new customer acquisition and retention.

**Flyer Enterprises 2.0: Marketing in the Digital Age**

Oral Presentation
2:30 PM - 3:20 PM
Independent Research
Miriam Hall 207
Advisor(s): John W Shishoff
Student(s): Carmon D Bens, Lauren E Clarisey, Gerald C Stoffl

Flyer Enterprises is integrating technology into all aspects of its student-run company. This interactive session will focus on the various ways the Internet is changing the way Flyer Enterprises advertises and communicates with its customers.

**Montgomery County Family and Children First Council Indicators Web Site Update**

Oral Presentation
2:30 PM - 3:20 PM
Senior/Capstone Project
Miriam Hall 214
Advisor(s): Harvey G. Enns, Arthur R. Santoianini
Student(s): Darren J. Geiser, Nicholas A. Morton, Letitia Sharp

The Montgomery County Family and Children First Council (MFFC) is part of a non-profit organization that seeks to benefit those in the Montgomery County and Miami Valley area. An MIS Senior Project team modified the FCFC Indicators web site to be more user-friendly and intuitive.
site so the display of relevant data and statistics was enhanced for the users of the FCFC Indicators web site to make more effective and informed decisions.

**Operations Management Senior Capstone: Transeo Global Vehicle Solutions**

**Oral Presentation**

2:30 PM - 3:20 PM

Senior/Capstone Project

Miriam Hall 103

Advisor(s): Michael F Gorman, John J Kanet

Student(s): Merek W Aman, Andrew T Blankemeyer, Kevin M Brandner

Transeo Global Vehicle Solutions is an early-stage venture business that offers armored vehicles to a wide variety of customers through their cash-in-transit and discreet armored production lines. CEO Alan Farah started this business in 2003 to provide high quality armored vehicle manufacturing and engineering. Transeo has experienced rapid growth in the last few years and has adapted to this growth by moving to a new 65,000 square foot facility in New Carlisle Ohio. Along with the new facility Transeo has grown to employ around 100 employees, and this number is expected to increase by 30 or 40 in the next year. The purpose of our project is to evaluate and re-engineer certain manufacturing / business processes, and to develop supporting manufacturing documentation to ensure a culture of processing for quality rather than inspecting for quality. We will use many tools such as Process Model and Microsoft Excel in performing this analysis. In each station of production we plan to provide Transeo with: a written documentation of each job task, pictures/visual aids to accompany the text, key tolerances that need to be noted, a list of parts, tools, and equipment that are to be used, and any quality control standards that need to be listed. We will compare these findings with their bills of materials and make any necessary modifications.

The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and close a for-profit company.

**Oral Presentation**

2:30 PM - 3:20 PM

Course Project 08_FA_MGT_220_01

Miriam Hall 109

Advisor(s): Robert F Chelle

Student(s): Clifford J. Babcock, Andrew J. Cracchiolo, Ross D. Fumagalli, Jeffrey P. Gast, Jennifer M. Hannan, Rachel F. Kerr, Mark W. McCausland, Morgan L. Metz, Alisa D. Monahan, Zachary J. Perkinson, Robert J. Starrett, Evan R. Whidden

The nationally claimed University of Dayton ‘Sophomore Entrepreneurial Experience’ course is a linked two semester course for sophomore majors in our School of Business Administration. Besides attending normal classroom lectures throughout the academic year, students propose, vote, team, launch, operate and close for-profit companies under the direction of an experienced professor and entrepreneur. For the 2008/2009 academic year, there are twelve micro-companies operating, offering a variety of products. The effort concludes with presentations to 18 local entrepreneurs who make judgments about written business plans, implementation of plans and outcomes.

**Standard Register Optimizes Its Print Production and Logistics Costs**

**Oral Presentation**

2:30 PM - 3:20 PM

Senior/Capstone Project

Miriam Hall 103

Advisor(s): Michael F Gorman

Student(s): Julie K Bennett, Matthew R Kleingers, Ashley L Kott

Standard Register is a document management company that has been experiencing a steady decline in the sales of their jumbo roll printing operation. Standard Register came to our group looking for a way to optimize the job assignments and batch sizes of their production in this line. Our proposal will develop strategic job allocation rules for the jumbo roll printing operations. The rules will be guidelines that will manage capacity and transportation costs generated from the jumbo roll orders. Our strategic rules will effectively utilize the available capacity of production equipment in a way that will maximize production margins.
Adiponectin, a hormone secreted exclusively by adipose tissue, has been implicated in health and body composition issues in many animals, but not yet in dogs. Adiponectin characteristically shows a counterintuitive negative correlation with an individual's Body Mass Index (BMI). This study tests any correlation between serum adiponectin concentration and three indicators of body fat in dogs: BCS, percent whole body fat, and grams whole body total fat. No such correlation was observed between these variables and serum adiponectin concentration in Labrador Retrievers fed an adult maintenance diet. Serum adiponectin concentrations also showed no anticipated average difference between male and female dogs, instead remaining fairly consistent across gender.

Alcohol & Drug Abuse Prevention Team (ADAPT) 2009 Research Project Underclassmen “Sanctioned” Drinking Trends vs. Upperclassmen non sanctioned Drinking Habits

Through the Alcohol & Drug Abuse Prevention Team (ADAPT) a research cohort of undergraduate students was comprised to study alcohol and drug abuse across the student body at the University of Dayton. The first group of participants consisted of first and second year students who were sanctioned by the Office of Community Standards and Civility for their infractions against The University’s Alcohol and Drug Policies. The second group consisted of juniors and seniors living in the student neighborhood (formerly known as the “Ghetto”) who randomly volunteered to participate. Participants (N=246) completed a self report questionnaire regarding their individual alcohol consumption and drinking habits. These ADAPT researchers hypothesize that sanctioned underclassmen may under report their alcohol consumption in an attempt to “save face” or “fake good” (as on the MMPI-2) in light of their sanctions whereas the non sanctioned upperclassmen would likely report with more accuracy their alcohol consumption and drinking habits. The comparative results of the data showed that the sanctioned students appeared to under report their current alcohol consumption and drinking habits. Overall these research findings suggest these students may fear the disciplinary repercussions of reporting their alcohol use accurately and thus under report their actual use.

Alcohol Free Alternative Programming

College is a time when young adults are on their own for the first time and begin exploring the idea of using alcohol as the main inroad to social engagement. It is important to design and offer alcohol-free social activities for college students without the use of alcohol. Alcohol on college campuses has been seen as a primary means to engage in fun, social activity. Because of this, alcohol has become a serious problem among college students and is beginning to impact their lives in a negative light. According to the National Institute on Alcohol Abuse and Alcoholism, over 40% of U.S. college students have engaged in high-risk drinking. This number may not be overly alarming to some, but it can be suggested that it leads to other problems for college students, possibly the use of other, more serious drugs. An average of 1,700 college students die from alcohol related injuries each year. Aside from potential life threatening issues, The 2006 Monitoring the Future Survey also
found that over 25% of college students have seen major declines in their grades and unwillingness to attend class that will ultimately have severe impacts on the success they could have once out of school. We will examine two alternative activities at the University of Dayton, Stander Cup, a student conducted event that hosts over 300 university students and offers an alternative for student social activity. The event is hosted by the Campus Recreation Center and offers a series of physical and mental challenges designed to show students there other forms of fun social engagement that do not include alcohol.

The second activity is the Flick and Float, which allows students to float in the pool while watching a movie. These events have proven to be a successful and fun for the Dayton students.

**AIGAn Schotky Devices**

**Independent Research**

**Undergraduate - Individual**

**Student(s): Anthony D. Di Mascio**

GaN and AIGaN are attractive wide bandgap semiconducting materials for electronic and optoelectronic devices such as high-power FET and UV- laser diodes. Much progress has been made in characterizing defects in GaN and AIGaN. However, little has been reported on effects of defects on Schotky contacts on AIGaN. In this paper, capacitance-voltage (C-V) and conductance-voltage (G-V) characteristics are performed to investigate properties of Au-AIGaN contacts on Si-doped AIGaN films, grown by radio-frequency plasma assisted molecular beam epitaxy. From an analysis of 1/C2 vs V, the doping concentration, built-in potential, and the barrier height were determined to be ND = 2.4x10^16 cm^-3, Vbi = 1.30 V, and FB = 1.42 eV respectively.

---

**America’s Original Past Time: Lacrosse**

**Course Project 09_WI_HSS_275_01**

**Undergraduate - Individual**

**Advisor(s): George M DeMarco**

**Student(s): Ashley E. Powers**

The purpose of this study was to describe the history of lacrosse, and how it evolved to be the sport that it is today. Lacrosse is the oldest North American sport. The evolution of lacrosse into the modern game that is played today began when Jean de Brebeuf, a Jesuit missionary, documented a game between the Huron tribe in 1636. Then in 1867, the game was standardized by a Canadian dentist, W. George Beers, with the adoption of set field dimensions, limits to the number of players per team, and other basic rules. Currently, lacrosse is the fastest growing sport in the United States and is the second most watched NCAA Men’s National Championship. In the 2008 NCAA Division I Men’s Lacrosse Championship, a record crowd of 48,970 cheered while Syracuse won yet another title. Also, the professional players, such as Paul Rabil, are receiving the most watched NCAA Men’s National Championship. In the 2008 NCAA Division I Men’s Lacrosse Championship, a record crowd of 48,970 cheered while Syracuse won yet another title. Also, the professional players, such as Paul Rabil, are receiving.

---

**“And That’s a Winner!” The History of the St. Louis Cardinals**

**Course Project 09_WI_HSS_275_01**

**Undergraduate - Individual**

**Advisor(s): George M DeMarco**

**Student(s): Andrew R. Jolley**

The purpose of this research paper is to provide a detailed history of the St. Louis Cardinals baseball organization. The St. Louis Cardinals are one of the most successful teams in Major League Baseball. The organization has won ten World Series Championships in its long storied history. Many great players have played for the organization including Stan “The Man” Musial and Ozzie Smith. Not only is the team well known for its Hall of Fame players but also for its broadcasters which included Harry Caray and Jack Buck. The organization has made its home in three different ballparks starting with Sportsman’s Park in 1920, then moving to Busch Stadium in 1966, and finally into the new Busch Stadium in 2006 which was capped off with a World Series victory over the Detroit Tigers. The St. Louis Cardinals are a first class franchise and this leads to an overwhelming fan base that stretches across the country, known as Cardinal nation.

---

**Antagonistic interaction of L and hth to define ventral eye boundary is independent of the exd function.**

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Amit Singh, Dr. Madhuri Kango-Singh**

The geographical range of unisexual Ambystoma overlaps with four bisexual mole salamander species that also breed in spring ponds. Several of these species are of conservation concern, and both adults and larvae can be difficult to distinguish morphologically from unisexuals. Mole salamanders are often sampled as larvae, a life stage during which bisexual species identity is also challenging. Here we present a rapid molecular method for screening larvae which is most similar to A. barbouri. A 258 basepair segment of the cytochrome b gene was amplified in six Ambystoma species and exemplar unisexuals for PCR using taxon-specific primers.

---

**And That’s a Winner!” The History of the St. Louis Cardinals**

**Course Project 09_WI_HSS_275_01**

**Undergraduate - Individual**

**Advisor(s): George M DeMarco**

**Student(s): Andrew R. Jolley**

The purpose of this research paper is to provide a detailed history of the St. Louis Cardinals baseball organization. The St. Louis Cardinals are one of the most successful teams in Major League Baseball. The organization has won ten World Series Championships in its long storied history. Many great players have played for the organization including Stan “The Man” Musial and Ozzie Smith. Not only is the team well known for its Hall of Fame players but also for its broadcasters which included Harry Caray and Jack Buck. The organization has made its home in three different ballparks starting with Sportsman’s Park in 1920, then moving to Busch Stadium in 1966, and finally into the new Busch Stadium in 2006 which was capped off with a World Series victory over the Detroit Tigers. The St. Louis Cardinals are a first class franchise and this leads to an overwhelming fan base that stretches across the country, known as Cardinal nation.

**Antagonistic interaction of L and hth to define ventral eye boundary is independent of the exd function.**

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Amit Singh, Dr. Madhuri Kango-Singh**

Drosophila eye. Drosophila eye anlagen initiates with a ventral ground state on which the dorsal eye fate is established. The members of Notch signaling pathway, Lobe (L) and Serrate (Serr), play an important role in ventral eye growth and development. We identified homochochrome (hth), a M class gene of class, as a strong enhancer of the L mutant phenotype. Loss-of-function of hth, a negative regulator of eye development, results in ectopic eye enlargements only in the ventral eye margin. This phenotype is complementary to the loss-of-ventral-eye phenotype of L mutants. hth forms a heterodimeric complex with Exd, which is required for their translocation to the nucleus. We were interested to see if Exd and hth show genetic and functional interactions. Loss-of-function clones of L in the ventral eye showed ectopic nuclear localization of Exd. To test whether L mutant phenotype is an outcome of Exd nuclear localization, we generated random loss-of-function clones of L in exd mutant background and vice versa. LOF clones of L in exd heterogeneous mutant background showed loss of ventral eye which was contrary to what we see in hth. Our results suggest L antagonistically interacts with hth to define the ventral eye boundary, and this interaction is independent of exd function.

**The application of molecular techniques for identifying Ambystoma salamanders**

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

The application of molecular techniques for identifying Ambystoma salamanders

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

The application of molecular techniques for identifying Ambystoma salamanders

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

The application of molecular techniques for identifying Ambystoma salamanders

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

The application of molecular techniques for identifying Ambystoma salamanders

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

The application of molecular techniques for identifying Ambystoma salamanders

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

The application of molecular techniques for identifying Ambystoma salamanders

---

**The application of molecular techniques for identifying Ambystoma salamanders**

**Graduate Research**

**Graduate - Individual**

**Advisor(s): Patrick K Williams**

**Student(s): Elizabeth A Rhoads**

The geographical range of unisexual Ambystoma overlaps with four bisexual mole salamander species that also breed in spring ponds. Several of these species are of conservation concern, and both adults and larvae can be difficult to distinguish morphologically from unisexuals. Mole salamanders are often sampled as larvae, a life stage during which bisexual species identity is also challenging. Here we present a rapid molecular method for screening larvae which is most similar to A. barbouri. A 258 basepair segment of the cytochrome b gene was amplified in six Ambystoma species and exemplar unisexuals for PCR using taxon-specific primers. An internal 113 basepair segment was amplified only in unisexuals and A. barbouri using Universal forward and Hybrid reverse primers. Multisequence alignment comparing the nucleotide sequence where Hybrid reverse primer anneals revealed nucleotide diversity in this region among Ambystoma species.

To determine species identity three microsatellite loci that have different allelic size ranges among species were PCR amplified in individuals found to be bisexual. This simple method for differentiating between unisexuals and bisexuals, and identifying mole salamander species with nuclear genes, can be applied prior to further research on these declining species.

---

**Applying the Standards and European Framework to Communicative Language Teaching**

**Honors Thesis**

**Undergraduate - Individual**

**Advisor(s): Isabel J Cavour**

**Student(s): Sara K Storti**

Traditionally Europeans are known for being multilingual and for learning multiple languages at young ages. In the United States 2005 was declared the “Year of Languages” in order to promote our development of bi- and multilingual education.
Due to the standards for foreign language learning developed by the American Council on the Teaching of Foreign Languages, the foreign language education programs in the United States, more specifically in Ohio, are very well developed in theory. However, students that come out of American programs are at a significantly lower level of proficiency than most European students. This study is based on the application of the standards, the classroom focus on the ability of the students to use and understand all facets of the language, and provides an overview of where language programs are, and suggestions for producing proficient students.  

Arsenic in Groundwater
Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Richard A Bendula
Student(s): Jessica Osborne

Arsenic is a know carcinogen and is the 30th most abundant element in the Earth’s crust. Arsenic is present in soils and rocks as trace minerals absorbed onto iron hydroxide compounds (R.T. Wilkin). A ground water study was conducted in Preble County located in the southwestern part of Ohio directly west of Montgomery County. Twenty wells in an evenly distributed area were selected for sampling. Based on the results of the study, 70% of wells in the study area detected arsenic while 40% exceed the drinking water standard of 10 ppb. The county lies within the glaciated region of Ohio. It is important to recognize that the county is covered with varying thicknesses of glacial drift. The bedrock consists of Silurian aged limestone and interbedded limestone and calcarious shales of Ordovician age. The targeted area of study is dominated by 3 main aquifer types. Thick clays with lenses of sand and gravel, interbedded shales and thin limestone, and permeable sand and gravel deposits (ODNR). The water samples were analyzed for both field and lab parameters. The field parameters include: pH, Salinity, Temperature, specific conductance, ORP, Resistivity, TDS, ammonia, and total hardness. Lab parameters include: Arsenic, Iron, and Nitrate. These parameters were used to determine if the presence of arsenic correlates with iron, ammonia and negative ORP. This correlation held true for roughly 80% of the wells that tested positive for arsenic. Soluble arsenic occurs in groundwater as As(3+) and As(5+). Under mildly reducing conditions As(3+) occurs and is iron is reduced to ferrous hydroxides. As(3) is the most toxic form of Arsenic. Fifty percent of the arsenic detected occurs as As(5+) while 75% of the wells tested had a negative value for ORP. This data does not demonstrate a strong correlation between a reducing environment and the presence of arsenic.

Assessing Wetland Plant Community Quality with a Vegetation Index of Biotic Integrity
Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Donald R Geiger
Student(s): Jacklyn C. Paulik

Student(s): Jacklyn C. Paulik
Advisor(s): Richard A Bendula

Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Jennifer L Kavanaugh
Student(s): David R. Skuta

Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Amy R Ciric
Student(s): Laura B Ebetino

Assessment of the Potential for Pyrolysis of Waste Plastics in Dayton, Ohio
Honors Thesis
1:00 PM
Kennedy Union Ballroom
Advisor(s): Sukhjinder S Sidhu
Student(s): Jenna C. Heinik

Due to the standards for foreign language learning developed by the American Council on the Teaching of Foreign Languages, the foreign language education programs in the United States, more specifically in Ohio, are very well developed in theory. However, students that come out of American programs are at a significantly lower level of proficiency than most European students. This study is based on the application of the standards, the classroom focus on the ability of the students to use and understand all facets of the language, and provides an overview of where language programs are, and suggestions for producing proficient students.

The Best of Both Worlds: The Entertaining and Informative Aspects of The 2008 General Election Campaign Ads
Course Project 08_FA_POL_300_01
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Kathleen B Watters
Student(s): Hope L Smalls

Campaign ads are like Miley Cyrus, you either love em or hate em as they roll across your television screen. During the 2008 general election period, campaign ads were a part of every day life for millions of television viewers. Each of the ads were created to persuade voters to vote either for the candidate or against the candidate. In order to accomplish these goals the creators of the ad must effectively use verbal and nonverbal content, and television production characteristics (Kaid 284). These three components compose what we refer to as video style.

Biomass to Energy Through Dairy Waste Anaerobic Digestion
Course Project 09_WI_CME_499_03
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Amy R Ciric
Student(s): Laura B Ebetino

Assessing Wetland Plant Community Quality with a Vegetation Index of Biotic Integrity
Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Richard A Bendula
Student(s): Jacklyn C. Paulik

Adaptive management is a structured, repetitive process of decision-making in the context of environmental uncertainty with the goal of reducing uncertainty over time through close monitoring of ecosystem conditions. In this approach, data is repeatedly collected on ecosystem status (monitoring) and evaluated to determine whether management decisions (restoration activities) require adjustment to stay on a desired "trajectory" of ecosystem development. The careful assessment of regularly-collected monitoring data, evaluated for progress toward desired restoration goals is the key to the strategy. Over time, this "learning by doing" (as adaptive management is sometimes described) should result in a restored ecosystem with attributes that closely match either natural reference sites or a "designer ecosystem" deemed suitable for our particular restoration site. It is estimated that more than half of the original wetlands in the world have been lost to drainage projects and human development projects. The state of Ohio has lost about 90% of its historic wetlands. Thus, both wetland protection and the ability to create and restore wetlands and their supporting aquatic environments are vital areas for continued study. A local management approach to a created wetland in Creeksides Reserve, Greene County, Ohio owned by the Greene County Park District. We report here on an assessment of wetland quality using the Vegetation Index of Biotic Integrity. This constitutes the first monitoring event of what will be a multi-year long-term study of wetland restoration at the site.

Bodybuilding: A History of the “Steroid-induced” Sport
Course Project 09_WI_HSS_275_01
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): George M DeMarco
Student(s): Joseph M. Hars

As plastic consumption increases, generation of waste and feedstock availability have become important considerations. The pyrolysis of plastic waste has recently emerged as a new technology for conversion of waste into raw materials. This technique uses thermal or catalytic cracking to return the plastic to a mixture of products with the potential for producing diesel oil or other fuels. After reviewing and commenting on the available technology, data on the local plastic waste stream in and around Dayton, Ohio, was collected in order to determine the applicability of pyrolysis as a waste management method. Discussion and recommendations are also extrapolated for conditions that would improve the suitability of this technology for the area.

Fossil fuels have been important to society for many years; however, this is a resource that is limited and alternative forms of energy will need to be identified. This resource is not only increasing steadily in cost, but its continued use also creates many environmental challenges. Therefore, alternative methods of energy generation are being pursued. Anaerobic digestion is one environmentally friendly process that converts biomass material into methane. A study was conducted to investigate the economic feasibility of installing an anaerobic digester at a local dairy farm. Cow manure and trace amounts of straw bedding were fed into this system, and the amount of methane generated by this resource via this process was calculated. Various digester types, including plug flow, continuously stirred, and batch were considered. By determining a hydraulic retention time, the optimal reactor size was calculated for each type and the cost of installation and operation was estimated. The appropriate size of each digester for the dairy farm’s daily operations was also taken into account. Furthermore, different options were investigated on how to treat the methane after it was produced to maximize the amount of power generation at a minimal cost. Although the process may not be economically viable, because of the small size of the farm, anaerobic digestion does have a lasting environmental benefit. It could also offer one more important option within society’s overall need to defeat our current energy crisis.

Bodybuilding: A History of the “Steroid-induced” Sport
Course Project 09_WI_HSS_275_01
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): George M DeMarco
Student(s): Joseph M. Hars

Due to the standards for foreign language learning developed by the American Council on the Teaching of Foreign Languages, the foreign language education programs in the United States, more specifically in Ohio, are very well developed in theory. However, students that come out of American programs are at a significantly lower level of proficiency than most European students. This study is based on the application of the standards, the classroom focus on the ability of the students to use and understand all facets of the language, and provides an overview of where language programs are, and suggestions for producing proficient students.  

Arsenic in Groundwater
Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Richard A Bendula
Student(s): Jessica Osborne

Arsenic is a know carcinogen and is the 30th most abundant element in the Earth’s crust. Arsenic is present in soils and rocks as trace minerals absorbed onto iron hydroxide compounds (R.T. Wilkin). A ground water study was conducted in Preble County located in the southwestern part of Ohio directly west of Montgomery County. Twenty wells in an evenly distributed area were selected for sampling. Based on the results of the study, 70% of wells in the study area detected arsenic while 40% exceed the drinking water standard of 10 ppb. The county lies within the glaciated region of Ohio. It is important to recognize that the county is covered with varying thicknesses of glacial drift. The bedrock consists of Silurian aged limestone and interbedded limestone and calcarious shales of Ordovician age. The targeted area of study is dominated by 3 main aquifer types. Thick clays with lenses of sand and gravel, interbedded shales and thin limestone, and permeable sand and gravel deposits (ODNR). The water samples were analyzed for both field and lab parameters. The field parameters include: pH, Salinity, Temperature, specific conductance, ORP, Resistivity, TDS, ammonia, and total hardness. Lab parameters include: Arsenic, Iron, and Nitrate. These parameters were used to determine if the presence of arsenic correlates with iron, ammonia and negative ORP. This correlation held true for roughly 80% of the wells that tested positive for arsenic. Soluble arsenic occurs in groundwater as As(3+) and As(5+). Under mildly reducing conditions As(3+) occurs and is iron is reduced to ferrous hydroxides. As(3) is the most toxic form of Arsenic. Fifty percent of the arsenic detected occurs as As(5+) while 75% of the wells tested had a negative value for ORP. This data does not demonstrate a strong correlation between a reducing environment and the presence of arsenic.

Assessing Wetland Plant Community Quality with a Vegetation Index of Biotic Integrity
Independent Research
1:00 PM
Kennedy Union Ballroom
Advisor(s): Donald R Geiger
Student(s): Jacklyn C. Paulik

Adaptive management is a structured, repetitive process of decision-making in the context of environmental uncertainty with the goal of reducing uncertainty over time through close monitoring of ecosystem conditions. In this approach, data is repeatedly collected on ecosystem status (monitoring) and evaluated to determine whether management decisions (restoration activities) require adjustment to stay on a desired "trajectory" of ecosystem development. The careful assessment of regularly-collected monitoring data, evaluated for progress toward desired restoration goals is the key to the strategy. Over time, this "learning by doing" (as adaptive management is sometimes described) should result in a restored ecosystem with attributes that closely match either natural reference sites or a "designer ecosystem" deemed suitable for our particular restoration site. It is estimated that more than half of the original wetlands in the world have been lost to drainage projects and human development projects. The state of Ohio has lost about 90% of its historic wetlands. Thus, both wetland protection and the ability to create and restore wetlands and their supporting aquatic environments are vital areas for continued study. A local management approach to a created wetland in Creeksides Reserve, Greene County, Ohio owned by the Greene County Park District. We report here on an assessment of wetland quality using the Vegetation Index of Biotic Integrity. This constitutes the first monitoring event of what will be a multi-year long-term study of wetland restoration at the site.
The purpose of this study was to describe the history of bodybuilding as well as the nutritional and physical advancements that have made bodybuilding a competitive sport today. What was once a sign of being physically fit in the Greek and Roman culture, the same ideas of competitiveness are present in today’s competitive bodybuilding sport. Today, bodybuilding is commonly associated with steroids, but there still remains a large group of individuals who are naturally bodybuilders. The research was conducted using primary sources such as interviews, newspaper articles, photographs, encyclopedias, and autobiographies as well as secondary sources such as secondary accounts and online websites. An expansive history of bodybuilding as well as the objective discussion of the use of steroids will be provided in this presentation.

Cervical Cancer, HPV, and the HPV Vaccine: How much do we really know?
Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Jayne B Robinson
Student(s): Meredith R Pesce

Cervical cancer is a leading killer of women around the world. While Papanicolasou (Pap) smear screenings have helped to significantly reduce the incidence of this disease in the United States, new treatments have been developed to further improve prevention. The Human Papillomavirus (HPV) vaccine aims to protect young women from contracting four strains of HPV that cause 70% of cervical cancer and 90% of genital warts. While the HPV vaccine has the potential to be radically more effective than the Pap smear, questions about its effectiveness remain unanswered. I undertook various research methods in order to explore these questions, determine how much is known about this new drug treatment, and decide whether the HPV vaccine will be more effective than current screenings in preventing cervical cancer in the U.S.

Classic Convention or Aesthetic Objection? A Juxtaposition of Public Art in Urban Environments and the Contemporary Installations of Spencer Tunick
Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Roger J Crum
Student(s): Melissa A Stawasz

Since 1992 the contemporary artist Spencer Tunick has been shocking public audiences with his large-scale, public installations in which thousands of individuals pose nude for his photographs that are both public art of the moment and, through their documentation, of record. Public art is nothing new, yet what Tunick engages in is a public art that variously challenges time-honored perceptions and convictions about what public art is or ought to be. Tunick’s art has received an enormous amount of media attention due to the controversy surrounding his work. This thesis provides a look into the realm of public art throughout history, the contentions surrounding such art, and Tunick’s intentions as an artist working in the public realm; it asks and answers the question whether Tunick is actually adhering to conventional public art practices or objecting to the traditional means of creating public art that has been established by artists before him.

Combating Modern Day Slavery: The Realities of Anti-Trafficking Efforts
Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Margaret P Karns
Student(s): Katerina M Vujea

This thesis explores the transnational issue of human trafficking, how the issue has been thus far addressed, and what has prevented anti-trafficking efforts from achieving more substantial results. It focuses on determining who the major players in the anti-trafficking movement have been, what actions they have taken, and where they have fallen short. My research has involved a review of key human trafficking documents; a comparison between the efforts taken in the anti-trafficking movement and the very successful violence against women movement; interviews with professors, representatives from nongovernmental organizations, and government officials; and an examination and analysis of the scope of the problem as a whole.

The Come Back Kid: Josh Hamilton
Course Project 09_W1_HOC_275_01
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Paul M Schulze

The purpose of this study was to describe the life and times of Josh Hamilton, who was the first selection of the Tampa Bay Devil Rays in the 1999 Major League Draft. After the promising start of his career, he suffered a knee injury in 2000 and become addicted to heroin. Suspend for the 2004 season and completely out of baseball he sought recovery and with the support of his wife and family found his way back in to Major Leagues in 2007 and has since become a dominant player for with the Texas Rangers. Research was conducted utilizing primary and secondary sources including interviews, photographs, video analysis, baseball statistics, and observations. Josh Hamilton, who processed amazing baseball talent but suffered severely from his self-imposed addiction but ultimately found recovery has lived a life from which many lessons can be learned.

Creekside Fen: Land Use and Its Impact on Biotic Integrity
Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Donald R Geiger
Student(s): Anna E Heink

Land disturbances stemming from increased urbanization present new challenges to the protection, management, and restoration of natural areas. Critical to maintaining and improving ecosystem functions is an understanding of the ways in which human land use influences environmental quality. This project investigates the impact of historical land use on the biotic integrity of a wetland fen at the Creekside Reserve, located in Greene County, Ohio. Agricultural practices, mill construction, and the construction of adjacent railroads, highways, and sewer pipelines, are among the various land-use factors considered in this study. A variety of environmental assessment techniques were employed in this investigation, in addition to dendrochronology, and analysis of historical land survey records.

The Crystal Structure of Neisseria Gonorrhoeae PriB Reveals Insights into Interactions within the Neisseria Gonorrhoeae Replication Restart Primosome
Graduate Research
1:00 PM
Graduate - Individual
Kennedy Union Ballroom
Advisor(s): Matthew E Lopper
Student(s): Jinlan Dong

DNA is a marvelouse storage device of genetic information, and its complete and faithful duplication is essential for the propagation of life. However, the integrity of DNA is often marred by DNA damage arising from the environment or from cellular metabolism. Regardless of the sources, DNA damage can disturb processes that read and copy the genetic information. In order to survive, cells must be able to repair the damage of DNA replication following encounters of the replication machinery with damaged DNA. In bacteria, this process is known as DNA replication restart and it involves a set of proteins called primosome proteins. Neisseria gonorrhoeae, a medically important bacterium, is heavily dependent on DNA replication restart pathways to survive in host cells. Here, we describe a high-resolution crystal structure of a Neisseria gonorrhoeae DNA replication restart primosome protein called PriB. PriB is a homodimer that is comprised of a single structural domain consisting of two oligosaccharide/oligonucleotide binding (OB) folds. PriB is a single-stranded DNA-binding protein that binds single-stranded DNA via the classic ligand binding surface of its OB folds. Furthermore, PriB has a direct and robust physical interaction with another primosome protein called PriA. The high affinity of Neisseria gonorrhoeae PriA and PriB lies in stark contrast to the low affinity interaction observed between EcoK PriA and PriB proteins and might represent a way in which the replication restart machinery of Neisseria gonorrhoeae has become specialized to help Neisseria gonorrhoeae cells respond to oxidative damage to their DNA.
Dean Karnazes: The Ultramarathon Man  
Course Project 09_W1_HSS_275_01  
Undergraduate - Individual  
Advisor(s): George M DeMarco  
Student(s): Kathleen M Eddingfield

The purpose of this study was to describe the history and tradition of Dean Karnazes, the Ultramarathon Man. Karnazes has risen to achieve, what is seen by some to be the “impossible”. Karnazes has pushed his body through maximum heat and cold weather. Karnazes won the Badwater Ultramarathon, a 135 mile race with average 130 degree weather, in 2004 in Death Valley. Also, when a marathon was allowed at the South Pole, Dean was one of five people to pay $25,000 dollars to run in negative 40 degree weather. The achievement Karnazes is most famous for is his completion of 50 marathons in 50 days in 50 states in 2006. Karnazes began his 50 marathons in St. Louis in September 2006 and ended at the NYC Marathon in November 2006. The research for this study was conducted through primary sources including video footage, interviews, and biographies and secondary sources. The accomplishments of Dean Karnazes are inspiration to all athletes and those with a desire to become athletes.

**Design and Implementation of an Advanced 3D Audio Communication System**  
Honors Thesis  
Undergraduate - Individual  
Advisor(s): Dale E Courte  
Student(s): Christopher M Pitstick

Three-dimensional audio has existed for quite awhile in the scientific and engineering community. However, only recently have computers become powerful enough to utilize it. This project’s goal is to implement an advanced audio communication system over a network utilizing 3D audio in a manner similar to Skype. The goal is to reduce the cognitive load on the user in comprehending multiple concurrent conversations. This project compares and analyzes the characteristics of current technologies created and being developed for such systems. It then proposes mechanisms for testing the system in a manner diverse enough to verify its performance in most standard applications. The focus is on human factors development.

**The Detroit Redwings: The History and Tradition of Stanley Cup Winners**  
Course Project 09_W1_HSS_275_01  
Undergraduate - Individual  
Advisor(s): George M DeMarco  
Student(s): Kaitlyn E. Zabiegala

The purpose of this study was to describe the history and tradition of the Detroit Redwings. The Redwings are a world renown hockey team that have won multiple Stanley Cups and created a popular fan base over the years. The Detroit Redwings have brought about some key players that have ultimately been recognized for their many accomplishments on the ice by being admitted to the hockey hall of fame. Referring to primary sources such as newspaper articles, books and their official website helps sport fans all over the world remember the impact this team specifically, has had on the official sport of hockey.

**Dinuclear Lanthanide (III) complexes containing Beta-ketonato terminal ligands bridged by 2,2’-bipyrimidine**  
Honors Thesis  
Undergraduate - Individual  
Advisor(s): Shawn M Swavey  
Student(s): Gilford M Eddingfield

Lanthanide (III) (Ln(III)) salts reacted with a 2,2’-bipyrimidine (bpm) and B-diketone terminal ligands (tl). The products of the reaction yielded 16 new complexes in the form of monomeric and bimetallic complexes. There were patterns in the synthesis of each specific Lanthanide crystal.

The dissertation was based upon the size of the lanthanide and the particular terminal ligand used. Smaller LnIII metals formed mononuclear complexes due to steric effects with the bridging ligand, bpm. The effects prevented the coupling of the second terminal ligand to the bpm.

**Direct Input-Output Optimal Trajectory Generation**  
Graduate Research  
Graduate - Individual  
Advisor(s): Raul E Ordonez  
Student(s): Alan L Jennings

Trajectory generation is a difficult chore requiring calculus of variations to obtain optimal results. Solving the integral equations is often intractable for complex systems. A new method is presented for finding optimal trajectories by directly approximating the system input-output behavior. Similar to how direct optimization or direct adaptive control does not seek to mimic internal model form, this method trains a fuzzy system directly to the system’s input-output behavior. Trajectories are structured by continuous function parameterizations. The fuzzy system maps the input parameter values to an output value so a trained approximator can estimate trajectory parameters producing the desired outcome. A cost function can be over-specified to estimate the region with the global optimal trajectory. This estimate can be refined using a constrained nonlinear optimization. The concept presented offers a novel approach consistent with the refinement of infant motions as they develop into adults that may provide a approach for autonomous learning of complex objectives.

**Distant Thunder: The University of Dayton Looks at the Spanish Civil War**  
Honors Thesis  
Undergraduate - Individual  
Advisor(s): Lawrence J Flockerzie  
Student(s): Casey E Schuster

The Spanish Civil War, which lasted from 1936 to 1939, was an international struggle that engaged the hearts and minds of countless people around the world. Described as the iconic event of the 1930s, it created an enormous clash of views and greatly divided public opinion. This thesis examines the various currents of public opinion in relation to the event and in the context of the 1930s, particularly focusing on the University of Dayton. Utilizing such resources as the student newspaper and literary magazine of the 1930s, the paper explores how students and faculty at the University of Dayton responded to the conflict. Additionally, it analyzes the Catholic and Marianist perspective and looks at college students’ responses to war and peace during the decade.

**DNA Replication Restart: the Structure and Function of Protein DnaT**  
Honors Thesis  
Undergraduate - Individual  
Advisor(s): Matthew E Lopper  
Student(s): Nicholas G Berger

The duplication and transmission of genetic material from parent cell to daughter cells is an essential process of growth and development, but despite the efficiency at which cells are able to replicate the genome, stalling of replication occurs, particularly at sites of DNA damage. Following repair of damaged DNA, DNA replication must be reinitiated to ensure the full genome is copied. In prokaryotes such as Escherichia coli, this process is known as replication restart and employs a host of proteins that operate via a pathway whose molecular intricacies remain poorly defined. One of these replication restart proteins, DnaT, has been shown to be important for normal growth and development in Escherichia coli, but at present little is known of how it contributes to replication restart pathways. Since protein structure and function are intimately related, I propose to seek insights into the function of DnaT protein in DNA replication restart pathways by examining its structure at high resolution. Thus, I will employ biochemical methods such as protein purification, crystallization and X-ray crystallography to elucidate the structure of DnaT. Ultimately, research on the structure and function of DnaT could help
Dorsal eye selector, pannier (pnr), interacts with the retinal determination gene network during Drosophila eye development

Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Amit Singh
Student(s): Sarah M. Otros

Dorsal eye selector, pannier (pnr), interacts with the retinal determination gene network during Drosophila eye development. Loss of function phenotypes of genes involved in determination of the dorso-ventral (DV) axis result in partial or complete loss of eye, a phenotype similar to those of RD gene mutants. Interestingly, the role of pnr in the patterning genes in retinal determination is not yet clear. We found that genes involved in DV patterning interact genetically with RD genes. Our studies showed that the function of dorso-ventral genes disrupted (interfered with) the ectopic eye formation ability of RD genes upon misexpression. pannier (pnr), a GATA-1 transcription factor, is a dorsal selector gene vital to axial patterning, whose loss-of-function phenotype shows dorsal eye enlargement. It has been suggested that this dorsal eye enlargement is due to ectopic receptor formation in the dorsal compartment of the eye. Here we will address the role of pnr in the RD gene network by testing whether (1) dorsal eye enlargements are due to an increase in the retinal cells as a result of formation of the ectopic equator which upregulates Notch signaling; or (2) pnr is required for head specific fate in the dorsal eye by suppressing RD gene function.

Dress Code 101: How to look like a UD Student
Senior/Capstone Project
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Dan E Miller, Leslie H Picca
Student(s): Mary E Darrah

The University of Dayton student's demonstrate similarity in their clothing worn on campus. The students at UD produce a dress code for the campus that helps demonstrate the identity of the school. Students want to be accepted as part of the University by following the dress code. Peer pressure helps to adapt to life on campus and becoming part of the identity. A dress code for the campus that helps demonstrate the identity of the school. Students want to be accepted as part of the University by following the dress code. Peer pressure helps to adapt to life on campus and becoming part of the identity. Peer pressure helps to adapt to life on campus and becoming part of the identity. Peer pressure helps to adapt to life on campus and becoming part of the identity.

Drosophila melanogaster as a model to study the genetic basis of Alagille syndrome
Course Project 09_WI_BIO_421_1
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Amit Singh
Student(s): Stephen L. Sanker

Alagille syndrome is a dominant genetic disorder in humans that is caused by a mutation in the Notch signaling pathway ligand, Jagged-1 (Jag-1). This ligand (Jag-1) and manifests in the liver, kidneys, eyes, and heart of those affected. This suggests that Jag-1 plays an important role in the development of these organs. Serratre (Ser) is a Drosophila gene that is homologous to Jag-1; therefore, it has similar properties in flies as Jag-1 has in humans. An investigation of the effects of Ser in Drosophila embryonic heart development will increase our understanding of the genetic mechanisms involved in the development of the fly heart and shed light upon the genetic basis of Alagille syndrome in humans. Using the GAL4-UAS genetic system, the gene Pannier (Pnr), which is essential in Drosophila embryonic heart development, was used to drive the expression of a dominant negative mutant of Ser in the eye. We found that the dominant negative mutant of Ser is required for cell survival during embryonic development in the Drosophila heart. Thus, we have developed an assay system to understand the role of Ser in heart development.

A Drosophila model to study the role of the Notch ligand Serrate (Jagged-1) in growth and cancer.
Independent Research
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Amit Singh, Shiranege Gunasekara (University of Dayton), Dr. Madhuri Kango-Singh (Mercer University)
Student(s): Oorvashi Roy Puli Gajendranath

Defects in Notch signaling are causal to several human diseases such as, acute lymphoblastic leukemia (ALL), and birth defects like Alagille’s syndrome, deafness, spondyloptosis, skeletal defects, congenital heart disease and CADASIL. Mutations in the Notch ligand, Jagged-1 (Jag-1). Drosophila homolog Serrate, Ser) results in a dominant developmental birth defect called Alagille’s syndrome (AGS; OMIM#118450). AGS manifests defects in the liver, heart, eye and kidney suggesting that Jag-1/Ser plays an important role during the development of these organs. Recently, elevated RNA expression of Jag-1 was linked to poor prognosis in breast cancer patients. However, the mechanism(s) by which Ser/Jag-1 regulates growth remain unclear. Therefore, understanding the function of Ser in growth control, and the genetic circuitry affected by mutations in Ser will help us understand the role of Ser/Jag-1 and Notch signaling in growth and cancer. We observed that overexpression of dominant-negative Ser transgene in Drosophila eye disc, caused complete loss of eye development, thereby suggesting that Ser plays a role in the proliferation, cell fate specification, differentiation or survival of cells in the developing eye. Our preliminary analysis indicates that loss of Ser function primarily affects survival and proliferation of cells in the developing eye rather than patterning or differentiation. Therefore, we are testing whether Ser regulates growth thereby affecting tissue or organ size, or Ser mutant cells gain unique survival characteristics and induce abnormal growth or cancer. These studies will gain novel insights into Notch pathway regulation and how cell proliferation or survival is controlled during development.

The effect of a bacterial virus on the ability of the bacterium Pseudomonas aeruginosa to form biofilms and the emergence of colony variants
Course Project 09_WI_BIO_421_1
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Jayne B Robinson
Student(s): Laura C. Gueltzow

Pseudomonas aeruginosa is a gram negative, ubiquitous bacterium. P. aeruginosa survives by its production of biofilms, which makes this bacterium more resistant to antibiotics. It is seen that with the strain PAO1, in biofilms, there is the formation of small-colony variants (SCVs) which present phenotypically different from the wild-type. These small colony variants were tested for biofilm production as well as twitching motility. They were also tested with exposure to the bacterial virus, UT1, to see if the presence of phage affected biofilm induction or the twitching motility of the SCVs. Additionally we screened a transposon mutant library for mutants that were unaffected by exposure to the UT1.

Efficiency in the Medical Supply Industry: A Nonparametric Analysis
Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): John G Ruggiero
Student(s): Erin F. Landers

In the uncertain economic climate of 2008-2009, it can be difficult to discover stocks that will increase in value. Financial advisors may suggest investigating Earnings per Share or various profit margins; an economist would be more likely to suggest looking for the most efficient companies. Using Data Envelopment Analysis as a measure of the efficiency and financial data from the Medical Supply Industry 3rd quarter 2008, the efficiency values were compared with the Gross Profit Margin (GPM), Earnings per Share (EPS), and Net Income Applicable to Common Stock (NIACS). It was discovered that GPM and NIACS were both somewhat positively correlated to the efficiency, while EPS was not. It was concluded that when investigating a stock, the efficiency may be a helpful variable to look at in addition to financial ratios, but cannot stand alone in determining future success of a stock.
The Establishment of Transformed Cell Lines Using Primary Cells Obtained From Fresh Feline Intestinal Tissue

Honors Thesis
Undergraduate - Individual
Advisor(s): Robert J Kaarns
Student(s): Michelle P Clark

The Interaction of enteropathogens and epithelial cells in the small intestine, including the duodenum, jejunum, and ileum, has been frequently documented in the case of both young and aged cats. In humans, diseases such as inflammatory bowel disease have been extensively studied and the major normal and abnormal bacteria and microflora have been observed and are well known. Numerous cell lines exist with which to study these effects. Unfortunately, intestinal cell lines are not available for use in feline model studies. As a result, there is very little evidence as to the distribution of intestinal microflora and their impact on intestinal function. Consequently, there is a need to create an in vitro model system to observe these changes and interactions. Previous studies have used mechanical disruption and/or enzymatic digestion to isolate canine bladder epithelial cells. These cells were then successfully transfected using pSV3-neo DNA plasmid, creating an immortalized cell line. The main goal of this study was to isolate fresh tissue from the intestinal tract of felines, establish primary cell cultures from the duodenum, jejunum, and ileum, followed by the successful transfection of these intestinal cells. To confirm successful transfection, immunocytochemistry was employed using monoclonal antibodies, including anti-large T antigen. To date, positive staining with anti-large T antigen has been observed signifying successful transfection. In summary, all transformed cells from ileum derived from fresh feline tissue were generated in this study. These cell lines can be used to monitor changes that occur at the cellular level, specifically up or down regulation of inflammatory cytokines, or TLR expression.

ETHOS Program: Cochabamba, Bolivia

Independent Research
Undergraduate - Individual
Advisor(s): Phillip T Aaron, Margaret F Pinnell, Michael J Vehar
Student(s): Erik J Reiersen

Two students will be spending ten weeks of the upcoming summer in Cochabamba, Bolivia working with CEDESOL Foundation through the ETHOS Program. CEDESOL provides efficient biomass stoves as well as retained heat and solar cookers to the people of Bolivia as a means of improving their quality of life. These ecological cookers help to resolve a number of the major problems associated with the discontinuation of the ETHOS Program. CEDESOL provides efficient biomass stoves as well as retained heat and solar cookers to the people of Bolivia as a means of improving their quality of life. These ecological cookers help to resolve a number of the major problems associated with the discontinuation of the ETHOS Program. CEDESOL provides efficient biomass stoves as well as retained heat and solar cookers to the people of Bolivia as a means of improving their quality of life. These ecological cookers help to resolve a number of the major problems associated with the discontinuation of the ETHOS Program. CEDESOL provides efficient biomass stoves as well as retained heat and solar cookers to the people of Bolivia as a means of improving their quality of life. These ecological cookers help to resolve a number of the major problems associated with the discontinuation of the ETHOS Program.

The Evolvement of the World of Fitness and Exercise through the Field of Dance

Course Project Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Volinda M. Barber

The purpose of this study was to describe the evolution of the world of fitness and exercise through the field of dance. The world of fitness has been transformed over the years, so that fitness activities can now include various dance forms including jazz, ballet and aerobic dance. Data were gathered from primary sources including interviews, observations, video, and scientific studies utilizing dance as primary mode of exercise.

A Family Tradition: Looking Back at the Basketball Careers of Bill Uhl, Sr. and Bill Uhl, Jr. and the Sports Medicine/Physical Therapy of Their Time

Course Project Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Anna M. Bryan

The purpose of this study was to describe the University of Dayton Men’s basketball careers of Bill Uhl, Sr. and Bill Uhl, Jr., one of the best-known father-son duos that played and still contribute to the program. The secondary focus will be on the sports medicine and physical therapy available to them during their time of play. Their stories have been told through interviews, original photos and articles; while the history of sports medicine and physical therapy has come from books, online databases and scholarly articles. Through this study of their history, their stellar stories have come alive for others to be inspired by and enjoy.

Female Musicians in the College Newspaper

Honors Thesis
Undergraduate - Individual
Advisor(s): Teresa L Thompson
Student(s): Anna R Danese

In the research on women and popular music, publications such as Rolling Stone and The Village Voice have been studied to see how they depict female musicians as opposed to male musicians. It has been discovered that if female artists are discussed at all, they are often described in terms of appearance instead of talent, compared only to other female musicians, and are asked questions about their personal life instead of their music. Using both quantitative and qualitative methods, I have looked at the Kent State University’s The Daily Kent Stater, The BG News at Bowling Green University, and The University of Dayton Flyer News to see if these observations hold true in collegiate journalism.

Global Application of Biomass Energy with Carbon Capture and Storage (BECS) in Reducing Atmospheric CO2 Concentrations

Course Project Undergraduate - Group
Advisor(s): Umesh K Haritashya
Student(s): Chandra M Legdesog, Todd L. Longbottom, Carolyn A. Pantle

A way to control atmospheric CO2 is through capturing and storing CO2 from fossil fuel combustion and biomass conversion processes. Capturing and storing CO2 from biomass conversion provides CO2 neutral energy while removing CO2 from the atmosphere. This concept is referred to as Biomass Energy with Carbon Capture and Storage (BECS). Our objective is to analyze the benefits of carbon capture and sequestration of fossil fuels versus biomass as methods of carbon storage. Additionally, this study also analyzes the cost difference of using various methods of capturing and storing CO2 from fossil fuel emissions and a method using BECS. Our analysis indicates that BECS could be a good method of removing CO2 from the atmosphere if initiated before a significant climate change problem arises.

Globalization and the Promotion of Democracy in Post-Communist Countries

Honors Thesis
Undergraduate - Individual
Advisor(s): Messay Kebede
Student(s): Meghan J Tobin

Globalization is a modern term used to describe the rapid spread of democratic ideals, the dominance of global processes over national processes, and the conglomeration of cultures. This thesis commences its exploration by first detailing the contemporary understanding of the term "globalization." Through analyzing prominent theories in the globalization field, the thesis will transition from an analysis of globalization into an exploration of its impact on the spread of democracy. Case studies of the Czech Republic, a post-Soviet country which has been relatively successful in the realization of democracy, and Russia, a country struggling to implement democracy will be used to test the validity of the claim that globalization fosters democratic development in post-communist countries. This author purports that globalization has opened numerous avenues for democratization, but favorable local factors are essential for its success.

Health Perceptions in Women with Disordered Eating Patterns

Honors Thesis
Undergraduate - Individual
Advisor(s): Robert J Kaarns
Student(s): Michelle P Clark

A way to control atmospheric CO2 is through capturing and storing CO2 from fossil fuel combustion and biomass conversion processes. Capturing and storing CO2 from biomass conversion provides CO2 neutral energy while removing CO2 from the atmosphere. This concept is referred to as Biomass Energy with Carbon Capture and Storage (BECS). Our objective is to analyze the benefits of carbon capture and sequestration of fossil fuels versus biomass as methods of carbon storage. Additionally, this study also analyzes the cost difference of using various methods of capturing and storing CO2 from fossil fuel emissions and a method using BECS. Our analysis indicates that BECS could be a good method of removing CO2 from the atmosphere if initiated before a significant climate change problem arises.

Globalization and the Promotion of Democracy in Post-Communist Countries

Honors Thesis
Undergraduate - Individual
Advisor(s): Messay Kebede
Student(s): Meghan J Tobin

Globalization is a modern term used to describe the rapid spread of democratic ideals, the dominance of global processes over national processes, and the conglomeration of cultures. This thesis commences its exploration by first detailing the contemporary understanding of the term "globalization." Through analyzing prominent theories in the globalization field, the thesis will transition from an analysis of globalization into an exploration of its impact on the spread of democracy. Case studies of the Czech Republic, a post-Soviet country which has been relatively successful in the realization of democracy, and Russia, a country struggling to implement democracy will be used to test the validity of the claim that globalization fosters democratic development in post-communist countries. This author purports that globalization has opened numerous avenues for democratization, but favorable local factors are essential for its success.
The purpose of this study was to describe the history of obesity and its effects on culture today. From the ancients to the current era, body image and fitness has been regarded in different ways, specifically as a symbol of wealth or immorality. Obesity has been seen as a universal health problem across the globe which has existed for decades. The current obesity epidemic continues to impact this country today. Currently in the United States approximately 16% of infants and 33% of adults are obese. Becoming a greater problem in the current age, obesity is a topic influencing politics and health alike. Historical analysis based on primary sources, including a physician interview, encyclopedias, and journal articles will bring the history of obesity alive for all to learn and impact the future.

**The History of the Pittsburgh Steelers: A Story of Minority Success**

Course Project 09WI_HSS_275_01

1:00 PM

Undergraduate - Individual

Advisor(s): George M DeMarco, Lloyd L Laubach

Student(s): Brian S. Blasik, Paul J. Haydocy

The purpose of this study was to describe the history of the Pittsburgh Steelers, showing the success of the three minority coaches during the Super Bowl Era. This study was conducted using various amounts of sources, including encyclopedias, pictures, newspaper articles, and official team website. After reading this study you will be able to appreciate the Pittsburgh Steelers not only through championships, but through their ability to reject the ideas of minority inability.

**I CanThe Life and Times of Dick and Rick Hoyt**

Course Project 09WI_HSS_275_01

1:00 PM

Undergraduate - Individual

Advisor(s): George M DeMarco

Student(s): Paul J. Haydocy

The purpose of this study is to describe and interpret the life and times of Dick and Rick Hoyt. Dick and Rick Hoyt have one of the most inspirational stories to tell. They have both completed over 900 races in their lives and they have done everyone of them as a team, together. I will do most of my research from scholarly sources. These sources include past interviews and from their book.

**In Their Own Words: The Experiences of First Generation College Students**

Honors Thesis

1:00 PM

Undergraduate - Individual

Advisor(s): Rachel M B Collopy

Student(s): Jessica C Fentress

First generation college students are significantly less likely to graduate from a four-year degree program than children of parents who attended college. Research has indicated that there may be four main causes for this lack of retention. They are: lack of social capital, lack of academic preparation, financial and emotional strain, and identity conflicts. Unfortunately, most studies look at each of these factors in isolation. By interviewing 6 seniors who will graduate by May of this year, I was able to get a clearer picture of how these factors have interacted to create obstacles or opportunities for UD seniors during their college careers and how these students developed resiliency and remained at the university.

**Influence of Amplitude Dynamics in Coupled Oscillator Arrays**

Graduate Research

1:00 PM

Graduate - Individual

Advisor(s): Robert P Penno

Student(s): Hai Jiang

The dynamic theory of coupled oscillators was developed, and tested with a class of loosely-coupled quasi-optical oscillator arrays by York et al. It was demonstrated that a constant phase progression can be achieved by detuning the free-running...
frequencies of the outermost array elements for the case of a linear uniformly excited array with weak coupling. Such a technique avoids the need for phase shifters, and thus reduces the complexity of the phaselocked loop circuits by using the coupled oscillators. Consequently, it simplifies the architecture of the Transmitter/Receiver module in the telecommunication system, and reduces the overall cost. In 1994, a general approach to strongly couple the oscillators using a transmission-line network was introduced by York. In this present work, the effects of amplitude dynamics, which have been previously ignored, are investigated. A flowchart for implementing the full system dynamics is presented. Furthermore, the free running frequencies that establish an arbitrary amplitude distribution are derived. For both weak and strong coupling, the array factors are computed from the steady state phases and amplitudes. It is demonstrated that amplitude dynamics have significant effects upon the main beam scanning angle, and renders control of the side lobe level employing a triangular amplitude distribution more difficult. However, when the free running amplitudes are identical for every element, main beam error is only 6% of the scanning angle when the effects of amplitude dynamics included.

The Influence of Climate Change on Flowering Dates of Local Flora

Independent Research

Advisors(s): Robert J Brecha, Donald R Geiger, Ryan W McEwan

Student(s): Grace P John

According to the Intergovernmental Panel on Climate Change (IPCC), mean global surface temperature has increased markedly over the last 100 years, and there is some evidence that this increase has accelerated over the last 20 years. Increasing global temperature has a variety of implications for human societies, and for ecological systems. One of the most important, and obvious, ways ecosystems are impacted is through variation developmental timing (phenology). For example, winter migration timing might change and the length of hibernation for some mammals could be shortened. We examined potential implications of climate change on plant development for spring flowering plants in Ohio. We used annual botanical survey records to document timing of spring flowering for 14 species from 1976 to 2003. The overall trend for these species was an increasingly earlier flowering time. This was consistent with the hypothesis that spring warmed the ground earlier over the sample period. This trend was not consistent across all species; however, as species such as snow drops (Galanthus spp.) that flower early in the spring changed markedly, while species that flower in summer such as Ageratum did not change over the sample period. Our results suggest that flowering time is changing as a result of alterations in climate but this influence may be most strongly manifested in those species that grow at the margins of the growing season.

Investigation of the McCook Field Area and Associated Health Effects of Trichloroethylene Exposure

Course Project 08_FA_ASI_343_H1

Undergraduate - Group

Advisor(s): Daniel C Fouke, Sukhjinder S Sidhu

Student(s): Reid S. Brennan, Madeline M. Duning, Daniel P. Howard, Megan E Johns

The McCook Field community in Dayton has been exposed to trichloroethylene vapors due to a chemical spill that occurred sometime before 1989. In order to determine if further investigation is warranted, a study was conducted that examined possible health effects related to a short-term exposure to trichloroethylene. The residents in the McCook Field area and in a nearby control community were surveyed. The survey results were then tabulated and frequency data was generated. The expected numbers generated from the control group were statistically compared to the observed numbers. In the group exposed to TCE, headaches, dizziness, poor coordination, and difficulty concentrating were experienced at significantly higher levels than expected. The number of reported miscarriages in the McCook Field community was also significantly higher. Given these results, it was concluded that the cleanup of the spill should be given more prompt consideration.

Judicial Review and Inter-Branch Dialogue: The Court’s Role in the Political System

Honors Thesis

Undergraduate - Individual

Advisor(s): Jason L Pierce

Student(s): Alexander P Orlowski

Judicial review, the power of a nation’s highest court to declare legislation and executive actions unconstitutional is one of the most controversial subjects in constitutional law. Some countries, such as the United States, employ a strong-form of judicial review whereby the highest court largely has final say over constitutional matters. The only definitive way to overcome judicial restraint, as rendered by the Supreme Court of the United States is through a constitutional amendment, which is an incredibly difficult threshold to achieve. Other countries, such as Canada, employ a weaker-form of judicial review, whereby the legislature can respond to the court through a special declaration that passes legislation, despite the fact that the high court may find it unconstitutional. This thesis seeks to examine whether or not implementing a weaker form of judicial review in the United States would significantly alter our national constitutional landscape, the subsequent practical implications thereof, or the institutional relationship between branches of government.

The Juice on the Juice: Looking Back at the Steroid Era in Baseball

Honors Thesis

Undergraduate - Individual

Advisor(s): George M DeMarco

Student(s): Patrick J Danilo

The purpose of this study was to describe the use of performance enhancing drugs in major league baseball over the past twenty years. This timeframe is known as the “Steroid Era,” and it has left its mark on major league baseball forever. It has impacted the game on many levels, and it has also impacted players lives off the field. This study contains primary sources, including magazine articles, interviews, photographs, and professional opinions, judicial documents, and video to completely demonstrate how the “Steroid Era” had a huge impact on major league baseball.

Justicia Ahora!: The Movement for Justice in Chile & Guatemala

Honors Thesis

Undergraduate - Individual

Advisor(s): Margaret P Karns

Student(s): Beth Ann Saracco

When the human rights of individuals and groups have been severely violated by state institutions during dictatorial rule, national reconciliation and peace building is not only needed but necessary in order to ensure the future stability of the transitioning democracy. In efforts to reconcile with their difficult pasts, Chile and Guatemala have both utilized various transitional justice approaches including truth commissions, judicial prosecutions, reparations, security system reform and memorization agendas. But, reconciliation is challenging, and Chile has clearly been more successful especially in regards to judicial prosecutions. Chile represents a nation that has achieved a degree of success in their attempts to end impunity and punish those responsible. My research examines how this process unfolded, through the actors that were involved, both in international and domestic efforts. I employ primary research gathered through interviews and observations with these actors, which include survivors, human rights lawyers, judges, presidents of human rights organizations, directors of the associations of family members, academics and journalists. By identifying the actors involved in this particular justice movement, a greater understanding of this process was acquired; lessons were drawn and challenges were noted. In considering these lessons and challenges in the context of the Guatemalan case, one of the greatest differences that emerge is the lack of activism demanding that justice be brought forth. Through research, it became evident that there was a greater presence of international activists involved in the Chilean movement for justice than in the Guatemalan process. The final section of my research examines why more people were advocating for justice in the Chilean case than in the Guatemalan case.

Land Use History: Helping Mother Nature to Help Herself

Independent Research

Undergraduate - Individual

Advisor(s): Donald R Geiger

Student(s): Elizabeth M Whalen

When the human rights of individuals and groups have been severely violated by state institutions during dictatorial rule, national reconciliation and peace building is not only needed but necessary in order to ensure the future stability of the transitioning democracy. In efforts to reconcile with their difficult pasts, Chile and Guatemala have both utilized various transitional justice approaches including truth commissions, judicial prosecutions, reparations, security system reform and memorization agendas. But, reconciliation is challenging, and Chile has clearly been more successful especially in regards to judicial prosecutions. Chile represents a nation that has achieved a degree of success in their attempts to end impunity and punish those responsible. My research examines how this process unfolded, through the actors that were involved, both in international and domestic efforts. I employ primary research gathered through interviews and observations with these actors, which include survivors, human rights lawyers, judges, presidents of human rights organizations, directors of the associations of family members, academics and journalists. By identifying the actors involved in this particular justice movement, a greater understanding of this process was acquired; lessons were drawn and challenges were noted. In considering these lessons and challenges in the context of the Guatemalan case, one of the greatest differences that emerge is the lack of activism demanding that justice be brought forth. Through research, it became evident that there was a greater presence of international activists involved in the Chilean movement for justice than in the Guatemalan process. The final section of my research examines why more people were advocating for justice in the Chilean case than in the Guatemalan case.
How is an ecosystem restored after it has been damaged by human activities? Previously it was thought that mother nature could recover by herself. Now we are beginning to realize that invasive species take advantage of the poor or degraded habitats, displacing many of the native plants and degrading the ecosystem. Human help is generally needed to reestablish a quality ecosystem. The help comes in a several-step process. First the land must be surveyed for habitats and resources and evaluated for quality but suitable indices. Only then does restoration begin. My project was to assist in assessing the land quality of a number of Greene County Park Reserves and collect data on habitat diversity and quality. The wetland site at Cemex Reserve serves as a case study for the survey of restoration progress. During the past 10 years restoration of this natural area has progressed from its state of an abandoned parcel of land that had been stripped of soil to obtain material for making cement. The case study report consists of the data describing its present state of restoration.

The Legacy of Ohio State Football
Course Project 09_WI_HSS_275_01
1:00 PM
Undergraduate - Individual
Kennedy Union 222
Advisor(s): George M DeMarco
Student(s): Brendan P Fowler

Postmodernism and the Commodification of Culture presents the history and theory behind the postmodern era. It deals with philosophers such as Jean Francois Lyotard, Jean Beaudrillard, and Gay Debor. Following this analysis of the theory of postmodernism

Legal Issues Confronting the News Media Today
Course Project 09_WI_CMP_432_01
1:00 PM
Undergraduate - Group
Kennedy Union Ballroom
Advisor(s): Annette M Taylor
Student(s): Rachael M. Bade, Jamie C Fisher, Jennifer L. Sink

Students in Law and the News Media explored various legal issues that the U.S. press faces as journalists strive to fulfill their most valued function in society – that of providing citizens with news and information to be self-governing. First Amendment rights can conflict with other rights and needs, such as an individual’s right to privacy or the nation’s need to protect certain information in the interests of national security. Among the issues researched by students were press coverage of sexual assaults, press access to information concerning juvenile offenders and victims, and Freedom of Information Act policies of the Bush and Obama administrations, press access to theatres of war and who is a “journalist.”

The Life & Times of a Michigan Man: Bo Schembechler
Course Project 09_WI_HSS_275_01
1:00 PM
Undergraduate - Individual
Kennedy Union 222
Advisor(s): George M DeMarco
Student(s): Rachael M. Bade, Jamie C Fisher, Jennifer L. Sink

Students in Law and the News Media explored various legal issues that the U.S. press faces as journalists strive to fulfill their most valued function in society – that of providing citizens with news and information to be self-governing. First Amendment rights can conflict with other rights and needs, such as an individual’s right to privacy or the nation’s need to protect certain information in the interests of national security. Among the issues researched by students were press coverage of sexual assaults, press access to information concerning juvenile offenders and victims, and Freedom of Information Act policies of the Bush and Obama administrations, press access to theatres of war and who is a “journalist.”

The Purpose of this study was to describe the history of swimming from the ancient Egyptians to present day Michael Phelps, and how the sport evolved to be what it is today. Primary sources including interviews, videos of recorded events, and photos from online sources were used. Secondary sources were also used in order to research the history of swimming including major events, significant figures in swimming, and common principles of the sport. Through this research, the history of swimming will come alive and people will come to appreciate the sport with a better understanding.

Making a Splash in the World: The History of Swimming
Course Project 09_WI_HSS_275_01
1:00 PM
Undergraduate - Individual
Kennedy Union 222
Advisor(s): George M DeMarco
Student(s): Brenna M. Kaveney

The purpose of this study was to describe the history of swimming from the ancient Egyptians to present day Michael Phelps, and how the sport evolved to be what it is today. Primary sources including interviews, videos of recorded events, and photos from online sources were used. Secondary sources were also used in order to research the history of swimming including major events, significant figures in swimming, and common principles of the sport. Through this research, the history of swimming will come alive and people will come to appreciate the sport with a better understanding.

Loving One Another: Two Christian Versions of Justice the in World
Honors Thesis
1:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Susan T Davis
Student(s): Justin M Ericson, Jonathan A Hentz, William D. Miller, Samantha A. Montgomery, Brendan T. O’Reilly

This project tested memory for location using a computer. Stimulation consisted of a moving target among 5, 13, or 21 moving “distracters.” For each trial, participants remembered both the beginning and ending location of the target and entered their response using the number pad of the keyboard. We hypothesized that memory performance would increase with an increase in the number of distracters and that a black stationary oval acting as a landmark would improve memory performance. We expected that the landmark would facilitate memory for the location of the moving target by providing a reference for the application of mental spatial coordinates. Resulting data from a sample of undergraduates indicate a significant interaction between landmark presence, number of distracters, and location of target (beginning or end). A comparison analysis between intercollegiate athletes and non-athlete participants using the same task is pending once the athlete data collection is completed. A preliminary examination of the data indicates that athletes demonstrate faster reaction time to location task.

The research shows how the specified career choices for each group member will look in ten years with emphasis on technology impact.

Posters 1:00PM - 2:30PM

The research shows how the specified career choices for each group member will look in ten years with emphasis on technology impact.
A major objective of next generation reusable launch vehicle (RLV) programs includes significant improvements in vehicle safety, reliability, and operational costs. Our previous research (most of the results were ever presented at Stanford Symposia since 2005) proposed a scheme of motion primitives (MPs) and neighboring optimal control (NOC) to deal with on-line trajectory reshaping on approach and landing (A&L). An MP scheme consists of trims and maneuvers. From an initial point to a given touchdown point, all feasible trajectories that satisfy certain constraints are generated based on MP scheme and saved into a trajectory database. An optimal trajectory can then be found off-line by using Dijkstra's algorithm. This trajectory is reshaped into a neighboring feasible trajectory in real-time by using NOC approach and the RLV is then recovered when it experiences a failure. This scheme was also used to recover a vehicle in wind. It is applicable when the wind effect (especially wind shear) is not large. However, it did not work well when the wind shear is big. This fact motivated us to find another approach to potentially deal with the wind effect. In this research, another NOC design is investigated and a new in-flight A&L trajectory generation method based on MP and the NOC approach is proposed to reshape the off-line optimal trajectory. This new neighboring trajectory reshaping theorem (NfTRT) is then investigated and proved. The simulation results show that a RLV can be recovered from some stick-effect failures in real-time.

Numerical Analysis of Copper Coated Thickness in Carbon Foam
Graduate Research
Graduate - Individual
Kennedy Union Ballroom
Advisor(s): George M DeMarco
Student(s): Ellen M. Ricker

The purpose of this study was to describe the history and evolution of the Head of the Charles Regatta that is held annually in Boston, Massachusetts. The regatta, named the World's Largest Rowing Festival, started in 1965 and was first created by Cambridge Boat Club Members D'Arcy MacMahon, Howard McIntyre, and Jack Vincent, and Harvard University's sculling instructor Ernest Arlett. Today, the regatta hosts over 7,500 athletes from around the world competing in 55 different events that are watched by over 300,000 spectators. The data, including pictures and programs from recent regattas, will be used to illuminate the event that is often overlooked in the Fall as well as to educate unfamiliar spectators.

Numerical Analysis of Copper-Coated Thickness in Carbon Foam
Graduate Research
Graduate - Individual
Kennedy Union Ballroom
Advisor(s): Khalid Lafi
Student(s): Mohammad Almajali

A numerical model was developed to calculate the copper coated thickness inside carbon foam. Copper electroplating method was conducted as an experimental technique to coat two samples: graphite plate and carbon foam. Initially the numerical model was built in two dimensions and formulated in MATLAB code. The sample of the experimentally coated graphite plate was validated to this model and a very good agreement was found. The sample of carbon foam was electroplated for different periods of time to achieve different thickness. Volume average method was used to determine the coated thickness at each time. The developed numerical model was modified to include the surface area of the carbon foam. Based on Boomma model, a new model for the shape of carbon foam was developed to calculate the specific surface area. Experimentally coated carbon foam sample has been microscopically observed and measured to determine the thickness of the copper layer. The numerical model was compared to the volume average method and the experimental measurement. The result shows the capability of the numerical model to predict the coated thickness.
Social skills are an essential part of child development. Unfortunately, parents or teachers, the typical reporters of children's social skill problems, frequently do not identify social skill deficits promptly. Children experiencing these social issues may be more likely to notice the problems as they become troubling. The Children's Self-report Social Skills Scale (CS4) was developed by Danielson and Phelps (2003) to create a way for children to report the degree to which they exhibit social behaviors or abilities. The purpose of the present study was to provide preliminary validation of the CS4 as well as to pilot the use of the scale with an ADHD population. The present study sought to assess preliminary convergent and discriminant validity of the CS4 by assessing the relationship between the CS4 and social intelligence, healthy friendships, peer victimization, and externalizing aggressive behavior. Children with and without ADHD were compared to determine preliminary construct validity of the CS4. While the small sample size reduces the external validity, and therefore the generalizability of the results, this pilot study provides possible avenues of exploration for future research. The CS4 positively correlated with social skills as measured by a scale of social intelligence as well as with guidance in friendships. Correlations between the CS4 and protection from victimization as well as overall friendship scores approached significance. The inverse correlation between peer victimization and CS4 scores also approached significance. Children with ADHD reported significantly stronger beliefs in the resiliency of their friendships than did children without ADHD. Future research should focus on utilizing larger samples to provide further validation of the CS4, investigating the hypotheses generated by the current study, and applying the CS4 to additional clinical populations. Limitations of the present study are also discussed.

The push for revitalization and the dynamics of its effects on a community in a struggling inner-city neighborhood: Over-the-Rhine, Cincinnati

Ohio. Over-the-Rhine (OTR) has faced several challenges in the last fifty years, including significant suburban sprawl, widespread crime, and, most recently, race riots in 2001. An earlier renaissance attempt in the 1990s failed to fix the devastating losses to the neighborhood, mostly due to lack of city-wide organizational leadership and significant planning. The city has brought together key community activists, business leaders, and major neighborhood organizations and has developed a comprehensive plan to revitalize OTR by creating a safer and more economically viable neighborhood. The neighborhood is in a constant state of flux. Yet, despite some conflicting neighborhood perceptions, today OTR is a much safer, cleaner, and vibrant neighborhood.

This thesis examines the implementation of a modern approach of urban revitalization, the extent of its success in promoting vitality in the area, and the impact on the local community on a poor, racially tensioned neighborhood in Cincinnati, Ohio. Over-the-Rhine (OTR) has faced several challenges in the last fifty years, including significant suburban sprawl, widespread crime, and, most recently, race riots in 2001. An earlier renaissance attempt in the 1990s failed to fix the devastating losses to the neighborhood, mostly due to lack of city-wide organizational leadership and significant planning. The city has brought together key community activists, business leaders, and major neighborhood organizations and has developed a comprehensive plan to revitalize OTR by creating a safer and more economically viable neighborhood. The neighborhood is in a constant state of flux. Yet, despite some conflicting neighborhood perceptions, today OTR is a much safer, cleaner, and vibrant neighborhood.
An in-depth study of sports sponsorship: understanding why businesses are spending millions of dollars on brand association and how they utilize sponsorship activation. IGB Sponsorship Report posted a $2.1 billion revenue in just the NFL, MLB, NBA, and NHL. Sponsorship activation can be defined as the follow-up actions taken by companies after securing the sponsorship rights to sports properties. Businesses need to leverage their investment on their sponsorship by finding the most effective ways to gain return on investment. The study of sponsorship activation is a relatively unexplored area in academia and only in its infancy in the business world. This thesis serves to discover how to make the most of out of sponsorship. Through the use of interviews and literature review of the research, the author has come to find that the secret does not lie in selecting the right property but in best leveraging that property.

**Stability and Instability in Differential Equations with Multiple Delays**  
Graduate Research  
1:00 PM  
Kennedy Union Ballroom

**Advisor(s): Youssuf N Raffoul**  
**Student(s): Megan A Cable**

We use Lyapunov functions to obtain sufficient conditions that guarantee stability and instability of the zero solution of the differential equation with multiple delays: 

\[
\dot{x}(t) = a(t)x(t) + \sum_{i=1}^{n} b_i(t)x(t-h_i).
\]

The highlight of the paper is allowing \(b(t)\) to change sign. In addition, we obtain criteria for the instability of the zero solution. Moreover, we will compare our results to new existing literature.

**Stability of Steady State Solutions of the Forced Kuramoto-Sivashinsky (KS) Equation**  
Graduate Research  
1:00 PM  
Kennedy Union Ballroom

**Advisor(s): Muhammad Usman**  
**Student(s): Miriam J Postek**

We consider the damped forced Kuramoto-Sivashinsky (KS) type equation and employ an asymptotic perturbation method to obtain steady state solutions. We shall analyze the stability of the steady state solutions.

**Studies of solid DNA-CTMA films using Raman Microprobe Spectroscopy**  
Honors Thesis  
1:00 PM  
Kennedy Union Ballroom

**Advisor(s): Perry P'Yaney**  
**Student(s): Faizan Ahmad**

Extensive research has been conducted on the development of deoxyribonucleic acid (DNA) - based electrical and electro-optical devices using purified DNA originally derived from salmon waste. However, the molecular weight of the virgin, as received DNA is greater than 8000 kDa whereas the electrical and electro-optical properties are optimum at lower molecular weights. High power sonication is used to reduce the molecular weight of the obtained DNA to levels as low as 200 kDa, in which higher power and longer exposure produces lower mean molecular weight. The DNA is then complexed with hexadecyltrimethylammonium-chloride (CTMA) to make it water insoluble. To support the various measurements that have been made to confirm that the sonicated material is still double strand DNA and to look for other effects of sonication, Raman microprobe studies were carried out to compare the spectra over a wide range of molecular weights, and to develop baseline data that can be used in correlation studies when various dopants are added to change the electrical, mechanical or optical properties. The Raman microprobe spectra from solid, dry-pack thin films of DNA with average molecular weights ranging from 200 kDa to >8 MDa complexed with CTMA are presented and compared with the as-received spectra. This study lies in selecting the right property but in best leveraging that property.

**Studies of environmental factors that are affected by the invasive shrub Amur Honeysuckle.**  
Course Project  
1:00 PM  
Kennedy Union Ballroom

**Advisor(s): Peter J Tilebaum**  
**Student(s): Ryan P O'Keefe**

Extensive research has been conducted on the development of deoxyribonucleic acid (DNA) - based electrical and electro-optical devices using purified DNA originally derived from salmon waste. However, the molecular weight of the virgin, as received DNA is greater than 8000 kDa whereas the electrical and electro-optical properties are optimum at lower molecular weights. High power sonication is used to reduce the molecular weight of the obtained DNA to levels as low as 200 kDa, in which higher power and longer exposure produces lower mean molecular weight. The DNA is then complexed with hexadecyltrimethylammonium-chloride (CTMA) to make it water insoluble. To support the various measurements that have been made to confirm that the sonicated material is still double strand DNA and to look for other effects of sonication, Raman microprobe studies were carried out to compare the spectra over a wide range of molecular weights, and to develop baseline data that can be used in correlation studies when various dopants are added to change the electrical, mechanical or optical properties. The Raman microprobe spectra from solid, dry-pack thin films of DNA with average molecular weights ranging from 200 kDa to >8 MDa complexed with CTMA are presented and compared with the as-received spectra. This study lies in selecting the right property but in best leveraging that property.
Undergraduate - Group
Advisor(s): Carl F Friese
Student(s): Mark A. Lauber, Sarah E Steele

Lonicera maackii (Amur Honeysuckle) is an invasive shrub distributed throughout the eastern United States. Its ability to establish in diverse habitats and reduce the growth of native tree seedlings and herbaceous plants has enabled L. maackii to dominate the areas it invades. Previous research attributes the competitive success of L. maackii to its early leaf production which enables it to out-compete native plants for light. However, we believe that other factors may also play an important role. We measured several possible factors in the local environment under L. maackii shrubs, including air temperature and humidity, soil moisture, organic matter, and inorganic matter. These data were collected under fifteen L. maackii shrubs and at fifteen control sites where L. maackii was not present in Sugarcreek MetroPark in Ohio. Preliminary results indicate that the areas under L. maackii shrubs have lower air temperature, higher humidity, higher soil moisture, more organic matter, and less inorganic matter than the control plots. Hopefully, this study will better define the factors that make L. maackii a successful invasive shrub, which in turn would provide insight into better management and restoration of invaded forest sites.

A survey of secondary teachers’ beliefs about the impact of No Child Left Behind’s required high-stakes testing on students and teachers: One school’s story
Honors Thesis
Undergraduate - Individual
Advisor(s): Beverly Ann Tillman
Student(s): Meghan K Manning

This study is based on a survey of teachers’ beliefs about the impact of No Child Left Behind’s (NCLB) high-stakes testing on students and teachers. The survey was created based upon literature in the field of education that both supports and criticizes the current law. Supporters praised the legislation for its initiative to hold schools accountable for the education of all students by well-trained professionals. Critics believe that the law is overly punitive, especially towards disadvantaged students, and too reliant upon high-stakes testing. The survey was administered to the teaching faculty of one high achieving secondary school in an eastern state in the United States. The results of the survey are generally critical of the law in its current form. There is a trend that shows that the majority of the teachers surveyed believe that the law, NCLB, initially had good intentions, but was not executed properly. This study helps readers to gain a better understanding of the challenges in the law NCLB based on the opinions of teachers who feel the implications of the law on both their teaching and on their students’ learning.

Survival, Immune Response and Organ Damage in Sepsis Are Controlled in the Central Nervous System: The Potential Efficacy of Leptin in Clinical Immunomodulation
Honors Thesis
Undergraduate - Individual
Advisor(s): Robert J Kearns
Student(s): Kelley L Guanciale

Sepsis describes a complex clinical syndrome that results from an infection, setting off a cascade of systemic inflammatory responses that can lead to multiple organ failure and death. Leptin, among its multiple known effects, is involved in regulating immune function. Here we demonstrate that leptin deficiency in ob/ob mice leads to higher mortality and more severe organ damage in a standard model of sepsis in mice. Moreover, systemic leptin replacement improved the immune response. Based on the molecular mechanisms of leptin regulation of energy metabolism and reproductive function, we hypothesized that leptin acts in the central nervous system (CNS) to efficiently coordinate peripheral immune defense in sepsis. We now report that leptin signaling in the brain increases survival during sepsis in leptin-deficient as well as in wild-type mice and that CNS leptin action is required for an adequate systemic immune response. Perhaps most importantly, these findings suggest a possible therapeutic potential for leptin analogues in infectious disease.

Synthesis and Polymerization of Phosphonic and Boronic Acid Substituted Terephthalic Acids for Use in Fuel Cell and Fire Retardant Applications
Graduate Research
Undergraduate - Individual
Advisor(s): Vladimir A Benin
Student(s): Scott A Simmons

Currently there are few polymers that can be used in multiple applications with little or no modification. There presently exist polymers that can improve fuel cell performance and provide fire retardant ability but none that can do both. Therefore, our research intends to produce a polymer, or class of polymer with a unique chemical structure that will provide enhancements to many current applications. Recently synthesized phosphonic and boronic acid functionalized terephthalic acids are some of these structures that could be useful in multiple applications.

“The Toe”: The Lou Groza Story
Course Project 09_WI_HSS_275_01
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Jacqueline R Bucci

The purpose of this study was to describe the life and times of “The Toe” Lou Groza, a well known Cleveland Browns football player that went above and beyond an average NFL player and still has an impact on us today. Groza was the starting kicking specialist for the Cleveland Browns and his humble life has inspired many people. Data from primary sources include photographs, interviews, original newspaper articles, and awards given by Lou Groza himself, also scholarly articles and journals that open the minds of many to his ideas, ambitions, and goals.

Translating Geometrical Transformations across Cultures: Teaching Mathematics in Zambia
Independent Research
Undergraduate - Individual
Advisor(s): James B Rowley
Student(s): Eric J. Krissek

In the summer of 2008 I had the opportunity to travel to the nation of Zambia, a country in southern Africa. During my time there, I was able to teach math in a secondary school classroom. Specifically, I attempted to teach the mathematical material known as geometrical transformations—reflections, translations, rotations, etc.—to a group of 12th grade students. My poster reflects my experience. Additionally, I have a plethora of observation and lesson plan notes that detail many of the events that I encountered in this teaching environment. One particularly surprising result that I found was the difference in notation used within the field of mathematics. Also, there exists a large pedagogical difference between the American student-centered educational approach and the British-inspired, teacher-centered Zambian approach to education. These drastic contrasts in educational philosophy are exposed through the qualitative recordings of my field notes.

Tutor-Supported Composition Courses at the University of Dayton
Honors Thesis
Undergraduate - Individual
Advisor(s): Connie L Bowman
Student(s): Kathleen M Groves

This project examines the University of Dayton’s English 101 and 102 T-sections: tutor-supported sections of the first-year composition course. First, the history of the program is discussed by looking at 1) why the program was created and 2) how it has changed since the pilot program. Then, results of student surveys about the program are assessed along with three case studies of student writing. Finally, recommendations for improvement are given in order to help the program continue to grow and continue to support student learning.
The UD Tree Trail

Undergraduate - Individual
Advisor(s): Nolan M. Nicase
Student(s): Nolan M. Nicase

The UD Tree Trail Project identifies twenty-one UD campus tree specimens of historical, cultural, or ecological significance. The selected trees are adorned with permanent steel placards, including their common and scientific names. A large, colorful brochure will be produced and distributed to introduce the trees and lead guests along the tree-tour. All who pass marked trees will be enriched with an instantaneous botany lesson, feel a greater sense of connection to the trees, the campus, and the Earth, and be inspired to lead and serve their community in the protection of trees and all of nature.

The United States of America: Health as a Human Right?

Honors Thesis
Undergraduate - Individual
Advisor(s): Dan E Miller
Student(s): Michael P. Lackott

This thesis examines the current healthcare crisis from a rights-based perspective, particularly focusing on the disproportionate number of minorities lacking health insurance. The study situates the current status of healthcare within the United States in comparison to other industrialized states. A study of the effects of health policy, mass media, and special interest groups on the political discourse of healthcare reform in the United States is used to highlight the injustices facing the minorities, particularly discrimination. The study utilizes historical documents and research, along with mass media communications, to explore the status of healthcare in the U.S.

The Virtue of Solidarity: a Theological and Practical Analysis

Honors Thesis
Undergraduate - Individual
Advisor(s): Kelly S Johnson
Student(s): Lauren P Hackman

The virtue of solidarity involves an awareness of interdependence between peoples and nations, as well as a firm commitment to eliminate suffering and promote the common good of all. This thesis project explores the theological basis of solidarity as developed in Pope John Paul II’s encyclical Sollicitudo Rei Socialis, as well as responses to the document. Next, this project seeks to consider the practical application of the virtue of solidarity by examining examples of solidarity offered by Pope John Paul II. Finally, this thesis investigates two programs that seek to promote solidarity and advance justice today: the Young Neighbors in Action mission trip program and the Catholic Relief Services Microfinance division.

Visible Light Induced Photocleavage of DNA by Ruthenium Substituted Porphyrins

Independent Research
Undergraduate - Individual
Advisor(s): Mark G Nielsen, Shawn M Swavey
Student(s): Anna M McCrate

A series of experiments were performed on two different ruthenium (Ru) porphyrin complexes (complex I and complex II) that have possible photo-chemotherapeutic properties with the very exciting potential of serving as chemotherapeutic agents. Porphyrins are aromatic carbons rings that can be photosensitized by wavelengths in the visible light range, and have been proven to have a high affinity for tumor sites. Photocleavage studies were done with complexes I and II to see if they damaged DNA in the presence of high intensity light in the visible range. Complex II, the fluorinated Ru-porphyrin, causes single strand nicks tosupercoiled DNA plasmid. Complex II, the fluorinated pyridyl Ru-porphyrin, proved to be highly effective at digesting supercoiled DNA plasmid. Also, a DNA intercalation assay was performed on the complex II with ethidium bromide (EBI) to prove that the method of binding to DNA was intercalation. Future experiments include determining the mechanism of the DNA damage, whether it has to be in aerobic conditions to make single oxygen or superoxide radical. If neither of these method prove to inhibit its ability to cleave DNA, then the mechanism must not have to do with oxygen and can occur in anerobic conditions.

The UD Tree Trail Project identifies twenty-one UD campus tree specimens of historical, cultural, or ecological significance. The selected trees are adorned with permanent steel placards, including their common and scientific names. A large, colorful brochure will be produced and distributed to introduce the trees and lead guests along the tree-tour. All who pass marked trees will be enriched with an instantaneous botany lesson, feel a greater sense of connection to the trees, the campus, and the Earth, and be inspired to lead and serve their community in the protection of trees and all of nature.
Women in Mysticism: Building a Bridge between Christianity and Islam

My research investigates the history of women in mysticism as exemplified by two women, the Muslim Rabi’a al-Adawiyya and the Roman Catholic St. Teresa of Avila. The goal is to find commonalities that may help build a bridge for dialogue between these two religions. The paper opens with a brief history of mysticism, beginning with Plato’s divided line through the development of mysticism in Islam and Christianity. Central is an investigation of the roles of women and the spiritual outlet mysticism allows them within the two dominantly patriarchal traditions. The paper compares the poems and adages attributed to Rabi’a to St. Teresa’s The Interior Castle, The Way of Perfection, and her Meditation on the Song of Songs. Themes they share strongly, such as the importance of personal prayer, and themes that show up in both mystics’ lives but they treat differently, such as ascetic and communal living, are discussed. The final section brings the discussion into the present. The similarities within the two paths may act as common ground for inter-religious dialogue today.

You Riverdance?: The Evolution of Irish Dance from Ancient Times to Modernity

The purpose of this study was to describe the evolution of Irish dance from ancient to modern times. Recent global fascination with this form of dance through traveling performances has inspired a detailed report of the impact of historical events on this once purely cultural practice. A first-hand account from an Irish dance instructor, various historical accounts, photographs, videos, as well as the exploration of global events will contribute to the information gathered for this study.
According to the EPA, at the end of 2007 there were a total of 629,866 active underground storage tanks in the United States. In FY 2007 alone, there were a total of 7,570 confirmed releases from these tanks. Although 77 percent of reported leaks have been cleaned up, there are nearly 110,000 old leaks that have yet to be addressed. It is hard to estimate how many people these releases may have affected, but one thing is for certain, a number of people across the U.S. have been impacted from leaking underground storage tanks in the last century. Dayton is no exception. A recent leak at the local Behr Thermal facility located at 600 Webster Street has impacted much of the McCook field neighborhood. Residents have seen their property values decrease dramatically and their health has been put in jeopardy with the risk of cancer increasing. It is clear that there are issues with underground storage tanks. This research will examine the way Ohio EPA and other agencies coordinate to prevent leaks from underground storage tanks. This research will also examine the steps these agencies take to perform cleanups, how leaks are identified, and who is held accountable for the environmental hazards that are posed. In addition, this research will identify the difference in standards between petroleum underground storage tanks and hazardous waste underground storage tanks. Finally, this research will provide recommendations to the Governor and legislature of Ohio in order to properly monitor, prevent, and respond to hazards posed by underground storage tanks.

This thesis traces the development of the modern American marching band, beginning with the first football halftime performance in 1907. Using archived performance footage and recordings, personal interviews and old marching band textbooks, this thesis is a historical account detailing the advancement of high school and collegiate marching bands in the United States. This presentation consists of a marching band show that follows the evolution of the marching band from the first block drill halftime shows to the intricate formations of the modern marching band.

Some of the greatest minds in American history recognized the benefits of problem-based learning long before the technique was given a title. Benjamin Franklin himself said, "Tell me and I forget. Teach me and I remember. Involve me and I learn." A scientific mind himself, Benjamin Franklin might be interested to know that since his profound statement about learning styles, problem-based learning has increasingly been acknowledged as an effective teaching method for middle school science classrooms. The implementation of problem-based learning has increased the cognitive development of students, as well as their overall enthusiasm and involvement in the subject they are studying.
In this paper I explore the relationship between Theodore Adorno, a philosopher and social theorist, to the Catholic theologian, Hans Urs von Balthasar. What I attempt to elucidate is the manner in which these two ostensibly different thinkers share common assessments of the condition of rationality within modernity. Adorno understands modern reason as suffering under a degenerative social process of “rationalization” whereby reason itself is reduced to power, and the world as mediated by reason, is reduced to a passive object for utilitarian manipulation. I trace Adorno’s story of rationalization from myth, through philosophy, and to modern scientific modes of understanding, focusing on his treatment of Kant. I then turn to articulate Balthasar’s history of reason, drawing together the consonances between it and Adorno’s. I conclude by pointing to the fact that both thinkers, believe that “aesthetics” can function as a corrective to the process of rationalization. For Adorno this takes the form of modern art in its dialectical relationship to culture, and for Balthasar, Christology, which manifests the metaphysical reconciliation of the universal and particular; rationality and the world.

Criminals or Freedom Fighters: A Sociological Look Into the Subculture of Computer Hackers

Panel Discussion
3:00 PM - 4:00 PM
St. Joseph’s Hall 230

Advisor(s): Patrick G Donnelly, Arthur J Jipson
Student(s): Christopher A Cerone

Computers and technology are an integral part of our world today. They help us with everything from playing games to banking to firing nuclear missiles. Without these systems our society could collapse into chaos. Despite the protections that we place on these computerized systems there exist people with the ability and knowledge to override them. These people known as computer hackers have an intimate knowledge of how computers work and how to get around all the safety mechanisms that keep our personal information safe from criminals who would otherwise steal information and property. The internet is an outlet, for people with the expertise, to get many of the things most people pay for free of cost. Since the internet is a place where many citizens are on unfamiliar ground people like hackers who are knowledgeable enough don’t have to play by the rules that the rest of the world does. The focus of the project will be on whether or not the subculture of hackers helps to facilitate the perpetration of criminal activity. This analysis of this project will help to show the effect a subculture like this can have on the rest of society. Also it will show why some of these people commit crimes of the internet. It could give insight into the effect the subculture could have on influencing people to rationalize their decision to steal intellectual property. Also it will show what ideological leanings the subculture has. Do they have anarchist undertones? Is there a goal to guide their rebellious actions on the internet?

Global Issues Through a Philosophical Lens

Oral Presentation
3:00 PM - 4:00 PM
LTC Studio

Advisor(s): Rebecca S Whisnant

This session will consist of selected group presentations from the Honors: On Globalism sections of Philosophy 103. The students have researched contemporary global/transnational issues including child soldiers, polygamy, gay rights, single motherhood, the mail-order bride industry, the Darfur refugee crisis, and the status of Iraqi women pre- and post-war. Each group will employ philosophical theories of ethics and justice to explain and analyze some central aspects of their topic.

Tradition and Interreligious Dialogue in the Christology of Raimon Panikkar

Oral Presentation
3:00 PM - 3:30 PM
Kennedy Union 311

Graduate Research
Advisor(s): Dennis M Doyle
Student(s): Justin M Yankech

This research project investigated how Raimon Panikkar attends to the tension between the goals of interreligious dialogue and traditional Christian dogma and doctrine. After examining Panikkar’s theological development over the course of his career, and critiquing it alongside the traditional Christological teachings from the Council of Chalcedon and documents by the Congregation for the Doctrine of the Faith, this report concludes that Panikkar maintains a positive tension between the goals of interreligious dialogue, theology of religion, and pluralism and traditional Christological dogma and doctrine. Seen in the light of his account of interreligious dialogue, Panikkar shows that the particularity and uniqueness of Christ and Christianity is not lost, and that our understanding of vocation, election, and mission is expanded. This presentation will outline how this positive tension is visible in Panikkar’s treatment of traditional Christological doctrine and interreligious dialogue as it applies to Hindu religious philosophy.

Childhood Obesity: An Epidemic in the U.S.

Panel Discussion
3:00 PM - 4:00 PM
St. Joseph’s Hall 023

Advisor(s): Paul J Beckler, M Frances Geyer Pestello
Student(s): Lori A. Pelletier

I am researching the causes and effects of childhood obesity. I am also going to elementary schools and interviewing the principal or food provider on how they choose their meals and asking them what they have seen in the eating patterns of their children.

Student(s): Sara E Garchar, Daniel W Longenbaker, Kathryn A Miras, Benjamin P Norton, Junko Ordonez, Kathleen A Patton, Sarah K. Stevens

Presentations 3:00 PM - 4:30PM
Juvenile Delinquency: To Rehabilitate or to Punish?
Panel Discussion
3:00 PM - 4:00 PM
Senior/Capstone Project
Advisor(s): Arthur J Jipson
Student(s): Amanda Nicole Lewis

The purpose of this study is to examine a rising issue in the juvenile justice system. This issue is examining if a juvenile entering the system has a mental illness; are they being rehabilitated or punished properly? Most of the time these mental illnesses are either from axis I and/or axis II. An Axis I disorder is a clinical syndrome like depression, schizophrenia, and social phobia. An Axis II disorder is a developmental disorders (e.g. autism and mental retardation). Disorders which are typically first evidence in childhood and personality disorders which have a more long lasting symptoms and encompass the individual’s way of interacting with the world. (e.g. Paranoid, Antisocial, and Borderline Personality disorders). In addition, if this is not occurring then what precautionary steps could and should be addressed. Entry into the juvenile justice system does not mean that children with known diagnoses will receive treatment or they will receive proper referral for diagnosis and treatment. This study will further delve into this particular issue and how far its effects extend. It is important to see where changes can be and should be made to ensure juveniles are receiving the proper referral. This way the juvenile justice system will run more efficiently and more productively. In addition, the families and communities will benefit significantly.

Making International Law Work for the World’s Women
Panel Discussion
3:00 PM - 4:00 PM
Course Project 09_WI_POL_340_01
Advisor(s): Natalie Florea Hudson
Student(s): Allison J Cone, Tricia A Heschel, Steve J Jackson, Bethany A. King

As part of a research project for the course, Gender and International Relations, this panel of students will be exploring a variety of international legal issues from a gender perspective. This panel will cover topics of rape as a war crime to human trafficking to the implementation of the Convention on the Elimination of All Forms of Discrimination Against Women to women’s legal status in post-colonial Africa, and will demonstrate how at the heart of each of these issues are questions about the meaning of justice in terms of equality, peace, stability, democracy and economic growth. Each paper on this panel will illustrate the dynamic nature of international law across cultures and the ways in which men and women experience legal standards and international norms differently. The law is a highly gendered process, and this process will shed some light on how the power of gender is at work in various political, social and economic processes across the globe.

Overflowing Obstacles: Examining Marianist Lay Communities as a Source of Social Change
Panel Discussion
3:00 PM - 4:00 PM
Senior/Capstone Project
Advisor(s): Paul J Becker, Laura M Leming
Student(s): Alexander P Orlowski

The original purpose of the Marianist lay communities was twofold: first, to provide small faith-sharing communities for local Catholics who had no other recourse after the revolution, and second to begin an effort to re-christianize France. Since then, the lay movement has grown to include some current 1,700 lay Marianists in North America and 7,000 world-wide. Catholics who had no other recourse after the revolution, and second to begin an effort to re-christianize France. Since then, the lay movement has grown to include some current 1,700 lay Marianists in North America and 7,000 world-wide. This project examines Marianist lay communities as a social movement organization and how its mission has evolved over time. Particular attention is given to the civic and ecclesial engagement of Marianist lay communities.

A Rhetorical Analysis of the Freeport, Illinois Abraham Lincoln/Stephen Douglas Debate
Oral Presentation
3:00 PM - 4:00 PM
Honors Thesis
Advisor(s): Albertina L Walker
Student(s): Maryjo F Pirages

My thesis examines the historical context of the famous Illinois Senate debates between Abraham Lincoln and Stephen Douglas through the analytical lens of rhetoric. After an exploration of rhetoric’s origins, importance, and role within the United States political landscape, my paper features an analysis of the dazzling, defining rhetorical moments of the Freeport, Illinois debate, a decisive oratorical contest that transformed a little-known state senator from Illinois into an American political icon.

Student Songwriter’s Concert
Performance
3:00 PM - 4:00 PM
Course Project 09_WI_MUS_399_01
Advisor(s): James R McCutcheon
Student(s): Mallory E Beck, Bridget M. Egan, Katherine M Feher, Joseph K. Gruber, Jordan P. Latore, Amy M. Love

Several students of Jim McCutcheon will present original songs written about a variety of topics.

Women and Islam: Self-Expression After 9/11
Panel Discussion
3:00 PM - 4:00 PM
Senior/Capstone Project
Advisor(s): Laura M Leming
Student(s): Elizabeth M Tiemeier

In light of recent events in U.S. history, Muslim women have been the victims of harsh and generalized judgments. Haddad poses the question, if women are being abused for their dress which others consider “objectionable or think that wearing such clothing somehow identifies them as being terrorist,” then how else are Muslim women able to express their identity (Haddad 2006: 15)? The goal of this project is to understand and share the ways Muslim women express their identity in a society which is already judging their attitudes, beliefs, and actions. In conjunction with a content analysis of popular resources for Muslim women (i.e. magazines), I will be conducting approximately six interviews with young American Muslim women (ages 18-30). The analysis of the interviews and text will include comparison and contrast of the ways in which women most commonly construct their identity in the public sphere. Sharing the results of this research will hopefully broaden others’ outlooks on Islam and Muslim women and what it means to the women to be Muslim in U.S. society.

Issue Forum on Campus Energy Use
Interactive
10:30 AM, 1:00 PM, 3:00 PM
Advisor(s): Jason L Pierce
Roesch Library

The issue forum on campus energy use brings together students, faculty, staff and administrators to deliberate three questions: How should UD secure its energy? How can UD use its energy more efficiently? Who should pay for energy improvements?
The RecPlex sent out a survey March 16th to all women on UD's campus to see what they think about their body images. After tallying the results an environment to promote positive body image is created in the fitness center of the RecPlex displaying what the women of UD thought about their own body image. Along with a timeline of history on how the way we view our bodies has changed since 1850.

On Contemporary Interior Design
Oral Presentation/Visual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Cassie Geisen

The idea behind my informative design piece is to create a solution that educates the viewers on contemporary interior design, while also creating a space that reflects the style of interior design to house the information piece itself. In doing so, the viewer will be able to read the information in a space that gives the visual representation of contemporary interiors. The information will give insight into the ways in which one should approach contemporary interior design in different areas of the home, such as entry ways, bedrooms, bathrooms and living areas.

Surviving Desire: Media Ethics and Food Advertising
Panel Discussion
Course Project 08_FA_ENG_114_HA
Advisor(s): Akhila Ramnarayan
Student(s): Tyra L. Campbell, Phillip H. Cluda, Laura M. Cornicelli, Grace E. Dutton, Lauren A. Simic

This panel explores the role of food images in mass marketing and the media. Rhetorically analyzing the affirmation of gender stereotypes in television commercials featuring food items, print ads in Cosmopolitan magazine, and fast food commercials targeting children, the panelists call for greater attention to be paid to media effects in the arena of food studies.

The Zodiac
Oral Presentation/Visual Arts Exhibit
Course Project
Advisor(s): John V Clarke
Student(s): Caitlin McCauley

The idea behind this project is to inform viewers of their human connection with early man’s discovery of astrological influences on life. In doing this I hope to reveal the metaphysical bridge stretching from the primitive, yet insightful views of the first astrologers, to the methodical and more heavily documented discoveries of today’s scientists. The final product will focus heavily on the twelve signs of the zodiac as well as related information about the uses of astrology, the varied positions of the planets and their link to the zodiac signs, human anatomy, and psychology. Using the ebb and flow of astrology from past to present, the overall message of this project should leave the viewer with a little more insight into the science and art of astrology and its impact on human life.

Contemporary Communication Research
Oral Presentation
Graduate Research
Advisor(s): Teresa L Thompson
Student(s): Jamie M. Eastman, Patrick T Fries, Sara R Hoyt, Nicholas T Iannarino, Lisa M. Kaminski, Alexandra A. Miles, Nicole A Miller, Jessica L Parker, Grace A. Rodney, Carrie L Scherer, Brittany E Waag

Issues in contemporary communication research will be examined by this group of graduate students. They will include such topics as: She Said What! Role of Gender in Verbal Aggressiveness and Vulgarity in Stand-up Comedians; Media Complementarity and the Internet; A Study of Online Media Sources and Media Complementarity Theory; The Impact of Animal Rights Messages on Opinions of Animal Welfare; Individual and Cultural Factors Affecting Students’ Anxiety During Language Study Abroad Programs; The “Parachute” School: Factors and How Messages about Alcohol Use at Universities Influence Prospective Students’ Perceptions; A Content analysis of the social support communication in blogs by empty nesters; The representation of religious issues on televised medical shows: A content analysis; Relational Dialectics in Dating; and Pageants and the Perception of Self: How the Modern Woman Relates to Beauty/Scholarship Competitions

All Industries Inc. Blade Process Analysis: Implementation and Training of Production Planning System
Oral Presentation
Senior/Capstone Project
Advisor(s): Michael F Gorman
Student(s): Tyler D Deutsch, Matthew E Kaercher, Dane M Schaeffer

This proposal describes a project to implement a model production planning system in the abrasive blades production process of All Industries, Inc. A model line will serve as an example for the effectiveness of a pull system to fulfill demand. First, we will analyze the effect of AI’s effort to move their customer specialization labeling process upstream in the process and its outcome on inventory levels, delivery, batch sizing, cost, and process time. Second, we will study the best possible scenario for a successful production planning model system; reviewing product type, machining, resource planning, method of communicating, and support from management team. Last, we will instruct the workforce on the agreed upon production planning system, creating applicable visual management tools, and performance measures. If successful, this model production planning system can be implemented throughout the shop on multiple product lines and processes.

A Comprehensive Process Improvement Analysis of Paint Inventory Control at American Trim LLC
Oral Presentation
Senior/Capstone Project
Advisor(s): Michael F Gorman
Student(s): Alison M Hrovatich, Francis P Kosmach, Kelly M Legrand

American Trim is a sheet metal forming and painting manufacturer with locations in Pennsylvania, Alabama, Mexico, and three in Ohio. Our team’s assignment is at the Sidney plant with the Decorated Products Department to facilitate more effective paint inventory control. The paint stage of the manufacturing process is the bottleneck work center at American Trim. If there is a shortage of paint, the current production run cannot be finished, which results in extra change-overs and delayed shipments to customers. American Trim must pay for expedited freight, suffer lost process time, engage in extra supplier/buyer negotiation efforts, and incur lost goods as a result of a paint shortages. Currently, inventory is stored in multiple locations, and paint ordering and usage is driven by “tribal knowledge” of employees who are familiar with the process and its idiosyncrasies. However, this loose inventory system has led to the aforementioned shortages as well as paint specification deterioration, and a time consuming and inaccurate inventory system. In order to prevent paint shortages, American Trim is in need of a comprehensive inventory tracking and reordering system. To achieve this, our team developed process maps of the current system and identified critical areas of improvements, such as a need for a central inventory location, a tracking system for mixed paint usage, and increased communication between ink mixers. Integral to these process changes, the team identified data necessary to link the production forecast to total actual paint usage, including a “fudge factor” calculation. To facilitate implementation, the team developed Standard Operating Procedures and On the Job Training steps. These process changes will prevent shortages of ink and control the paint inventory in a less labor intensive way.

Entrepreneurship Capstone Business Consulting Project
Panel Discussion
Senior/Capstone Project
Advisor(s): Robert S Franks
Student(s): Kyle A Camreli, Sarah A Lingo, Michael C Morris

Entrepreneurship majors participates in a consulting project with actual local businesses as the capstone to the educational journey. This presentation features students from different teams sharing the conclusions and recommendations they will
The School of Business Administration has established a team of students tasked with investigating a non profit business plan that could be implemented as an addition to the student-run businesses, Flyer Enterprises. The team has interviewed key campus and community leaders and has received ideas from others across campus. The most feasible ideas have been expanded upon and business plans have been written for the two top choices: a community thrift store and a non profit small business consulting company. This presentation will discuss the history of the program, descriptions of the top two choices, and the possible implementation of one or more of the ideas.

**Marketing Strategy Plan for the Department of Educational Leadership**

*Oral Presentation*  
3:30 PM - 4:20 PM  
Miriam Hall 214  
Advisor(s): William F Lewis  
Student(s): Brian W Badertscher, Lindsay M Camella, Jonathan P. Hernandez, John R Markwell, Benjamin R Morgridge, Michael R. Rieker, Jaclyn M Schier, Brittany L Stewart

In this session, students in the marketing capstone course (MKT 455, Marketing Planning and Strategy) will be presenting the marketing strategy plan that they constructed for the Department of Educational Leadership.

**The Off-Stage Horn, featuring Joshua Paulus and the UD Horn Choir**

*Oral Presentation*  
3:30 PM - 4:30 PM  
Sears Recital Hall  
Advisor(s): Richard K Chenoweth  
Student(s): Michael A Blake, Elise M. Boevengton, Cassandra G Collins, Eric M. Fahrman, Timothy P Fox, Sara A. Jordan, Megan E Malachowski, Weston Lee Merling, Joshua E Paulus, Christine L. Pelletier

This presentation will explore the use and convention of the Off-Stage Horn in orchestral writing and in compositions for opera and ballet. I am exploring the use of this concept and including any works where specific directions from the composer require the horn or group of horns to play music outside of the normal performance space, which in opera and ballet is the orchestra pit, and for the symphony orchestra the stage. I will trace the origins of the horn and give a brief history of the horn in its role as an orchestral instrument. I will then examine the works of different composers and their unique and specific usage of the off-stage horn. While composers such as Richard Wagner wrote passages for a single solo horn, other composers such as Giuseppe Verdi wrote for small horn ensemble. Composers such as Richard Strauss wrote for large collections of horns, while Gustav Mahler composed for off-stage wind bands in which horns constitute an integral part. I will also explore off-stage parts in works by composers such as Ottorino Respighi and Hector Berlioz that are often now played by horns but were originally written for instruments that are no longer in use. Musical examples will be performed demonstrating all of the above. A horn playing off-stage is an interesting device on its own, worthy of scholarly attention. Based on my research, this is the first attempt to gather information about the extent of the repertoire in a scholarly fashion. In this presentation, through the use of musical examples, I will demonstrate that the off-stage horn can be used to accentuate a dramatic moment, advance a narrative, serve a specific musical purpose, or to foreshadow a coming event.

**River Tour of Downtown Dayton with the UD River Stewards**

*Interactive*  
12:30 PM, 3:00 PM  
Immaculate Conception Chapel  
Student(s): Tracey L. Horan, Emily M Klein

Join the River Stewards on a river tour of downtown Dayton! The trip will put in at RiverScape MetroPark in downtown Dayton and paddle through the downtown areas of the Great Miami River. Tour guides will share information about the history of the rivers that run through Dayton as well as the environmental impacts of the city on the rivers. Appropriate dress is required—shoes that are sturdy and you don’t mind getting wet (NO FLIP-FLOPS!) and comfortable clothing. The first trip will depart from outside the Chapel of the Immaculate Conception at 12:30 and the second will depart at 3:00 from the same location. Only a limited number of slots are available. **Advanced registration is requested but not required. Email Tracey at RiverInstitute@notes.udayton.edu to sign up.**
"A League of Their Own": Women's Professional Baseball
Course Project 09_WI_HSS_275_02
3:00 PM
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Alison R. Roell

The purpose of the study was to describe the era of women's professional baseball during a time when the rest of the world was at war. At a time when the young men of America were being drafted into the Second World War, women's opportunities outside of the home rose in both society and sports. Historical analysis was based on primary sources such as photographs, and different articles from databases that brought the women's "league of their own" to life.

Aesthetic Preference for Unity Persists when Illusions are Present
Independent Research
3:00 PM
Undergraduate - Group
Advisor(s): Susan T Davis
Student(s): Carolyn J Mingione, Rebecca M Spalding

The purpose of this experiment was to expand upon previous research to examine whether symmetry is upheld as a preference when there is an illusion present. Previous research on two dimensional objects suggests that the preference for unity will prevail. The first phase of the examined the preference for symmetry in two dimensional objects that present an illusion, looking specifically at the Muller Lyer illusion. The two dimensional Muller Lyer illusion was manipulated in accordance with the unity ratio (1:1.00), the golden ratio (1:1.618), 1:1.27, 1:2.10, 1:2.79, and the original Muller Lyer ratio. Results indicated that the unity ratio was preferred for both horizontally and vertically oriented stimuli when the ratio was adjusted shaftlegs (the shaft was always larger) and the golden section ratio was never preferred. These preliminary results uphold a preference for the unity ratio across two dimensional objects with illusions, and the next question of interest regards whether this preference will also be upheld in more complex three dimensional illusions. The study focused on six ratios of six different 3-dimensional shapes varying in illusion and symmetry. The shapes consisted of a nonsymmetrical shape, a necker cube, a necker cube offering an impossible illusion, a flattened necker cube, a diamond, and a cylinder offering no illusion. The ratios were consistent with those of the first part, but instead of the original Muller Lyer ratio, the sixth ratio was 1:3.88. A chi squared analysis of the pilot data collected for the first part of the experiment found that participants significantly preferred the unity ratio when presented with more complex illusions. The Pearson chi squared statistic is 188.116 with 25 degrees of freedom. The non-illusional cylinder did not show the same preference.

Age, Gender, And Run Time As Determinants Of Pacing In The Marathon
Independent Research
3:00 PM
Undergraduate - Individual
Advisor(s): Paul M Vanderburgh
Student(s): MacKenzie L Hoops

Purpose: To determine the independent influences of age, gender, and run time on marathon pacing. Pacing was defined as mean velocity (min/mile) of the first 20.2 miles divided by that of the last six miles, expressed as a percentage. Methods: Subjects were 186 men and 133 women marathoners from the 2005, 2006, and 2007 races of a midwest US marathon. The course was a one-mile loop with pace markers throughout, thus facilitating pacing strategy. Split times were measured electronically via shoe chip for each mile. The February event ensured that ambient temperature (never above 5 deg C), was not a factor in hypothermia, a condition known to substantially slow marathon times and affect pacing. Results: Multiple Regression analysis revealed that female, older or faster runners demonstrated more consistent pacing than male, younger or slower marathoners (p < 0.01 for each predictor and overall explained variance was 18%). No two- or three-way interactions were statistically significant. Conclusions: This is the first study, to our knowledge, that has examined and quantified the independent effects of age, gender, and run time on marathon pacing. Future studies should examine the influence of other factors and/or confounders such as effort or body composition.
An Evaluation of Student-Based Budgeting
Course Project
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Kristen E Lauer

Using the findings from studies done by Brown University and the Annenberg Institute for School Reform, and work by K. Miles, K. Ware, and M. Roza, the researcher analyzed and evaluated the difference between school-based budgeting and student-based budgeting within public school districts in the United States. The researcher also evaluated the way in which a system of weight-based funding was used to create a system in which students of many backgrounds and ability levels were able to be equally educated. Although the researcher noted that there are challenges to the student-based budgeting system, the researcher combined research from Brown University and Annenberg Institute for School Reform to come up with a way to change from the traditional budgeting system of most public districts in the United States to the new student-based budgeting system.

Analysis of the Impact that Cultural Tendencies have on Learning and Teaching Styles
Course Project EDT 110 I
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Kristen J Linfield

This paper identifies the connection that exists between the learning styles of an individual and their cultural background. Unless teaching styles and instructional methods are modified to address the different learning styles of these children of diverse backgrounds, this will limit the effectiveness of schools. Also addressed is the particular way that culture does affect the learning styles of students and the responsibility that teachers have in working to respond to the diverse styles of students. The culture itself impacts the children by instilling values and teaching styles, as modeled by the parents, before the child attends school, thus instilling a specific learning pattern and process in the child. While each student also has an individual learning preference, their learning style is often influenced by these early interactions with their culture. The teacher, in order to address these needs must also be embedded to a certain extent in the culture, create a role that recognizes the value of the student’s ability and work to ensure that the student’s ability is brought to its maximum capacity through certain methodology which works to match the learning styles of the students, while ensuring that the expectations of the school for academic success are also met.

Anything is Possible: The Ironman Triathlon World Championships
Course Project 09_WI_HSS_275_02
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Ellen M Vanderburgh

The purpose of this study is to describe the Ironman Triathlon World Championship in Hawaii and observe how far it has come in the last 30 years. The Ironman Triathlon is a relatively new racing event and in its short existence, has become the ultimate test of mental and physical ability for people across the globe. Numerous professional and non-professional athletes have competed in this amazing event and have shown the power of the human body. Interviews, journal articles, photos and other primary sources on the Ironman Triathlon World Championships were used to evaluate the details of the race and what type of training is required in order to finish. Secondary sources were used to obtain some necessary statistics and information on the participants including their times, to discover how much the race has changed over the years. The Ironman Triathlon has made great strides in the last few decades and will continue to make its mark in the realm of competitive endurance sports in the years to come.

The Art of Science: Land-Use History of Argonne Forest in Dayton, OH
Course Project 09_WI_BIO_499_P1
Undergraduate - Individual
Advisor(s): Carl F Friese, Patrick K Williams
Student(s): Joshua M Siefring

Argonne Forest was an amusement park in the early 20th century and now is located inside Five Rivers MetroParks’ POSSUM Creek in Dayton, Ohio. The forest consisted of areas such as a swimming pool, dance floor, foot-bridge, dirt race track, and open green picnic space. Natural plant succession has covered much of the area, with invasive honeysuckle overgrowing many of the natural and historical features of the park. Former photographs of Argonne Forest were found and these historical areas of interest were re-photographed from a comparable angle to evaluate how the site has changed over time. Each point where photographs were taken were also logged with a GPS unit and entered into a GIS database. This GIS data can then be used to help MetroParks better manage the site for biodiversity and historical value. Quadrate and transect sampling was used for measures of plant species diversity and density in the photographed locations. The final product is a blend of site history, biodiversity change and art in relation to how these locations have been viewed through the camera over time.

Assessing Quality of Fish Populations During Stream Restoration with an Index of Biotic Integrity (IBI)
Senior/Capstone Project
Undergraduate - Individual
Advisor(s): Jeffrey L Kavanaugh
Student(s): Joshua M Stiefing

Little Beaver Creek in Greene County, Ohio is an effluent-dominated stream receiving a significant proportion of its discharge as effluent from the Eastern Montgomery County Wastewater Treatment Plant (WWTP). Toxic levels of nutrients from the WWTP have severely impacted fish populations in the stream for decades. In addition to WWTP effluent the stream is impacted from stormwater runoff and physical alterations made by humans to the stream channel. As a result, Little Beaver Creek has never met standards of water quality set for it by the Ohio Environmental Protection Agency. Using fish electroshocking equipment, we have recently collected data on fish populations in Little Beaver Creek that show the stream is meeting standards for supporting aquatic life for the first time. The improvement in fish population structure is most likely related to recent upgrades in treatment technology used at the WWTP.

Assistive Lifting Device
Senior/Capstone Project
Undergraduate - Group
Advisor(s): Rebecca P Blust
Student(s): Ywen Chen, Michael J Erdi, Jing Huang, John M Madigan, Yong Zhou

Employees that stock the products at the Commissary earn their wage based on how quickly they stock the shelves. The client would like us to design, build, and test a device that will increase the productivity of these employees, thus allowing them to maximize their earnings. Also, safety is another important issue that needs to be considered. The main user Clarence is handicapped in one arm. He can only use one hand to stock the shelf which makes it very difficult to lift items from a crate or a box to the shelves. The scope of this project is to design an automatic lifting device which will help the user stock the shelf efficiently, effectively and safely. This project can widely used in factory and grocery stores. It helps not only Clarence but other employees to increase their productivity as well as releasing their fatigue.

Automated Crankshaft Pinmill Cutter Inspection System
Senior/Capstone Project
Undergraduate - Group
Advisor(s): David R Barth, Rebecca P Blust
Student(s): Michael P Beale, Qihan Qi, Yifan Shi, Yinghui Shi, Shengran Zhang

This project is for Honda of America MFG, Inc. located in Anna, Ohio. Our project is to design an automated inspection system to increase the accuracy of the milling cutter and enhance the efficiency of the inspection process. The machining
of crankshaft is a complex operation due to the complicated shape of the crankshaft and the degree of precision required. The pin-fin cutter is a special cutter which is used to mill the crankshafts. In order to insure the accuracy and precision needed for a pristine crankshaft, the cutter needs to be installed correctly and to be in tolerance. There are two parts in this inspection process: the correct orientation of carbide insert and the required tolerance of the insert. These two parts of the process must be absolutely correct and checked 2-3 times during the process by multiple technicians. Currently, the insertion and the inspection process are manual/visual processes and take about a half an hour each to perform. It is very time consuming. The goal of our proposed automated system project is to reduce the set-up time as well as the inspection process time.

Beam Steering Performance of Electrowetting Microprrism Arrays
Graduate Research
Graduate - Individual
Kennedy Union Ballroom
Advisor(s): Joseph W Haus
Student(s): Wei Han

We explore new concepts for non-mechanical steering of laser beams using micromiprism designs based on electrowetting phenomena. The micropiprism are designed using a water/oil interface. The wetting angle at the side walls of the prism is electrically controlled. We consider transmissive micropiprism designs in this study. In this presentation we report the diffraction efficiency of single-sided and double-sided micropiprism designs. For small angle (less than 1.5 degrees) the far-field diffraction efficiency exceeds 90% and the far-field angles can be extended to more than 10 degrees with better than 80% diffraction efficiency. For the micropiprism the array angles are discrete and the aberation between the diffraction peaks can be covered by applying a tilted phase to the input field. We used an extended beam propagation algorithm that is not restricted to paraxial beams. We solve Maxwell’s equations in different geometries with input beams whose width can be one or many wavelengths. For continuous numerical computation is applied to a liquid crystal array that has been reported in the literature using a finite difference-time domain algorithm. The results are in good agreement with the results in the literature. We use a water/oil interface for the design study and report steering angles to more than 10 degrees. The beam can be continuously steered between the discrete diffraction angles by tilting the input beam or applying a gradient to the tilt of the oil/water interface. The diffraction efficiency can be optimized to exceed 80% in these cases.

Bend it Like Beckham: The Life of David Beckham
Course Project 09_WI_HSS_275_02
Undergraduate - Individual
Kennedy Union 222
Advisor(s): George M DeMarco
Student(s): Jack C. Pearson

The purpose of the study is to describe the life of David Beckham. The study will include a description of Beckham's teenage years to his current age of 33. The use of primary sources: "My side" his autobiography and other. First hand sources that he has written or been interviewed in, will help tell the story of the man he is today and the different paths that he has had to go through in all different countries across the world. The media has played a very important role in Beckham's life so different angles will be interpreted to make his life story factual with different perspectives. Beckham's life will be looked at and go through in all different countries across the world. The media has played a very important role in Beckham's life so different angles will be interpreted to make his life story factual with different perspectives. Beckham's life will be looked at and described from both on and off the soccer field looking at his social family and general personal life.

The Biography of FLora (Flo) Hyman and Her Impact on the Sport ofVolleyball
Course Project 09_WI_HSS_275_02
Undergraduate - Individual
Kennedy Union 222
Advisor(s): George M DeMarco
Student(s): Tiffany M. Gaerte

The purpose of the study was to describe the shortened life of Flora (Flo) Hyman, a member of the 1980 USA National Team. Flo was known as the best volleyball player not only in the United States, but in the world gaining countless awards throughout her high school, collegiate and national careers. Unfortunately Hyman's time was cut short at the young age of thirty - one where she collapsed and died on the sideline of the volleyball court on January 24, 1986. Her death was first thought of as a heart attack but with further investigation she was diagnosed with having Marfan Syndrome. Historical analysis is based on primary sources, including biographies, photographs and videos that will bring Flo Hyman and her career back to life.

Bootstrapping with SAS and Exploring Dirty Data
Graduate Research
Graduate - Individual
Kennedy Union Ballroom
Advisor(s): Andrew O Ewvare, Joseph W Haus, John S Loomis, Qiwen Zhan
Student(s): Alain N Tschimwag

Ellipsometry is a powerful optical metrology technique used to measure thin films properties such as thickness and refractive index simultaneously and in a non-destructive way. Most ellipsometers available in the market suffer from a limitation in the spatial resolution and this problem makes this technique inadequate for characterizing microstructured thin films and surfaces. Another difficulty in microellipsometry is a low signal-to-noise (SNR) ratio due to the detector’s pixel size required for good ellipsometric performance. In this thesis a nulling microellipsometer design using a radial symmetry concept has been implemented and tested. The radial symmetry is achieved by passing a circularly polarized beam through an electro-optical retarder and a radial analyzer. A high numerical aperture objective is used to achieve high angle illumination of the sample and the focus of the beam on the sample. Due to their symmetry the rays within the entire annular ring in the back focal plane, instead of just one small portion of the ring as it is the case with a back focal plan microellipsometer.

Dirty data is data that is misleading and incorrect due to improper database storage or data input. This research paper is concentrating on tackling missing data issue using statistical method, in which missing values are estimated using iterative bootstrapping. For research purposes, we take n data points (subset) of out N data points (population), and assume we have k missing data points where k<N-n. Then, we apply bootstrapping on the subset to find relevant regression statistics. These statistics are used to estimate k missing values of dependent variable based on existing independent variables. Bootstrapping statistics should be used because the population does not have to be of normal distribution or approximately normal distribution; on the other hand, we need to make normality assumption if we use the statistics obtained from the subset. Practically we do not know the distribution of the population and we need to be able to estimate missing values of any kind of data distribution.

Building and Testing a High Resolution Radially Symmetric Nulling Microellipsometer
Graduate Research
Graduate - Individual
Kennedy Union Ballroom
Advisor(s): Andrew O Ewvare, Joseph W Haus, John S Loomis, Qiwen Zhan
Student(s): Alain N Tschimwag

The purpose of the study was to describe the professional career of the late caddy for Tom Watson, Bruce Edwards. Bruce Edwards, troubled with ALS commonly known as Lou Gehrig’s disease was an inspirational figure not only in the sporting world but for all people unfortunately burdened with cancer. Edwards a caddy since the 1970’s made the most of his short lived life by living life to the fullest and not letting his sickness get in the way of becoming not only a great caddy but lifelong friend of Tom Watson. The story behind his life and times of Bruce Edwards is filled with facts and facts pertaining to people on a local, national, and global scene as it involves such an emotional and inspirational story. Data was collected through extensive research methods involving the pooling of several stories and dedications including interviews, articles, and photographs from ESPN and the USGA but with primary allotment from the book Caddy for Life: The Bruce Edwards Story by John Feinstein. The project overall highlighted the emotional story behind the caddy who battled through cancer, lived life to the fullest, and passed with no regrets.
The genus Impatiens, with a worldwide distribution of more than 1300 species, enjoys wide popularity as a garden plant, and is a staple of commercial nurseries. Apart from its economic value, however, this genus is also of considerable biological interest, displaying unusual traits such as cleistogamy (closed flowers) and chasmogamy (open flowers) in the same plant. These plants have also become invasive in certain parts of the world by evolving traits such as the most nutritious and sweet-smelling nectar in its habitat. Data has been gathered for 244 species for 118 traits and put in a relational database. Six morphological and ecological traits were selected from this database for 84 species for this project. Nucleotide sequence (chloroplast trnT-trnL, intergenic spacer) was also gathered for these 84 species and three close outgroup species, including Hydrocleys triandra, the sole representative of the sister genus of Impatiens. These sequences were aligned and phylogenetic analyses carried out using the Neighbor-joining method of inference, with maximum likelihood distances. Bootstrapping was done with 100 replicates. Branches with less than 50% support were collapsed, yielding a tree with many unresolved branches. (The Impatiens genus is known to be a difficult taxon for good phylogenetic resolution.) The six traits were then superimposed on this tree to determine the emergence patterns of these traits. Such a study is expected to shed light on the association of the traits, if any, with the speciation events in this speciose genus.

A Comparative proteomic analysis during urodele lens regeneration
Independent Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Panagiotis A Tsonis
Student(s): Jonathan P McFadden

To examine underlying mechanisms of urodele lens regeneration, we have employed a proteomic analysis of 650 proteins involved in several signaling pathways. We compared expression of these proteins between the regeneration-competent dorsal iris and the regeneration-incompetent ventral iris in the newt. After a series of screenings we selected several proteins to evaluate their expression quantitatively on immunoblots. We then used these selected proteins to compare their expression between the dorsal iris of the newt and the iris of the axolotl, another urodele, which does not regenerate the lens. In the newt we find that most proteins are expressed in both dorsal and ventral iris, even though there is differential regulation. Moreover, several of these proteins are expressed in the axolotl iris as well and for some of them their expression is consistent with the regeneration potential.

Independent Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Amit Singh, Muhammad Usman
Student(s): David A Aaby

The Hodgkin-Huxley Model is a mathematical model used to describe action potentials in nerve cells, or neurons. An action potential is an electrical signal used to send information between neurons. The Hodgkin-Huxley model is a system of four nonlinear, ordinary differential equations (ODEs) that describe how an action potential is initiated and propagated. No exact solution of this system can be found, so the system must be solved numerically. Several methods, such as the Euler Method, Runge-Kutta fourth order method, and numerical Matlab functions were used to solve the system of ODEs. These numerical methods were compared to determine which method gave the most accurate approximation of neuron action potential.

Cultivating a Renewable Energy Economy: The Effects of Feed-In Tariffs on Germany's Energy Patterns
Independent Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Joseph P Tedesco
Student(s): Margaret M Delaney, Ashley R Pavone

The purpose of this test was to distinguish between anxiety and Generalized Anxiety Disorder (GAD) in a population of college females. As compared to other existing college anxiety scales that typically measure academic anxiety, our test measures a more comprehensive level of anxiety: academic life, social life, anxiety about the future, and generalized anxiety characteristic of GAD. Currently, we are utilizing a Likert scale in order to determine which areas of college life produce the most anxiety; next, we hope to revise our questions and create our final test that measures anxiety using a Guttman scale.

Determining the Prevalence of Community-Acquired Methicillin-Resistant Staphylococcus aureus (CA-MRSA) Colonization in Student-Athletes at the University of Dayton
Independent Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Robert J Kears
Student(s): Amanda L Robbe

The purpose of this test is to distinguish between anxiety and Generalized Anxiety Disorder (GAD) in a population of college females. As compared to other existing college anxiety scales that typically measure academic anxiety, our test measures a more comprehensive level of anxiety: academic life, social life, anxiety about the future, and generalized anxiety characteristic of GAD. Currently, we are utilizing a Likert scale in order to determine which areas of college life produce the most anxiety; next, we hope to revise our questions and create our final test that measures anxiety using a Guttman scale.

The Delaney-Pavone Anxiety Scale for College Women
Independent Research
3:00 PM
Undergraduate - Group
Kennedy Union Ballroom
Advisor(s): Joseph P Tedesco
Student(s): Margaret M Delaney, Ashley R Pavone

The purpose of this test is to distinguish between anxiety and Generalized Anxiety Disorder (GAD) in a population of college females. As compared to other existing college anxiety scales that typically measure academic anxiety, our test measures a more comprehensive level of anxiety: academic life, social life, anxiety about the future, and generalized anxiety characteristic of GAD. Currently, we are utilizing a Likert scale in order to determine which areas of college life produce the most anxiety; next, we hope to revise our questions and create our final test that measures anxiety using a Guttman scale.

Dangerous Ascent: A Look at the Historical and Athlet-ic Perspectives Surrounding Mountain Climbing
Course Project 09_W1_HSS_275_02
3:00 PM
Undergraduate - Individual
Kennedy Union 222
Advisor(s): George M DeMarco
Student(s): Leigh C. Elling

The purpose of this project was to describe the impact of the development of mountaineering as a sport on the world. More specifically, the investigation looks at the impact that the sport has had on the spirit of human curiosity, adventure and drive for success. Data were taken from various primary sources such as interviews, photographs and video to provide accurate historical analysis. Personal accounts of successful mountain climbers were collected to capture the emotions and dedication behind risking one’s life for athletic endeavors. Significant events, such as the conquering of Mt Everest by Sir Edmund Hillary, were covered in detail to show the progression of mountain climbing throughout history. This study also looks at the role nature plays in the historical and current practice of mountaineering.
Research was conducted to determine the prevalence of community-acquired methicillin-resistant Staphylococcus aureus (CA-MRSA) colonization among student-athletes at the University of Dayton. MRSA is a cutaneous bacterial infection that poses a threat not only in nosocomial settings but also in the community around us, including student-athletes. While a team may not possess anyone with the actual infection, previous studies have demonstrated that up to 8% of student-athletes are asymptomatic carriers. Following approval from the University’s Institutional Review Board, 215 student-athletes were questioned, consented, and tested. A nasal swab as well as a skin swab was taken from each subject. Collected samples were spread onto the surface of a SpectraTM MRSA plate and screened for the presence of typical appearing bacterial colonies. One point four (1.4%) percent of those athlete tested were found to be asymptomatic carriers. Further testing was done on certain athletes following the conclusion of their athletic seasons to check for increased prevalence, however the results showed no increase. This study enabled us to identify possible student-athletes at the University of Dayton at risk for developing CA-MRSA. The findings provide an opportunity not only to identify the carriers, but also to provide a forum to instruct these student-athletes on the safe practices to reduce the incidence of this disease.

**DNA variations within the human Aquaporin 5 water channel gene may alter gene expression.**

**Graduate Research**

**Advisor(s): Carissa M Krane**

**Student(s): Venkateshwar Mutram**

The water channel aquaporin 5 (AQP5) is expressed in mammalian lung and alveolar epithelium. Based on the evidence that AQP5 deficient mice exhibit hyporesponsiveness to bronchial constriction when stimulated with a constriciting agent, a clinical feature of asthma, we hypothesized that nucleotide variations within a functionally significant region (i.e. 3'UTR) of human AQP5 (hAQP5) may alter gene expression levels. To examine if the A to G nucleotide variation in the 3'UTR of hAQP5 gene alters the mRNA expression levels, expression constructs containing either the A3UTR (wild type), G3UTR, A-G or G-A nucleotide combinations fused to an enhanced green fluorescent reporter were transfected into a mouse lung epithelial cell line (MLE-15 cells) which expresses endogenous AQP5. Real time quantitative RT-PCR analysis showed significant difference in the mRNA expression levels of hAQP5-AG, hAQP5-GA haplotypes compared to A-A and G-G. But the protein expression levels of AG and GA haplotypes were found to be significantly lower compared to WT and SNP (p<0.05). This shows that nucleotide variations within the 3' UTR region of hAQP5 gene might alter the gene expression levels. To determine the stability of AQP5, the cells were treated with actinomycin-D at different time points (0, 6, 12, 18 and 24 hrs). AQP5 mRNA expression levels were decreased by about 50% after 12 hrs. This shows that the half life of AQP5 is around 8-10 hrs. Further examination of the mRNA stability and protein expression levels of hAQP5 3'UTR nucleotide variations might help in understanding the functional role of the 3'UTR in gene regulation.

**Drosophila eye model to understand the genetic basis of Alzheimer’s disease**

**Independent Research**

**Advisor(s): Amit Singh**

**Student(s): Rohan M. Modi, Jaison J. Nairnampalli**

The cause and progression of Alzheimer’s disease (AD), which affects over 450,000 people in the United States each year, is not completely understood. The disease is manifested by neurodegenerative symptoms such as short-term memory loss, difficulty with language, problems with abstract thinking, and personality changes. In Alzheimer’s disease, the cleavage of the transmembrane Amyloid Precursor Protein (APP) results in the formation of an abnormal AB 42 peptide rather than a normal AB 40 peptide. The AB 40 peptide fragment of APP is mainly required for neuronal growth and survival. However, the AB 40 peptide is a toxic peptide, which results in the generation of extracellular plaques that block neuronal pathways and cause neurodegeneration. The genetic machinery is highly conserved between Drosophila and humans, making the Drosophila eye model system a useful tool in understanding the genetic mechanism of Alzheimer’s disease. We overexpressed the AB42 gene in the eye to assay its neurodegenerative effect due to amyloid beta plaque formation. We found that it results in neurodegeneration in the retina as evidence from holes in the eye field. Our current objective is to understand the underpinnings of this phenomenon in order to discern the genetic circuitry involved in the neurodegenerative phenotype of the eye. Such studies will help us in understanding the genetic basis of Alzheimer’s disease.

**Dry Air Charge Needle Guarding System**

**Senior/Capstone Project**

**Undergraduate - Group**

**Advisor(s): David R Barth, Rebecca P Blust**

**Student(s): Michael P Berkemeier, Junchen Lu, Michael S. Wade, Yang Wang, Qiuxia Zhou**

Emerson Climate Technologies is the world’s leading provider of heating, air conditioning, and refrigeration. The headquarters is located at 1675 West Campbell Road Sidney OH off of Interstate 75. Emerson is ahead of all their competitors because of their high-tech scroll system. The scroll system has a 100% volumetric efficiency which places the innovative system beyond the typical piston system(s) for which competitors use. Our project includes areas from both the Scroll Facility and the Integrated Products Division. The Dry Air Charge Process has caused puncture injuries to some employees while they conduct the dry air charge. In one case an employee of Emerson was injured while charging the compressor with a dry air charging hypodermic needle. This accident occurred while an employee was unscrewing two gauges and a needle ended up puncturing the left hand. If the process is done correctly the individual should insert a needle into a rubber plug to the compressor to fill it up with dry air. Currently every compressor must be charged with 5-14 lbs of dry air prior to shipping. The Needles used in this operation, vary in sizes depending upon the size of the compressor. As a group we plan to design a prototype of a new guarding system to prevent future injuries from occurring. Repetition, simplicity and ergonomic design need to be considered for safety and training reasons.

**The Effects of Harmonic Power Level and Weld Duration on Tissue Sealing**

**Independent Research**

**Undergraduate - Group**

**Advisor(s): Carissa M Krane, Margaret Pinnell**

**Student(s): Alice M. Begovich, Shannon C. Hallinan, Eric T Whitney**

A harmonic device has been developed for the purpose of denaturing protein fibers in the hope of sealing two pieces of tissue together. Two parameters in this are the duration of the actual welding action and the harmonic power level at which the weld is being performed. A series of qualitative tests were performed to evaluate the effects of these parameters and were analyzed using photography, electron microscopy, and Boolean-type weld strength measurements.

**Emerson Climate Technologies MOV Disconnect**

**Senior/Capstone Project**

**Undergraduate - Group**

**Advisor(s): Rebecca P Blust**

**Student(s): Andrew J Champa, Shijie Gu, Robert C. Kraft, Nicholas E. Sexton, Minchao Wang, Jingya Zheng**

Emerson Climate Technologies, a business of Emerson, exists to provide solutions for customers by combining world class engineering and technology. Being the leading provider of heating, air conditioning, and refrigeration, Emerson Climate Technologies provides solutions for the residential, industrial, and commercial markets. Because Climate Technologies sole purpose is to improve human comfort, safeguard food, and protect the environment, products are always changing to meet the needs of individual customers. There is however industry standard products that Climate Technologies manufactures everyday. The project Emerson has given involves a redesign of a jumper circuit located on one of their inverter products. Currently the jumper is very difficult to manipulate as well as unsafe for the operator.

**Energy from Buried Water: A Proposed Open-Loop Geothermal Heating and Cooling System for the Founders Renovation**

**Course Project**

**Undergraduate - Group**

**Advisor(s): Viorel Paslaru, Sukhjinder S Sidhu**
Ground-source heat pumps, commonly called geothermal heat pumps, are proven renewable energy technologies which access solar energy stored underground. Taking advantage of the fact that soil and groundwater temperatures are constant a few feet beneath the surface, ground-source heat pumps use a small amount of electrical energy to "pump" heat from the ground into buildings. Using this technology, 50 to 70 percent of energy used for space heating and cooling can be saved compared to traditional systems, with corresponding economic advantages and greenhouse gas reductions. The Miami Valley aquifer and its rich groundwater resources make Dayton and its surroundings one of the most promising environments for implementing ground-source heat pump systems. A large-scale geothermal system is proposed for the upcoming renovation of Founders. The building's heating requirements have been modeled using several computer software packages and used to determine the amount of drilling required to access a steady supply of groundwater.

**Every Day is Earth Day: A Social Justice Living Learning Community Project**

- **Course Project:** 09_WI_HSS_275_02
- **Time:** 3:00 PM
- **Location:** Kennedy Union 222
- **Advisor(s):** George M. DeMarco
- **Student(s):** Jeffrey M. Deblase, Advisor(s): George M. DeMarco

This poster presents a feasibility study on using algae to sequester carbon dioxide and produce biofuels at the Dayton Wastewater Treatment Plant. This project took place during the Winter 2009 semester, during which four students worked closely with the Wastewater Treatment Plant to become familiar with the various constraints of the system. The team then used the knowledge of these constraints and their research on algae systems to determine the feasibility of using algae to sequester carbon dioxide at this site.

**Feeding Preferences of Nerodia clarkii compressicaudata**

- **Independent Research**
- **Undergraduate - Individual**
- **Advisor(s):** Patrick K. Willliams
- **Student(s):** Reid S. Brennan

The study tested the feeding preferences of Nerodia clarkii compressicaudata in regards to size of prey. Each specimen was simultaneously presented with two fish, one 2.5 cm or less in length, and the other 4 cm or more in length. The fish which was eaten first was recorded and repeated seven times for seven different snakes over a 4 week period. The larger fish was chosen first 40 of the 49 times. Under the assumption that selection would be 50% if size played no role, the control value was determined to be 24.5. Using a Chi Square test the results proved to be statistically significant, $x^2(1, N = 49) = 19.61$, $p < 0.001$, showing that Nerodia clarki compressicaudata preferred the larger fish as compared to the smaller.

**The Evolution of Sports Medicine**

- **Course Project:** 09_WI_HSS_275_02
- **Undergraduate - Individual**
- **Advisor(s):** George M DeMarco
- **Student(s):** Brittany L. Gallina

The purpose of the study was to describe the evolution of sports medicine throughout history. This project outlines the contributions of ancient physicians, such as Hippocrates and Galen, to the field of medicine to the foundation of the largest sports medicine organizations: the American College of Sports Medicine, the American Orthopedic Society for Sports Medicine, and the National Athletic Trainers Association. Historical analysis based on primary and secondary sources was utilized to determine how these people and organizations have transformed and expanded the field of sports medicine throughout the world.

**Fear the Sweater: The Life and Times of Jim Tressel**

- **Course Project:** 09_WI_HSS_275_02
- **Advisor(s):** Joseph W. Hau, Peter E. Powers
- **Student(s):** Henry L. Aldridge, Colin L. Hisey, Kasandra C. Maxwell

Jim Tressel, former head coach of Ohio State University, is portrayed, not only as a great football man, but also a great human being. Data were collected from primary sources, including: personal narrative, photographs, videos, and interviews, which will portray the excellence of this man so all may learn.

**Fitness in the White House: How Presidents of the Mid 20th and Early 21st Centuries Led America in Fitness**

- **Course Project:** 09_WI_HSS_275_02
- **Advisor(s):** Joseph W. Hau, Peter E. Powers
- **Student(s):** Henry L. Aldridge, Colin L. Hisey, Kasandra C. Maxwell

The purpose of the study was to describe how Presidents Dwight D. Eisenhower, John F. Kennedy, Gerald H. Ford, George W. Bush and Barack Obama led the United States of America in fitness during their time in the White House. In their own distinct ways these Presidents made fitness important in their own lives and the lives of all Americans, and this study looks at the fitness regimens and physical activities of the presidents, related to their personal lives and their relationships with the public.

**Feasibility of Using Algae for Carbon Sequestration**

- **Course Project:** 09_WI_HSS_275_02
- **Advisor(s):** Matthew D. Dunaway, Madeline M. Duning, Julia L. Faeth, David E. Pratt

This poster presents a feasibility study on using algae to sequester carbon dioxide and produce biofuels at the Dayton Wastewater Treatment Plant. This project took place during the Winter 2009 semester, during which four students worked closely with the Wastewater Treatment Plant to become familiar with the various constraints of the system. The team then used the knowledge of these constraints and their research on algae systems to determine the feasibility of using algae to sequester carbon dioxide at this site.
The purpose of this study was to describe the history of the Cleveland Cavaliers, a professional basketball team. The study included each decade and its coaches, players, and game statistics. Data were collected based on primary sources, such as interviews, photographs, and statistics. In describing all of this it was made more clear why the Cavaliers success has risen so greatly in the recent years.

**Generating Terahertz Frequencies**

Independent Research

Undergraduate - Individual

Advisor(s): Peter E Powers

Student(s): Kevan A. Kramb

This poster describes experiments that were conducted to demonstrate a tunable Terahertz source by the combination of two different frequency beams. The approach used was to frequency convert a 1064nm laser into two beams separated by a THz difference. Experiments conducted so far indicate that the two beams can be independently tuned so that any THz frequency can be generated. After splitting the original 1064nm laser, each half was directed to a crystal that was seeded with another lower powered laser to control the bandwidth. By changing the temperature of the crystals the frequencies of each beam can be modified, thereby creating a tunable difference. The beams were then rejoined and directed through another different frequency crystal to generate the desired THz frequency.

**GIS Analysis of Environmental Justice in Montgomery County**

Course Project 09_WI_GEO_404_P6

Undergraduate - Individual

Advisor(s): Shuang-Ye Wu

Student(s): Rachel A Hostetler

The aim of this research is to determine if there is any possible environmental justice issue in Montgomery County using GIS. First research was done to determine sites of pollution in Montgomery County. There were four types of pollution found. They include air pollutants, water pollutants, toxic pollutants, and SUPERFUND sites. The first three types of pollutants are government regulated and are only released in approved quantities. This implies the pollutants are not released in hazardous amounts. Using geocoding these sites were mapped. A buffer zone around the sites was created. The buffer was used to clip Census data so that the statistics within the buffer and outside the buffer could be compared. The statistics that were compared include race, income and gender. Disparities between these statistics may indicate an environmental justice issue.

**Graphic Correlation of Ordovician Conodonts Using Constrained Optimization (CONOP 9)**

Independent Research

Undergraduate - Individual

Advisor(s): Daniel Goldman

Student(s): Carolyn A. Pantle

Two of the greatest evolutionary events in Earth history occurred during the Ordovician time period. The first was an extraordinary radiation of marine organisms, and the other the second largest mass extinction recorded in the fossil record. In order to examine the biodiversity dynamics of an extinct group of Ordovician marine microfossils called conodonts, we used the computer program CONOP9 (Constrained Optimization) to construct a composite time scale from their stratigraphic range data. Unlike traditional graphic correlation, which integrates ranges into a composite time scale one section at a time, CONOP9 is j-dimensional - it works with observations from j-number of sections simultaneously. CONOP9 rejects impossible solutions (constraint) and then searches for the best possible solution (optimization). The best correlation solutions are those that require the minimum net adjustment of observed ranges in local sections.

**Green Light**

Senior/Capstone Project

Undergraduate - Group

Advisor(s): David R Barth, Rebecca P Blust

Student(s): Karen Adams Claude, Zixuan Dong, Timothy J. Horner, Tingyuan Hu, Linjie Ni, Jingjing Pan

Rapid unsustainable world population growth increases the demand on diminishing natural resources, and power generation and distribution systems. Thus, there is a severe need to increase the production of food products at a significant lower energy cost. The client has proposed the exploration of the feasibility of designing and building an ultra high efficiency self powered LED based commercial greenhouse grow light system. This semester we will expand this to include greater technical detail and prototype testing.

**Guardian Light Cone**

Senior/Capstone Project

Undergraduate - Group

Advisor(s): David R Barth, Rebecca P Blust

Student(s): Brian J. Cox, Christopher J Datko, Rengyu Hua, Daniel P Lackner, Muzhen Li, Nana K Sarpong

The purpose of the Guardian light cone project is to develop a collapsable cone that is capable of being lit internally with ultra-bright LED’s. The ultra-bright LED’s will help increase visibility of the cone. The Guardian Light Cone is intended for commercial use with emergency vehicles, giving them the capability of warning approaching traffic of hazardous conditions. It will also have the ability to redirect traffic in the case of an accident and in construction zones.

**The History and Development of Volleyball in Canada**

Course Project 09_WI_HSS_275_02

Undergraduate - Individual

Advisor(s): George M DeMarco

Student(s): Lauren I Enns

The purpose of this study was to describe the history and development of volleyball across Canada. Since its introduction to the country in 1900, volleyball’s popularity has transcended differences of gender, age, ethnicity, ability, and location to unite Canadians through a common passion. Today, Canada’s prominence in the international arena continues to develop, especially with the emergence of beach volleyball in recent decades. Primary sources, such as newspapers, journals, and photos, as well as secondary sources found in books formed the foundations of the study.

**The History of Competitive Cheerleading**

Course Project 09_WI_HSS_275_02

Undergraduate - Individual

Advisor(s): George M DeMarco

Student(s): Aubrey M. Evans

The purpose of this study is to describe the history of competition cheerleading and its impacts on female involvement in sports and its affect on injury statistics. A broad overview of how cheerleading evolved from the spirit-filled activity to the competitive and strenuous sport it has become, personal pictures, journal articles, newspaper articles, and books written about the competitive cheerleading sport help to highlight many events and stories about the sport. There are many different aspects to not only being a successful competition cheerleader, but also many to not getting hurt both physically and emotionally.

**Rapid unsed sustainble world population growth increases the demand on diminishing natural resources, and power generation and distribution systems. Thus, there is a severe need to increase the production of food products at a significant lower energy cost. The client has proposed the exploration of the feasibility of designing and building an ultra high efficiency self powered LED based commercial greenhouse grow light system. This semester we will expand this to include greater technical detail and prototype testing.**
Hydraulic and lunar influence on stream drift and amphidromous minimum reproductive potential in tropical streams

**Course Project 09_WI_HSS_275_02**

**Advisor(s):** Mark E Benbow, Albert J Burky, Kathleen R Jennings, Megan E Shoda

**Student(s):** Melanie I Ajadharian, Ian M Barron, Gustavo A Diaz, Kimberly A Galaska, John C Kurzawa, Jonathan B White

The purpose of the study was to describe the evolution of motivation in sport. Ancient civilizations had different value systems that promoted physical fitness. Each culture has unique incentives to be physically active, including survival, preparation for warfare, religious reasons, race rights, and women’s rights. Historical analysis based on primary sources, including photographs and interviews, and secondary sources will explain the reasons people were motivated to exercise and explore reasons to remain physically active today.

Hydraulic Constraints on Stream Macroinvertebrate Communities in the Little Miami River, Ohio

**Course Project 09_WI_HSS_275_02**

**Advisor(s):** Mark E Benbow, Albert J Burky, Kathleen R Jennings, Megan E Shoda

**Student(s):** Melanie I Ajadharian, Ian M Barron, Gustavo A Diaz, Kimberly A Galaska, John C Kurzawa, Jonathan B White

Flow dynamics govern aquatic ecosystems, affecting distribution and abundance of organisms. Hydraulic variables may be the most important, yet least understood environmental factor affecting the ecology of benthiic organisms. The objective of this study were to quantify flow heterogeneity and associated effects on benthiic community structure within and between riffle (N=5) and run (N=5) benthiic habitats in the Little Miami River, Ohio (N39° 45.834 W83° 54.12). It was hypothesized that flow velocities, species density, diversity, and relative abundance would be inversely related between riffle and run habitats. In June 2008, a modified Surber sampler was used to collect six random benthic samples from a 100 m2 grid within each habitat. Depth was measured and a SonTek FlowTracker was used to profile the water column velocity above each benthic sample. Samples were preserved in 70% ethanol and are currently being sorted and identified to family and functional feeding groups. One-way ANOVA will test the significance of flow on benthiic communities between riffle and run habitats. This study will provide deeper insight into the ecological organization of streams, improve our ability to predict how flow alterations caused by human activities affect these ecosystems, and has the potential to guide water management in restoration efforts.

The History of the Cleveland Indians

**Course Project 09_WI_HSS_275_02**

**Advisor(s):** George M DeMarco

**Student(s):** Kelsey S. Williams

For more than a century, Hobart has provided food service products worldwide. Hobart is the leading supplier in products used for baking, cooking, food preparation, refrigeration, dishwashing and wrapping. Some of their most distinguished products include: mixers, slicers, scales, wrapping equipment, refrigeration, ovens and dishwashing equipment. Currently, the CL44e dish machine is tested and assembled in house. Following the assembly of the dish machine, it is placed onto a wooden pallet for shipping. Once the dish machine is properly secured onto the pallet, it is fully concealed by a cardboard container. The packaging method is designed to protect the machine from the rigors of shipping. Currently, the cost for shipping packaging material is high. In order to ensure that the product maintains damage-free shipping, it is necessary for a conducive yet cost efficient method to be developed. Therefore, it is the clients wishes that the total cost of the packaging product system be reduced while creating an alternative feasible packaging/shipping method. In order to satisfy our clients needs, it will be necessary to reduce the overall cost of the current pack product materials. Therefore, an alternative method for the shipping/packaging process will be researched, designed and implemented. Reducing assembly and installation time will also be factored into the new and improved method. In order to ensure that the dish machine arrives to its destination free of damage, the product must be able to withstand truck and train delivery rigors. Also, as the dish machine is shipped it must be adequately protected until it reaches its destination.

The History of Motivation in Physical Activity and Sport

**Course Project 09_WI_HSS_275_02**

**Advisor(s):** George M DeMarco

**Student(s):** Amy R. Konieczny

The purpose of the study was to describe the history of the Cleveland Indians from the day they began as a team, to the present day. The Cleveland Indians have a history of remarkable players such as Larry Dobfs, Bob Feller and Kenny Lofton. The Indians have in turn made an impact on Cleveland and baseball fans in general. The Indians have in turn made an impact on Cleveland and baseball fans in general. This study will provide deeper insight into the ecological organization of streams, improve our ability to predict how flow alterations caused by human activities affect these ecosystems, and has the potential to guide water management in restoration efforts.

The History of the Green Bay Packers

**Course Project 09_WI_HSS_275_02**

**Advisor(s):** David E Benbow, Mark Benbow

**Student(s):** Tiffany B Clark, Tasha M Herms, Jordan M Kast, Sarah E\nKempf, Jessica M Kush, Mark E Benbow, Albert J Burky, Kathleen R Jennings,\nMegan E Shoda, Melanie I Ajadharian, Ian M Barron, Gustavo A Diaz, Kimberly A Galaska, John C Kurzawa, Jonathan B White

Several families of atyid shrimp, neritid snails and gobiid fishes have an amphidromous lifecycle that biologically connects headwater streams with intertidal marine communities in many tropical areas of the world. Amphidromy is a form of diadromy where adults live and reproduce in freshwater, or more rare euryhaline, stream habitats, and then the embryos drift to the ocean for early juvenile development. After 3-12 months of development the non-reproductive juveniles begin migrating back upstream into non-rational watersheds, where they continue development into discrete life cycles. A life cycle is complex, unique and vulnerable to reduced flow conditions of native stream habitats, especially in streams that have been heavily dewatered for anthropogenic uses. The objectives of this study were threefold: 1) to determine flow effects on total stream drift, the amphidromous/saltmarsh/littoral drift ratio, amphidromous embryo reproduction, and the amphidromous embryonic component, 2) identify life cycle relationships with amphidromous drift; and, 3) describe how flow conditions and lunar cycles interact to affect amphidromous drift to the ocean. Flow effects were evaluated by studying diurnal and nocturnal drift in a highly diverted tropical stream compared to a nearby stream without major flow diversion on the island of Maui, Hawaii. Preliminary results show that most drift occurred during dusk and at midnight, with most embryonic drift collected around midnight. Autochthonous/saltmarsh/littoral drift ratios also peaked at midnight, even after removing embryonic drift from the aquatic component, indicating behavioral drift by aquatic insects during nocturnal hours. On average over the day, and after accounting for watershed size, all drift components except embryonic drift were significantly lower in the diverted stream, indicating that anthropogenic water removal has severe effects on in-stream productivity, and that amphidromous reproduction may be cued by other external factors such as lunar cycle or tidal regime. Additional analyses are underway to evaluate lunar/tidal interactions with daily stream flow in these streams.
In Need! Turn to a Good Neighbor: A Social Justice Living Learning Community Project

Course Project
3:00 PM
Undergraduate - Group
Kennedy Union Ballroom
Advisor(s): Monalisa McCurry Mullins
Student(s): Jacklyn A. Kowalski, Paige E. Porter, Alexander J. Reed

The Good Neighbor House is a nonprofit organization located in Dayton, Ohio that is run primarily by volunteers and charitable donations. Its focus is to aid families with basic necessities like medical care, food, household items, clothing and furniture. According to Aristotle, true happiness requires self-sufficiency and when basic needs are unmet it leads to unhappiness, which is the common situation at the Good Neighbor House. Through our service experience with this organization, we have learned that being a good neighbor means helping one person at a time by minimizing the daily struggles and problems that are faced by so many people in our society.

Intramolecular 6-Endo Heck Cyclization of 3-(2-Iodophenoxy)methylbenzofuranos: A Novel Approach to Pterocarpen Isoflavonoids

Other: Senior Chemistry Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Gary W Morrow
Student(s): Katherine J. Fowler

Pterocarpene are oxygenated tetracyclic heterocycles with a unique benzofuranyl-benzopyran ring junction. Members of the pterocarpen group include flemichapparin B, isolated from pea petals, and erypoegin, isolated from the ornamental plant Erythrina poeppigiana and which exhibits broad spectrum activity against Gram-positive bacteria as well as significant activity against vancomycin-resistant strains of enterococci. We will present a new synthetic approach to pterocarpen via an unusual intramolecular 6-endo Heck cyclization of 3-(2-iodophenoxy)methylbenzofuranos, which in turn are readily prepared via Mitsunobu coupling of o-iodophenols with 3-hydroxymethylbenzofurans.

Investigation of a Reported Antibiotic from Moringa oleifera: Extraction and Computational Studies

Senior/Capstone Project
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Vladimir A Benin
Student(s): Michael C Horwath

Moringa oleifera, sometimes called the "Miracle Tree," has received international attention for its potential to improve health in impoverished tropical areas. In addition to high vitamin content the tree contains several antibiotic compounds. I became interested in Moringa during a service immersion to Zambia in the summer of 2007, where I saw the tree being grown to support nutrition in a local hospital. With the help of my advisor, Dr. Vladimir Benin, I have carried out my senior thesis project to investigate further the medicinal chemistry of Moringa. I am presenting results on the investigation of one potential antibiotic, "ptyergysmin." This compound was reported in the 1950s but has not been identified in later studies. Root pieces were subjected to gentle extraction, followed by column chromatography and NMR analysis. Results showed that ptyergysmin was not a major component. In addition, extensive ab initio and DFT calculations were used to determine the most favorable isomer of ptyergysmin and examine plausible decomposition pathways.

Investigation of Structural Modification inside LINBO3 with Tightly Focused Femtosecond Lasers

Graduate Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Qiwen Zhan

Two defocused optical images are taken to compute the phase profile around the structural modification area using quantitative phase microscopy algorithm. The index difference calculated from the phase profile is -4x10^(-4). This is a useful characteristic of the structural modification in the crystal.

It Runs in the Blood: Biography of Peyton Manning

Course Project 09_WI_HSS_275_02
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): George M DeMarco
Student(s): Kelly E. Esser

The purpose of this study was to describe the life and times of Peyton Manning. Manning is portrayed as one of the best quarterbacks within both the college and NFL leagues. Not only has he made accomplishments within the game of American football but, he has given much time to various organizations in order to help within the community. This project outlines Peyton Manning's life, thoroughly portraying his multiple accomplishments throughout his reign. Primary sources, such as newspapers, journals, and photos, as well as secondary sources found in books formed the foundations of the study.

Kicking Like A Girl: The Life and Times of Mia Hamm

Course Project 09_WI_HSS_275_02
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): George M DeMarco
Student(s): Kelsey A. Flanders

The purpose of this study was to describe the life of Mia Hamm and show that through her athletic journey, she has set a standard for the sport of soccer and proven that women's soccer should remain as important as men's, even if it does not attract the same crowds. Data was collected based on primary sources such as interviews, photographs, and statistics. In describing her life, it was made clear why she is considered such an influential figure in women's soccer.

Lacrosse Goal Scoring: The Neural-Facilitation of the Switching Technique

Independent Research
3:00 PM
Undergraduate - Individual
Kennedy Union Ballroom
Advisor(s): Joseph P Tedesco
Student(s): Ryan W. Summers

The 2008 NCAA Men's lacrosse champion, Syracuse University, took a total of 806 shots on goal during their 18 game season. These 45 shots per game average resulted in the team scoring 245 goals for the season; averaging 13.5 goals per game (www.suathletics.com). It is the opinion of this study that the shots on goal that do not score resulted from the shooter missing the goal wide either left, right or over the goal or hitting either the goalie or the goal pipes. This present study hypothesizes that the shooter's fundamental brain perception increases the likelihood of hitting a solid object because the object is a figure standing on a foreground. This research project develops a method that teaches lacrosse players to shift their attentional-focus from the goalie and goal frame (figure) to the open areas of the net (ground). By teaching a team of lacrosse players the experimental method, we call the "switch"; we hope to facilitate the athletes' ability to consciously alter their perceptual focus to open areas of the goal. In doing this experiment, we hope to prove that the amount of times a shooter will hit either of these obstructions will drop significantly. In teaching shooters to shift their focus from the goalie and goal, to the open areas of the net, we predict that the shooter will hit those objects less often and increase their scoring and shooting percentage.
We numerically studied long-range surface plasmon excitations on gain assisted metal gratings with gain materials between the nano wires using rigorous coupled-wave analysis method. With a small gain coefficient, the absorption loss of the metal can be compensated, so that an extremely narrow dip of the reflectance curve can be achieved leading to a long propagation length of surface plasmon polaritons.

**Looping in the Results: Benefits of multiyear teaching**
Course Project
Undergraduate - Individual
Advisor(s): Patricia M Hart
Student(s): Lauren M. Haner

Looping, also known as multi-year teaching or placement, is the educational strategy that has children stay with an educator for two years instead of one. This can develop stronger bonds between teacher and student, not to mention help with learning development. Though there are many positive attributes, the researcher thinks some children might be left behind in this system of learning. The goal of the paper is to focus on many of the perspectives of looping, both negative and positive, to better support looping practices in schools.

**The Luck of The Irish: History of Notre Dame Women’s Basketball**
Course Project 09_WI_HSS_275_02
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Mary Katharine Holder

The purpose of this study was to describe the history of Notre Dame’s Women’s basketball and the historic athletic achievements reached as individuals, as a team and as a program. A University known for mostly successful male sports, highlighting this team's success will acknowledge the achievements of a women’s sport on a local, national, and global level. The study highlighted the fantastic 2001 NCAA Championship season, the lives of the successful coach Muffet McGraw and the 2001 NCAA Woman's MVP Ruth Riley. Data was collected from primary sources, including narratives, photographs and video, as well as secondary sources.

**The “Magic” Show, Starring Earvin Johnson**
Course Project 09_WI_HSS_275_02
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Cole M. Bradham

The “Magic” Show, Starring Earvin Johnson was researched to describe the life and times of National Basketball Association (NBA) legend, Earvin “Magic” Johnson and the impact he had on those who knew of him. Magic is considered one of the best players as well as the greatest point guard of all time. He played his well accomplished career with the Los Angeles Lakers where a heated rivalry with Boston Celtics star Larry Bird emerged. Magic's career took a step back when he was diagnosed with HIV, but that did not stop him from living out his dream. Historical analysis based on primary sources, including photos, interviews, several databases, as well as secondary sources will further investigate and analyze the story of both Magic Johnson's career, and life.

**Mixed Martial Arts: Behind the Myths**
Course Project 09_WI_HSS_275_02
Undergraduate - Individual
Advisor(s): Scott T. Parry

The purpose of the study was to describe the world of mixed martial arts and its evolution. A secondary purpose was to dispel some of the misunderstandings surrounding the sport. From the early stages of pankration to today's UFC, the sport of mixed martial arts has greatly evolved. Although it was at first a gruesome sport with few rules, it is now a well officiated competition in which the great athletes engage in a much safer form of combat. Primary and secondary sources are used in order to further describe the evolution of the sport. Also, several persuasive articles are used to help eliminate some common rumors about the dangers of mixed martial arts. Overall, the paper has discussed the evolution, safety, and growth of mixed martial arts and the UFC.

**Optimal Plasmonic Focusing and Applications**
Graduate Research
Undergraduate - Individual
Advisor(s): Wiben Chen

Plasmonic focusing with metallic nanostructures is an effective approach to confine optical field into nanometric size, which breaks the diffraction limit of light. Owing to strong spatial confinement and high field enhancement, plasmonic focusing has important applications in near field optical imaging and sensing. Surface plasmon is an electromagnetic wave due to the interaction of light and metallic structures. As a wave phenomenon, surface plasmon can be focused using appropriate excitation geometry and metallic structures. We explored three different metallic structures for nano-focusing of surface plasmons with radial polarization illumination. When radially polarized beam is launched into these plasmonic structures, the entire beam 

---

**Long-range Surface Plasmon Excitations on Gain Assisted Metal Gratings**
Graduate Research
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Scott T. Parry

Kennedy Union 222
The recent increase in reported cases of Methicillin-Resistant Staphylococcus aureus (MRSA) in companion animals has become a concern for veterinarians throughout the world. While studies have shown that the MRSA organism in animals is relatively uncommon, there are also at risk. A concern of many veterinarians is that the gene that causes the resistance to antibiotics for humans could transfer into a commensal organism commonly found on animals, Staphylococcus intermedia, which in turn could also become resistant to antibiotics. This study was conducted using swab specimens taken from dogs and cats at a single local veterinary practice. The samples were from sites which presented with infection and abscesses, otitis externa, pyoderma, or infected surgical sites. Microbiological procedures such as culturing, Gram staining, and plating, using various media were employed to detect the presence of Staphylococcus aureus in the specimens. Of the 32 samples provided, this particular study found no samples containing MRSA although it did detect one case of Staphylococcus aureus. While the results indicate there is a known incidence of the pathogen at this clinic, they do not provide translates to the Dayton area being free of resistant forms of Staphylococcus. Future studies need to be conducted with a larger sample size from more clinics, to create a more representative sampling of the prevalence of this pathogen in this geographical area.

Planning for flood risk under the changing climate
Independent Research
Undergraduate - Individual
Advisor(s): Shuang-Ye Wu
Student(s): Dennis V Eck

Historically, the city of Dayton, Ohio has been particularly vulnerable to flooding due to its location at the confluence of four major rivers. Such exposure to flood risk will only increase with future climate change, as the IPCC’s most recent assessment reports a projected 10-20% increase in precipitation for this region. This study assesses how flood risk changes under different climate scenarios as well as land use change scenarios through the following steps. (1) Develop statistical models to downscale results of major climate models and relate precipitation with annual peak flow. These models predict a peak flow for the future 100-year flood will increase 20-30%. (2) Map present and future floodplain by statistical correlation based on the increased flood magnitude, and model GIS in how such extent will change with future climate change for the Dayton area. (3) Assess the social vulnerability of people who are exposed to flood risk when considering the socio-economically disadvantaged are disproportionately affected by the increase in flood risk due to climate change; (4) Assess how flood risk will differ under different land use planning scenarios. Results will be shared with local land use and resource planners to solicit input on the type of climate information needed, such that study results could be incorporated into local planning processes for a sustainable future.

Playing Against the Odds: The Inspiring Story of Chris Lofton
Course Project 09_W1_HSS_275_02
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Kaitlyn M. Stahl

The purpose of this study is to describe the lucrative sports career and personal struggles and achievements of Chris Lofton, a talented athlete and cancer survivor. Lofton is still an inspiration to all athletes overcoming obstacles of any kind. His success as a basketball player for the Tennessee Volunteers speaks for itself and the barriers he had to overcome during his season shows the steadfastness and determination of this great athlete. He has continued his basketball career overseas and his success as a basketball player for the Tennessee Volunteers speaks for itself and the barriers he had to overcome during his season shows the steadfastness and determination of this great athlete. He has continued his basketball career overseas and still has a deep love for the game. Being a neighbor and close friend of Chris Lofton, I have used personal primary sources of interviews, observations, and photos, along with secondary sources of internet and newspaper articles to display the inspiring and impressive story of this talented player.

The Prevalence of MRSA in Local Companion Animals
Independent Research
Undergraduate - Individual
Advisor(s): Robert J Kearns, Mark G Nielsen
Student(s): Sarah E Timko

Over the past four years there have been increased findings of Methicillin-Resistant Staphylococcus aureus (MRSA) in companion animals. The MRSA organism, a pathogen, was once viewed strictly as a threat to humans. Now the animals that surround us are also at risk. While studies have shown that the MRSA organism in animals is generally uncommon, the recent increase in reported cases in companion animals has become a concern for veterinarians throughout the world. The form of Staphylococcus aureus studied is known to be resistant to a great number of antibiotics and the transient nature of the organism makes it possible to be transmitted from humans to our companion animals and back to humans. A concern of many veterinarians is that the gene that causes the resistance to antibiotics for humans could transfer into a commensal organism commonly found on animals, Staphylococcus intermedia, which in turn could also become resistant to antibiotics. This study was conducted using swab specimens taken from dogs and cats at a single local veterinary practice. The samples were from sites which presented with infection and abscesses, otitis externa, pyoderma, or infected surgical sites. Microbiological procedures such as culturing, Gram staining, and plating, using various media were employed to detect the presence of Staphylococcus aureus in the specimens. Of the 32 samples provided, this particular study found no samples containing MRSA although it did detect one case of Staphylococcus aureus. While the results indicate there is not a known incidence of the pathogen at this clinic, they do not provide translates to the Dayton area being free of resistant forms of Staphylococcus. Future studies need to be conducted with a larger sample size from more clinics, to create a more representative sampling of the prevalence of this pathogen in this geographical area.

Planning for flood risk under the changing climate
Independent Research
Undergraduate - Individual
Advisor(s): Shuang-Ye Wu
Student(s): Dennis V Eck

Historically, the city of Dayton, Ohio has been particularly vulnerable to flooding due to its location at the confluence of four major rivers. Such exposure to flood risk will only increase with future climate change, as the IPCC’s most recent assessment reports a projected 10-20% increase in precipitation for this region. This study assesses how flood risk changes under different climate scenarios as well as land use change scenarios through the following steps. (1) Develop statistical models to downscale results of major climate models and relate precipitation with annual peak flow. These models predict a peak flow for the future 100-year flood will increase 20-30%. (2) Map present and future floodplain by statistical correlation based on the increased flood magnitude, and model GIS in how such extent will change with future climate change for the Dayton area. (3) Assess the social vulnerability of people who are exposed to flood risk when considering the socio-economically disadvantaged are disproportionately affected by the increase in flood risk due to climate change; (4) Assess how flood risk will differ under different land use planning scenarios. Results will be shared with local land use and resource planners to solicit input on the type of climate information needed, such that study results could be incorporated into local planning processes for a sustainable future.

Playing Against the Odds: The Inspiring Story of Chris Lofton
Course Project 09_W1_HSS_275_02
Undergraduate - Individual
Advisor(s): George M DeMarco
Student(s): Kaitlyn M. Stahl

The purpose of this study is to describe the lucrative sports career and personal struggles and achievements of Chris Lofton, a talented athlete and cancer survivor. Lofton is still an inspiration to all athletes overcoming obstacles of any kind. His success as a basketball player for the Tennessee Volunteers speaks for itself and the barriers he had to overcome during his season shows the steadfastness and determination of this great athlete. He has continued his basketball career overseas and his success as a basketball player for the Tennessee Volunteers speaks for itself and the barriers he had to overcome during his season shows the steadfastness and determination of this great athlete. He has continued his basketball career overseas and still has a deep love for the game. Being a neighbor and close friend of Chris Lofton, I have used personal primary sources of interviews, observations, and photos, along with secondary sources of internet and newspaper articles to display the inspiring and impressive story of this talented player.

The Prevalence of MRSA in Local Companion Animals
Independent Research
Undergraduate - Individual
Advisor(s): Robert J Kearns, Mark G Nielsen
Student(s): Sarah E Timko

Over the past four years there have been increased findings of Methicillin-Resistant Staphylococcus aureus (MRSA) in companion animals. The MRSA organism, a pathogen, was once viewed strictly as a threat to humans. Now the animals that surround us are also at risk. While studies have shown that the MRSA organism in animals is generally uncommon, the recent increase in reported cases in companion animals has become a concern for veterinarians throughout the world.
Sediment loading in a channel can be a tool for analyzing erosion rates in a waterrshed. This technique was applied to Wolf Creek, Ohio to quantify the erosion along an important stretch of the creek where ongoing erosion problems appear to be contributing to the sediment loading downstream. This research measured the suspended sediment load in the Wolf Creek drainage basin through collection of suspended sediment samples with a US DH-48 depth-integrated sediment sampler integrated with channel profiles at three locations within the drainage basin. These samples were filtered through a one micron filter to determine the amount of sediment in each sample. Initial results indicate that there is an increased sediment loading downstream from a large outcrop of glacial materials and suggest that the glacial outcrop is eroding and contributing sediment to the stream. Remediation of the sediment is being considered as a means to reduce sediment loading in Wolf Creek.

The purpose of this study is to describe the tragic yet triumphant life and times of Steve Prefontaine and explain how he changed the sport of distance running up until his death in 1975. Also, we will see how through running Pre inspired many Americans, from his generation to ours, to go out and exercise. Data were collected from primary sources such as interviews, articles and photographs. This study of Steve Prefontaine will permit everyone to witness how influential he was in the sport of distance running.

In this study about the recent life and times of Cristiano Ronaldo, my aim is to describe how he has become the player and person that he is today. My study will start by looking at the background and childhood of the player and will then go on to show how his career has escalated in such a short amount of time. To an outsider looking at my topic and realizing that Ronaldo is only 24 years old, they might say that it would be difficult to find enough information about him. This would be true of many athletes of this age but Ronaldo’s career has been very illustrious and successful since the start. This can be seen as he was voted world player of the year in February 2009. My main focus will show how he grew up in a disadvantaged family, and how that drove him on to gain the success and recognition that he has achieved across the world.

Replication Restart in Mycoplasma Pneumoniae
Senior/Capstone Project
Course Project 09_WI_HSS_275_02
Undergraduate - Group
Advisor(s): Matthew E Lopper
Student(s): Kyle A Scarberry, Rebecca L Sweet

Biological processes that serve to read, duplicate, or preserve the information contained in DNA are necessary for all forms of life and involve the activities of many proteins. The main objective of this research is to determine if the protein MPN554 of the human pathogen Mycoplasma pneumoniae is a protein involved in rescuing DNA replication when replication is disrupted following encounters with DNA damage. The function of a protein is determined by its molecular structure and by its ability to physically interact with other macromolecules. Therefore, this research focuses on understanding the ability of MPN554 to interact with DNA by means of biochemical and structural methods of experimentation to better understand the role it plays in the bacterial cell, with the long-term goal of developing new antibacterial compounds.

Replicating luxury suite holders is more than just exceptional service!
Independent Research
Course Project 09_WI_HSS_275_02
Undergraduate - Group
Advisor(s): Peter J Titlebaum
Student(s): Justin D. Kirk, Ryan Mirabedini

The purpose of an academic study of luxury suites is to further the knowledge of those selling and leasing suites to customers. Luxury suite revenue accounts for an average of $9.8 million per professional sports venue annually in the United States (Lawrence, Contorno, Kutz, Hendrickson Dorsey, 2007). While revenue generated from luxury suite sales is an important part of a professional team’s income stream, there is need for more education regarding customer retention strategies. Sales teams consistently strive to develop relationships with their clients and could reduce customer turnover by improving these efforts. Organizations must understand how the buyer of the luxury suite demonstrates such return on investment (ROI), and how this system can be better utilized. In order to answer these questions, 20 teams from the four major sports leagues (NBA, MLB, NFL, and NHL) were interviewed about their consideration of customer ROI and the role it plays in their service to luxury suite clients. The sample was split evenly between teams in small, medium and large market areas. Representing service areas of various sizes reflects demographic diversity and provides crucial information suite owners can leverage to improve customer retention strategies. This study will show the importance of customer service as it relates to the retention of clients. Information can have a sizeable positive impact on luxury suite sales and ROI for clients. Not only will luxury suite owners benefit, but professional franchises looking for repeat customers will see rewards as well. In turn, we will be survey luxury suite owners and how they determine the return on their investment. Whether it is a brand image or simply fan loyalty, this study will create a forum for discussion.

RFID Wristband Manufacturing
Senior/Capstone Project
Course Project 09_WI_HSS_275_02
Undergraduate - Group
Advisor(s): Rebecca P Blust
Student(s): Jeffrey D. Declark, Lin Ding, Brian L Morris, Thomas James Q O’Loughlin, Bradley J Peters, Michael R. Richter

Standard Register is a leader in manufacturing patient wristbands in over 60% of US hospitals. Currently, the Standard Register system, Patient Link™/Patient Enterprise (PLUES), links together patient information to a unique bar code which is printed on all documents, wristbands, and labels for the patient. We have been tasked with replacing the barcode system with newer RFID technology. This includes collecting data and analyzing the current wristband production process and implementing the RFID tags into the process, conducting an FMEA of the production process, and a test production run at Standard Register.
The Role of PriB in Replication Restart in Neisseria gonorrhoeae

Senior/Capstone Project 3:00 PM
Student(s): Jared A. Crasto
Advisor(s): Carissa M Krane

Nanomaterials exhibit unique optical, electronic and mechanical properties but the ability to control and assemble nanostructures is a challenge. This workshop will focus on the self-assembly of different inorganic nanostructures. The resulting structures were helical in shape and possessed unique properties such as blue-shifted fluorescence and enhanced photocatalytic activity. The long-chain helical structures also showed long-range macroscopic ordering and liquid crystalline behavior.

Separating Visual Features from Tracked Objects

Graduate Research 3:00 PM
Student(s): Katrina L Duckett
Advisor(s): David R Barth, Rebecca P Blust

Student(s): Leeie L Jameson
Advisor(s): Susan T Davis

The purpose of the previous research is on the identification of the tracked objects and their features. In the present research, we use a new experimental condition that dissociates the VSTM stimulus from the tracked objects, during the tracking sequence. This allows us to identify where in the cognitive process the interference affects performance.

The The Impact of Converse and Chuck Taylor

Course Project 09_WI_HSS_275_01 3:00 PM
Student(s): Marie Johnsen
Advisor(s): George M DeMarco

The purpose of the previous research is on the identification of the tracked objects and their features. In the present research, we use a new experimental condition that dissociates the VSTM stimulus from the tracked objects, during the tracking sequence. This allows us to identify where in the cognitive process the interference affects performance.
The purpose of this study is to explore the life and times of Sydney Crosby. Crosby is the captain of the Pittsburgh Penguins and was named the youngest captain ever in NHL history at age 21. Through his years of hard work, “Sid the Kid” was the seventh player in the NHL to win all three awards (the Art Ross Trophy, the Hart Memorial Trophy, and the Lester B. Pearson Award). His dedication and love for the game has made him the player he is today.

**Sociable Influence on Newly Married Women**

Student(s): Alexandra C. Olivo
Advisor(s): Carolyn Roecker Phelps

The purpose of this study was to describe the history of the Chicago Cubs professional baseball franchise. Data were collected based on interviews, photo analysis, video analysis, and other forms of available information. The research shows how the Cubs have enjoyed great success while enduring a century-long championship drought. The study also examines the history of the franchise while highlighting specific players, teams, and broadcasters who have made the Chicago Cubs one of the most distinguished teams in all of professional sports in America.

**Sources of Stress and Coping Strategies in College Athletes**

Student(s): Carolyn Roecker Phelps
Advisor(s): Carolyn Roecker Phelps

College student often perceive many aspects of their lives to be very stressful. Student-athletes are a special group of college students who face a unique set of stressors, and how they choose to manage the stress they encounter has been questioned. This study was interested in examining sources of stress for student-athletes and the methods of coping most frequently used when dealing with stress. We surveyed the freshman and transfer student athletes at the University of Dayton. Forty-two student-athletes participated in the study. Results indicated that school and sport cause the greatest amount of distress among the athletes. We also found that talking to someone about what is going on and exercising excessively were most frequently endorsed as strategies for coping with stress. Counter to our hypothesis we found that men and women did not differ in overall levels of stress; however, there were differences in the sources of stress.

**Spectroscopic Investigation of Lithium Ion Solvation and Complexation in Polar Aprotic Solvents**

Student(s): Michael C. Gallenstein, Matthew D. Kniess, Alexander J. Ohlemacher, James M. Ortman, Kenneth D. Wittenberg
Advisor(s): Jack Cartwright, David A Sauer

The formation of complex ions between lithium ion and polar aprotic solvents was investigated. Lithium ion was found to form stable complexes with ethylene carbonate, propylene carbonate, acetonitrile, and 1,4-dioxane. The complexes formed with most of the solvents were low melting solids, although the 1,4-dioxane complex decomposed above 150°C before melting. The 1,4-dioxane complex is unique in that it can form a polymeric complex with 1,4-dioxane acting as a bridging group. These complexes were examined using FT-IR and Raman spectroscopy along with ab initio calculations to understand how complexation occurs. Variable temperature NMR was used to examine the melting process of these complexes and understand solvent exchange processes. These studies lend insight into the electrolyte used in many types of lithium batteries.

**Stepping Down and Moving Forward: A Social Justice Living Learning Community Project**

Student(s): Carolyn Roecker Phelps
Advisor(s): Carolyn Roecker Phelps

As tutors at Patterson Kennedy Elementary School, we are working individually with students to help improve their skills in reading, writing, math, and Spanish. By connecting with these young learners in our community, we are following the lead of Socrates and trying to direct the youth towards a brighter future. Our role as tutors is to help improve basic academic skills, but in fulfilling this task we have also become role models for these young students at Patterson Kennedy. We are stepping down from our privileged position to recognize the role that diminished resources plays in educational advantage. Our goal is to demonstrate how the lack of proper materials can inhibit educational objectives in the classroom.

**Posters 3:00PM - 4:30PM**

Student(s): George M DeMarco
Advisor(s): George M DeMarco

The purpose of the study was to describe the history of the Chicago Cubs professional baseball franchise. Data were collected based on interviews, photo analysis, video analysis, and other forms of available information. The research shows how the Cubs have enjoyed great success while enduring a century-long championship drought. The study also examines the history of the franchise while highlighting specific players, teams, and broadcasters who have made the Chicago Cubs one of the most distinguished teams in all of professional sports in America.

**Sources of Stress and Coping Strategies in College Athletes**

Student(s): Carolyn Roecker Phelps
Advisor(s): Carolyn Roecker Phelps

College student often perceive many aspects of their lives to be very stressful. Student-athletes are a special group of college students who face a unique set of stressors, and how they choose to manage the stress they encounter has been questioned. This study was interested in examining sources of stress for student-athletes and the methods of coping most frequently used when dealing with stress. We surveyed the freshman and transfer student athletes at the University of Dayton. Forty-two student-athletes participated in the study. Results indicated that school and sport cause the greatest amount of distress among the athletes. We also found that talking to someone about what is going on and exercising excessively were most frequently endorsed as strategies for coping with stress. Counter to our hypothesis we found that men and women did not differ in overall levels of stress; however, there were differences in the sources of stress.

**Spectroscopic Investigation of Lithium Ion Solvation and Complexation in Polar Aprotic Solvents**

Student(s): Michael C. Gallenstein, Matthew D. Kniess, Alexander J. Ohlemacher, James M. Ortman, Kenneth D. Wittenberg
Advisor(s): Jack Cartwright, David A Sauer

The formation of complex ions between lithium ion and polar aprotic solvents was investigated. Lithium ion was found to form stable complexes with ethylene carbonate, propylene carbonate, acetonitrile, and 1,4-dioxane. The complexes formed with most of the solvents were low melting solids, although the 1,4-dioxane complex decomposed above 150°C before melting. The 1,4-dioxane complex is unique in that it can form a polymeric complex with 1,4-dioxane acting as a bridging group. These complexes were examined using FT-IR and Raman spectroscopy along with ab initio calculations to understand how complexation occurs. Variable temperature NMR was used to examine the melting process of these complexes and understand solvent exchange processes. These studies lend insight into the electrolyte used in many types of lithium batteries.

**Stepping Down and Moving Forward: A Social Justice Living Learning Community Project**

Student(s): Carolyn Roecker Phelps
Advisor(s): Carolyn Roecker Phelps

As tutors at Patterson Kennedy Elementary School, we are working individually with students to help improve their skills in reading, writing, math, and Spanish. By connecting with these young learners in our community, we are following the lead of Socrates and trying to direct the youth towards a brighter future. Our role as tutors is to help improve basic academic skills, but in fulfilling this task we have also become role models for these young students at Patterson Kennedy. We are stepping down from our privileged position to recognize the role that diminished resources plays in educational advantage. Our goal is to demonstrate how the lack of proper materials can inhibit educational objectives in the classroom.

**Students Gain Insight of Philanthropy**

Other: Existing Campus Activity
Advisor(s): Carolyn Roecker Phelps

The purpose of the study was to describe the history of the Chicago Cubs professional baseball franchise. Data were collected based on interviews, photo analysis, video analysis, and other forms of available information. The research shows how the Cubs have enjoyed great success while enduring a century-long championship drought. The study also examines the history of the franchise while highlighting specific players, teams, and broadcasters who have made the Chicago Cubs one of the most distinguished teams in all of professional sports in America.

**Sources of Stress and Coping Strategies in College Athletes**

Student(s): Carolyn Roecker Phelps
Advisor(s): Carolyn Roecker Phelps

College student often perceive many aspects of their lives to be very stressful. Student-athletes are a special group of college students who face a unique set of stressors, and how they choose to manage the stress they encounter has been questioned. This study was interested in examining sources of stress for student-athletes and the methods of coping most frequently used when dealing with stress. We surveyed the freshman and transfer student athletes at the University of Dayton. Forty-two student-athletes participated in the study. Results indicated that school and sport cause the greatest amount of distress among the athletes. We also found that talking to someone about what is going on and exercising excessively were most frequently endorsed as strategies for coping with stress. Counter to our hypothesis we found that men and women did not differ in overall levels of stress; however, there were differences in the sources of stress.

**Spectroscopic Investigation of Lithium Ion Solvation and Complexation in Polar Aprotic Solvents**

Student(s): Michael C. Gallenstein, Matthew D. Kniess, Alexander J. Ohlemacher, James M. Ortman, Kenneth D. Wittenberg
Advisor(s): Jack Cartwright, David A Sauer

The formation of complex ions between lithium ion and polar aprotic solvents was investigated. Lithium ion was found to form stable complexes with ethylene carbonate, propylene carbonate, acetonitrile, and 1,4-dioxane. The complexes formed with most of the solvents were low melting solids, although the 1,4-dioxane complex decomposed above 150°C before melting. The 1,4-dioxane complex is unique in that it can form a polymeric complex with 1,4-dioxane acting as a bridging group. These complexes were examined using FT-IR and Raman spectroscopy along with ab initio calculations to understand how complexation occurs. Variable temperature NMR was used to examine the melting process of these complexes and understand solvent exchange processes. These studies lend insight into the electrolyte used in many types of lithium batteries.

**Stepping Down and Moving Forward: A Social Justice Living Learning Community Project**

Student(s): Carolyn Roecker Phelps
Advisor(s): Carolyn Roecker Phelps

As tutors at Patterson Kennedy Elementary School, we are working individually with students to help improve their skills in reading, writing, math, and Spanish. By connecting with these young learners in our community, we are following the lead of Socrates and trying to direct the youth towards a brighter future. Our role as tutors is to help improve basic academic skills, but in fulfilling this task we have also become role models for these young students at Patterson Kennedy. We are stepping down from our privileged position to recognize the role that diminished resources plays in educational advantage. Our goal is to demonstrate how the lack of proper materials can inhibit educational objectives in the classroom.

**Students Gain Insight of Philanthropy**

Other: Existing Campus Activity
Advisor(s): Carolyn Roecker Phelps

The purpose of the study was to describe the history of the Chicago Cubs professional baseball franchise. Data were collected based on interviews, photo analysis, video analysis, and other forms of available information. The research shows how the Cubs have enjoyed great success while enduring a century-long championship drought. The study also examines the history of the franchise while highlighting specific players, teams, and broadcasters who have made the Chicago Cubs one of the most distinguished teams in all of professional sports in America.
Sustainable Technology in Bolivia: An ETHOS Immersion
Student(s): Alexander A Ramsey
Advisor(s): Philip T Aaron, Margaret F Pinnell
Undergraduate - Individual   Kennedy Union Ballroom
Course Project 09_WI_EGR_330_P1   3:00 PM

Super-lensing effects of metallo-dielectric stacks
Graduate Research 3:00 PM
Graduate - Individual Kennedy Union Ballroom
Advisor(s): Joseph W Haus, Andrew M Sarangan, Qiwen Zhan
Student(s): Nikorn C Katte

Super-lensing effects of metallo-dielectric stacks
Student(s): Nikorn C Katte
Advisor(s): Joseph W Haus
Undergraduate - Individual Kennedy Union Ballroom
Course Project 09_WI_EGR_330_P1   3:00 PM

They Call it Puppy Love: A Social Justice Living Learning Community Project
Student(s): Katharyn L. Balbach, Bridget K. Brady, Anne K. Gerker, Carla J. Nietfeld, Margaret A. Yanker
Advisor(s): Monalisa McCurry Mullins, Lori G Phillips-Young
Undergraduate - Group Kennedy Union Ballroom
Course Project 09_WI_PHL_103_01   3:00 PM

Super-lensing effects of metallo-dielectric stacks
Student(s): Katte Nkorni
Advisor(s): Peter J Titlebaum
Undergraduate - Individual Kennedy Union 222
Course Project 09_WI_HSS_275_02   3:00 PM

The Third Rail of Politics: The State of Social Security in America
Student(s): Kayode T Ajayi-Majebi
Advisor(s): John S Putka
Undergraduate - Individual Kennedy Union Ballroom
Student(s): Matthew E Walsh
Student Project   3:00 PM

A Test Bed for Mobile Robotics Research
Graduate Research 3:00 PM
Graduate - Individual Kennedy Union Ballroom
Advisor(s): Raul E Ordonez, Kayode T Ajayi-Majebi
Student(s): George M DeMarco

Advisor(s): John S Putka
Undergraduate - Individual Kennedy Union 222
Course Project 09_WI_HSS_275_02   3:00 PM

The project is an in depth examination of the Social Security program that is currently in place in the United States. In addition to the history of the program, problems with the subsidy will be analyzed, and a number of solutions will be presented.
Abstract: Through the experience of tutoring elementary children, we have discovered how valuable positive role modelling skills. By offering this special assistance, we have come to realize the tremendous benefit of one on one tutoring for these kids. We have also learned something about ourselves, and how beneficial it is to our own moral development to help our community through service learning.

UD Sustainability Sculptures
Senior/Capstone Project
3:00 PM
Kennedy Union Ballroom

Advisor(s): Monica McCurry Mullins
Student(s): Peter J. McDermott, Andrew D. Molnar

University of Dayton Sustainability Sculpture project is funded by University of Dayton in order to make full use of the marble saved from the renovation of Marycrest Hall in the summer of 2006. A competition was held and three sculpture designs were selected to be fabricated and placed around the University's campus. In this project, our team is going to work with a truly cross functional team which includes three artists and consultants from The College of Arts and Sciences. We will follow the requirements of feasibility and ergonomics to revise the three designs in order to fabricate one of them by using the saved marble and install it in front of RecPlex.

Vacuum Forming Benchmarking-Inteva Products
Course Project 09_WI_MFG_490_01
3:00 PM
Kennedy Union Ballroom

Advisor(s): David R. Barth, Rebecca P Blust,
Student(s): Wenjie Chen, Pan Jing, Shanshan Wu, Li Yang, Zhou Zhou

Inteva is an engineering manufacturing and supply powerhouse serving customers around the world with innovative interior and closure solutions for vehicles ranging from entry level compacts and luxury sedans to pick-ups and massive commercial vehicles. The focus of the project is the vacuum-formed plastic which is often used on customer-side surfaces of vacuum forming panels in Inteva Products. Based on the vacuum forming technology, the machine exposes the plastic to stretching forces and heat. In this process, the strong force and high heat will cause the thin skin and edge to deform the embossing grain resulting in changes in both color and gloss. The scope of the project is to quantify the impact of vacuum forming on both aesthetic and mechanical properties through quantifying the change of the grain of about 12 different materials (skins) provided by Inteva Products. The expected results by the end of the project are analytically describing grain quality and benchmarking different materials.

Water and Natural Gas Use at Sycamore Square Apartments
Course Project 09_WI_ASI_146_H1
3:00 PM

Undergraduate - Group

Advisor(s): Maureen A Braniff
Student(s): Amy Marie Droege

Harm reduction education has become the mode of educating students on alcohol use in colleges and universities. This project is an assessment of an operating alcohol education program at a small, Catholic college in Ohio. The program was focused on educating students who had been sanctioned because of alcohol related policy violations. The program assessment was multifaceted including interviews, focus groups, and a Core Survey. The report includes information about the history of alcohol education at the institution, the current trends and practices, recommendations for future application, and a discussion of the grant proposed to fund future initiatives. This project suggests an approach that is wide reaching at the institution. The goal of the new program is to encourage all members of the faculty and staff to take on the role of educator in this area of the students’ lives. Collaboration and cooperation for a common philosophy is necessary for the program’s success and this and any institution.

Examining Social Change Model Leadership: Men and Women in Student Organizations
Graduate Research
4:30 PM
LTC Forum

Advisor(s): Nicholas A. Carter
Student(s): Jennifer L Wittstock

Graduate - Individual

The purpose of this study was to describe the life of Tiger Woods, his rise to dominance in the sports world, and his recent comeback from ACL Knee Surgery. Eldrick Tiger Woods was destined for greatness from a very young age, and under the guidance of his father Earl, he steadily made his climb to the top of the golf world. His impressive and dedicated work ethic have made him the epitome of athletes in golf. Although his quest to become the greatest golfer of all time was recently sidetracked by ACL Knee Surgery he has since returned to competition and deems himself ready and better than ever to chase history and become the most victorious golfer of all time. Tiger’s quest for Jack Nicklaus’ record 18 major victories drives him to be the image of winning in sports.

Title: Guiding Children Toward Good Choices: A Social Justice Living Community Project
Course Project
3:00 PM
Kennedy Union Ballroom

Advisor(s): Brian M. Wofford, Rebecca P Blust
Student(s): Victoria Pastaru, Sukhinder S Sidhu,
Student(s): Daniel H. Craft, Andrew P Huelsman, Corey L Vossler

This project looks at natural gas and water consumption at Sycamore Square Apartments, a local apartment complex. Using rainfall data and roof area analysis an analysis was done on the amount of feasible rainwater collection, as well as a system for such collection. Current sink and shower fixtures were also examined. More efficient retrofits and their costs and savings potentials were then considered. Additionally, natural gas billing data for all 26 buildings of the complex was analyzed in Dr. Kelly Kissock’s Energy Explorer C program. From this comparative analysis the poorly performing buildings could be recognized. Then, possible water heater and boiler upgrades and their costs and savings potentials were considered.

Development and Implementation of an Alcohol Education Program: A Harm Reduction Approach
Graduate Research
4:30 PM
LTC Forum

Advisor(s): Molly A Schaller
Student(s): Maureen A Braniff

Harm reduction education has become the mode of educating students on alcohol use in colleges and universities. This project is an assessment of an operating alcohol education program at a small, Catholic college in Ohio. The program was focused on educating students who had been sanctioned because of alcohol related policy violations. The program assessment was multifaceted including interviews, focus groups, and a Core Survey. The report includes information about the history of alcohol education at the institution, the current trends and practices, recommendations for future application, and a discussion of the grant proposed to fund future initiatives. This project suggests an approach that is wide reaching at the institution. The goal of the new program is to encourage all members of the faculty and staff to take on the role of educator in this area of the students’ lives. Collaboration and cooperation for a common philosophy is necessary for the program’s success and this and any institution.

Faculty Perspectives of a Community College Student Retention Program
Graduate Research
4:30 PM
LTC Forum

Advisor(s): Molly A Schaller
Student(s): Amy Marie Droege

Student retention is a problem that faces all colleges and universities. Many factors contribute to student retention, including class attendance, engagement outside the classroom, and contact with faculty and advisors. This issue is even more prevalent at community colleges, where students are generally non-traditional and often enter college at-risk for early
Relationship between the Ethnic Identity Development and the Level of Campus Involvement between first and second year Latino/a students.
Graduate Research
Graduate - Individual
Advisor(s): Molly A Schaller
Student(s): Zwisel M Gandia

Higher education scholars have done extensive research involving Latino/a student ethnic identity; yet there is very little research describing the level of campus involvement and engagement, and the ethnic identity development of first and second year Latino/a students at predominately white institutions (PWI). The purpose of this quantitative causal-comparative study was to examine the relationship between the level of campus involvement and the ethnic identity development of first and second year Latino/a students at a predominately white institution.

Self-Authorship and Service-Learning: The Role of Service-Learning in Reshaping Beliefs, Values, and Identity
Graduate Research
Graduate - Individual
Advisor(s): Molly A Schaller
Student(s): Laura M Mals

Self-authorship emphasizes the capacity for college students, as young adults, to become critically aware of external influences, to construct mature interpersonal relationships with others, and to establish and maintain an inner voice and identity based on a set of complex personal values and beliefs (Baxter Magolda 2004, 2007, 2008; Kegan, 1994). Within the context of service-learning, research suggests that well-designed experiential programs can promote the development of self-authorship by fostering an increased awareness of socially-constructed knowledge and meaningful reflection among its participants (Baxter Magolda, 2000; Jones & Hill, 2003). This study qualitatively examines the relationship between participation in a highly intensive and experiential service-learning program for college students and the development of self-authorship. Applying grounded theory methodology, interviews were conducted with past participants of the service-learning program. Using coding methods consistent with a grounded theory constructivist approach, an analysis of the data was completed. This study illuminates implications of service-learning programs for achieving developmental goals for college students.

Relationship between Satisfaction of Intimate-Partner Relationships and Depressive Symptoms among Law Students
Graduate Research
Graduate - Individual
Advisor(s): Molly A Schaller
Student(s): Christina M Cook

Law students face a variety of stressors during law school, which can affect their interpersonal relationships. This correlational study examined the relationship between the satisfaction of an intimate-partner relationship and self-reported behaviors related to depression among law school students. The factors of efficacy expectations and attributions were used to examine relationship satisfaction. A questionnaire was given to law students as a single law school, asking them to rate their levels of satisfaction with their intimate partners and to identify the behaviors they exhibit that relate to their levels of depression. Results of the study include a simple correlation coefficient and other descriptive data.

Student Satisfaction: Students without a Home
Graduate Research
Graduate - Individual
Advisor(s): Molly A Schaller

Faculty members are trained to identify and engage students who are struggling by reaching out to them via personal interaction, phone and email. Identified students can be connected with resources such as peer tutoring and academic counseling to help evaluate their options. This scholarly project assesses the faculty perspective of the Retention Program through a detailed survey of the campus faculty. Survey questions relate to an individual faculty member's understanding of the program, their personal participation, and their perception of its effectiveness.
Student(s): Jack R Pence

Not all student organizations have office space allotted within the student union or elsewhere. Other student organizations are less fortunate and struggle finding room on the overcrowded campus. The overarching purpose of this study is to look at the physical space, the intrinsic motivation of students, and the role that the leadership and advisors play within the organizations and how that plays into their level of satisfaction.

**University-Sanctioned Academic Probation and the Impact of Academic Renewal Courses**

Graduate Research 4:30 PM

Graduate - Individual LTC Forum

Advisor(s): Molly A Schaller

Student(s): Amanda E Virag

This study examines the academic self-esteem in first-year students on university-sanctioned academic probation, and the impact that learning support resources, like the Academic Renewal Course and Coaching Sessions (ARCC) has on future achievement. Students currently enrolled in a section of the ARCC course, and past ARCC participants were selected and interviewed. Using a grounded theory approach, results from the interviews were coded in an effort to further explore the ways in which students see themselves as learners and how academic resources can be impactful.
Name | Title | Location/Time
--- | --- | ---
Barth, David | Automated Crankshaft Pinmill Cutter Inspection System | Miriam Hall 217 | 11:00 AM - 12:00 PM
Barth, David | Dry Air Charge Needle Guarding System | Miriam Hall 217 | 11:00 AM - 12:00 PM
Beach, Aaron | Photodegradation of Beta-Carotene in Chloromethane Solvents and Characterization of Photoproducts | KU Ballroom | 10:30 AM - 11:30 AM
Becker, Paul | Hate Groups Use of High Tech: An In-depth Analysis of the Stormfront Website | St. Joseph's Hall 230 | 1:00 PM - 2:00 PM
Becker, Paul | Grief and Bereavement Amongst College Students: A Qualitative Study | St. Joseph's Hall 023 | 10:30 AM - 11:30 AM
Becker, Paul | Is the Media's Portrayal of Aging Adults Accurate? | St. Joseph's Hall 023 | 1:00 PM - 2:00 PM
Becker, Paul | Shake Your Money Maker: Black Women Oppression Displayed in Hip Hop Music Videos Stemming from Historical Structures and Gendered Racism | St. Joseph's Hall 023 | 1:00 PM - 2:00 PM
Beffa, Nicholas | Small Group Communication - Promotional Video for Prospective UD Students and Parents | Marianist Hall Commons | 1:00 PM - 2:30 PM
Benchek, Amy | The Other Place is Their Place: Social Justice Living Learning Community Project | KU Ballroom | 10:30 AM - 11:00 AM
Benbow, Mark | Stream Size Effects on Benthic Community Response to Water Withdrawal. | KU Ballroom | 10:30 AM - 11:30 AM
Bogner, Andrew | Future Job Projections: Occupational Therapist, Physical Therapist, Athletic Director | Miriam Hall 207 | 10:30 AM - 11:30 AM
Bogner, Andrew | The Benefits of Service-Learning in Youth Development | Miriam Hall 207 | 10:30 AM - 11:30 AM
Bogner, Andrew | Gender Differences in Self-Affirmation When Anticipating Performance Impairment | Miriam Hall 207 | 10:30 AM - 11:30 AM
Buechter, Marikyle | Service Learning in Sport Management: Murderball Style | Miriam Hall 207 | 10:30 AM - 11:30 AM
Burgei, Kaitlyn | 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bryan, Anna | A Family Tradition: Looking Back at the Basketball Careers of Bill Uhl, Sr. and Bill Uhl, Jr. and the Sports Medicine/Physical Therapy of Their Time | St. Joseph's Hall 023 | 1:00 PM - 2:00 PM
Buchele, Carolyn | UD Sustainability Sculptures | Miriam Hall 207 | 10:30 AM - 11:30 AM
Buchele, Carolyn | La Proxima Generacion de Patterson Kennedy: A Social Justice Living Learning Community Project | KU Ballroom | 10:30 AM - 11:00 AM
Burgei, Kaitlyn | Vacuum Forming - Benchmarking - Inteva Products | Miriam Hall 207 | 10:30 AM - 11:00 AM
Bun, David | Gender Differences in Self- Assertion When Describing Performance Impressions | Miriam Hall 207 | 10:30 AM - 11:00 AM
Bunyan, Jeremy | Investigation of the McCook Field Area and Associated Health Effects of Trichloroethylene Exposure | KU Ballroom | 10:30 AM - 11:30 AM
Bunyan, Jeremy | Bozeman, Adam | Lock Them up and Throw Away the Key? A Social Justice Living Learning Community Project | Miriam Hall 207 | 10:30 AM - 11:00 AM
Bust, Laura | “The Story" of the Group Success | KU Ballroom | 10:30 AM - 11:30 AM
Bust, Laura | Siboney, Carolina | “The Story" of the Group Success | KU Ballroom | 10:30 AM - 11:30 AM
Bust, Laura | The History of the Pittsburgh Steelers: A Story of Minority Participation in the NFL | St. Joseph's Hall 230 | 12:00 PM - 1:00 PM
Bust, Laura | Bozeman, Adam | The Other Place is Their Place: Social Justice Living Learning Community Project | KU Ballroom | 10:30 AM - 11:00 AM
Bust, Laura | Bust, Laura | Miriam Hall 207 | 10:30 AM - 11:00 AM
Bust, Laura | The History of the Pittsburgh Steelers: A Story of Minority Participation in the NFL | St. Joseph's Hall 230 | 12:00 PM - 1:00 PM
Bust, Laura | 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bust, Laura | Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bust, Laura | Merrick, Reid | 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bust, Laura | Merrick, Reid | Investigation of the McCook Field Area and Associated Health Effects of Trichloroethylene Exposure | KU Ballroom | 10:30 AM - 11:30 AM
Bust, Laura | Merriam, Reid | 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bust, Laura | Merrick, Reid | Investigation of the McCook Field Area and Associated Health Effects of Trichloroethylene Exposure | KU Ballroom | 10:30 AM - 11:30 AM
Bust, Laura | Merrick, Reid | Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bust, Laura | Merrick, Reid | Investigation of the McCook Field Area and Associated Health Effects of Trichloroethylene Exposure | KU Ballroom | 10:30 AM - 11:30 AM
Bust, Laura | Merrick, Reid | 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
Bust, Laura | Merrick, Reid | 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries | KU, Boll Theatre | 1:00 PM - 5:00 PM
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Location/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burgess, Laura</td>
<td>Is the media’s portrayal of aging adults accurate?</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Burky, Albert</td>
<td>Stream Size Effects on Benthic Community Response to Water Withdrawal.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Christopher, Nathan</td>
<td>Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project.</td>
<td></td>
</tr>
<tr>
<td>Clarke, John</td>
<td>The Development of the Book</td>
<td>Library, First Floor Lobby</td>
</tr>
<tr>
<td>Clark, Michelle</td>
<td>The Establishment of Transformed Cell Lines Using Primary Cells Obtained From Fresh Feline Intestinal Tissue.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Clarke, John</td>
<td>The Zodiac</td>
<td>Hall Atrium</td>
</tr>
<tr>
<td>Byrnes, Susan</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Busch, Arthur</td>
<td>Paley: Censorship, Subversion, Subsumption and Ignorance</td>
<td></td>
</tr>
<tr>
<td>Byrnes, Susan</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Campbell, Gary</td>
<td>Possibility of using Algae for Carbon Separation.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Campbell, Tyre</td>
<td>Surviving Stress: Media Ethics and Food Monitoring</td>
<td>LT Center 1026</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Darrah, Mary</td>
<td>Dress Code 101: How to Look Like A UD Student</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Danese, Anna</td>
<td>Female Musicians in the College Newspaper</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Cultrona, Sam</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Carmichael, Kacy</td>
<td>The Color of Incarceration: A Case Study of Montgomery County Jail</td>
<td>St. Joseph’s Hall 211</td>
</tr>
<tr>
<td>Cassiman, Shawn</td>
<td>Is the media’s portrayal of aging adults accurate?</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Christopher, Michael</td>
<td>Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project.</td>
<td></td>
</tr>
<tr>
<td>Chelle, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and manage their own business.</td>
<td></td>
</tr>
<tr>
<td>Chaffin, Christina</td>
<td>3rd Annual University of Dayton Business Plan Competition.</td>
<td>Miriam Hall 109</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Byrnes, Susan</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Darrah, Mary</td>
<td>Dress Code 101: How to Look Like A UD Student</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Danese, Anna</td>
<td>Female Musicians in the College Newspaper</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Cultrona, Sam</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Carmichael, Kacy</td>
<td>The Color of Incarceration: A Case Study of Montgomery County Jail</td>
<td>St. Joseph’s Hall 211</td>
</tr>
<tr>
<td>Cassiman, Shawn</td>
<td>Is the media’s portrayal of aging adults accurate?</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Christopher, Michael</td>
<td>Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project.</td>
<td></td>
</tr>
<tr>
<td>Chelle, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and manage their own business.</td>
<td></td>
</tr>
<tr>
<td>Chaffin, Christina</td>
<td>3rd Annual University of Dayton Business Plan Competition.</td>
<td>Miriam Hall 109</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Byrnes, Susan</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Darrah, Mary</td>
<td>Dress Code 101: How to Look Like A UD Student</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Danese, Anna</td>
<td>Female Musicians in the College Newspaper</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Cultrona, Sam</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Carmichael, Kacy</td>
<td>The Color of Incarceration: A Case Study of Montgomery County Jail</td>
<td>St. Joseph’s Hall 211</td>
</tr>
<tr>
<td>Cassiman, Shawn</td>
<td>Is the media’s portrayal of aging adults accurate?</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Christopher, Michael</td>
<td>Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project.</td>
<td></td>
</tr>
<tr>
<td>Chelle, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and manage their own business.</td>
<td></td>
</tr>
<tr>
<td>Chaffin, Christina</td>
<td>3rd Annual University of Dayton Business Plan Competition.</td>
<td>Miriam Hall 109</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Byrnes, Susan</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Darrah, Mary</td>
<td>Dress Code 101: How to Look Like A UD Student</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Danese, Anna</td>
<td>Female Musicians in the College Newspaper</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Cultrona, Sam</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Carmichael, Kacy</td>
<td>The Color of Incarceration: A Case Study of Montgomery County Jail</td>
<td>St. Joseph’s Hall 211</td>
</tr>
<tr>
<td>Cassiman, Shawn</td>
<td>Is the media’s portrayal of aging adults accurate?</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Christopher, Michael</td>
<td>Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project.</td>
<td></td>
</tr>
<tr>
<td>Chelle, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and manage their own business.</td>
<td></td>
</tr>
<tr>
<td>Chaffin, Christina</td>
<td>3rd Annual University of Dayton Business Plan Competition.</td>
<td>Miriam Hall 109</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Conti, Amanda</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Byrnes, Susan</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Darrah, Mary</td>
<td>Dress Code 101: How to Look Like A UD Student</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Danese, Anna</td>
<td>Female Musicians in the College Newspaper</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Cultrona, Sam</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Living Water Ministries Model.</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Carmichael, Kacy</td>
<td>The Color of Incarceration: A Case Study of Montgomery County Jail</td>
<td>St. Joseph’s Hall 211</td>
</tr>
<tr>
<td>Cassiman, Shawn</td>
<td>Is the media’s portrayal of aging adults accurate?</td>
<td>St. Joseph’s Hall 023</td>
</tr>
<tr>
<td>Presenter &amp; Advisor INDEX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Location/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeMarco, George</td>
<td>The History of Obesity and Effects on Today's Culture</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>The History of Competitive Cheerleading</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>The Evolution of the Modern Football Helmet</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>The Detroit Redwings: The History and Tradition of Stanley Cup Winners</td>
<td>KU 222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>The Biography of Flora (Flo) Hyman and Her Impact on the Sport of Volleyball</td>
<td>KU 222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>New Oar Old? The History of the Head of the Charles Regatta</td>
<td>KU 222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>Kicking Like A Girl: The Life and Times of Mia Hamm</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>How Am I Going to Drag Myself Out of Bed? The History of Motivation in Physical Activity and Sport</td>
<td>KU 222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>From Red and Blue to Red and Blue: The History of the Cleveland Cavaliers</td>
<td>KU 222</td>
</tr>
<tr>
<td>Dean, Robert</td>
<td>Equity Valuation Modeling</td>
<td>Hall 118, Davis Center</td>
</tr>
<tr>
<td>Dean, Robert</td>
<td>&quot;A League of Their Own&quot; Women's Professional Basketball</td>
<td>KU 222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>&quot;And That's a Winner!&quot; The History of the St. Louis Cardinals</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>&quot;Stepping Down and Moving Forward: A Social Justice Living Learning Community Project&quot;</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>America's Original Past Time: Lacrosse</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>A Family Tradition Looking Back at the Basketball Careers of Bill O'Reilly Sr. and Bill O'Reilly Jr. and the Sport's Medicine/Physical Therapy of Their Careers</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>The Life and Times of Cristiano Ronaldo</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>You Riverdance?: The Evolution of Irish Dance from Ancient Times to Modernity</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>To win is to visualize: The Life and History of Edwin C. Moses</td>
<td>222</td>
</tr>
<tr>
<td>DeMarco, George</td>
<td>The Juice on the Juice: Looking Back at the Steroid Era in Baseball</td>
<td>KU 222</td>
</tr>
</tbody>
</table>

**Presenter & Advisor INDEX**
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Location/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elliott, James</td>
<td>The Rebirth of Science Curricula in the United States</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Eloe, Paul</td>
<td>Bootstrapping with SAS and Exploring Dirty Data</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Eloe, Paul</td>
<td>Earning Money in Day-Trading - Fact or Fiction?</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Ernst, Margaret</td>
<td>Stream Size Effects on Benthic Community Response to Water Withdrawal</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Evans, Aubrey</td>
<td>The History of Competitive Cheerleading</td>
<td>222 Room</td>
</tr>
<tr>
<td>Fehrman, Eric</td>
<td>The Off-Stage Horn, featuring Joshua Paulus and the UD Horn Choir</td>
<td>Sears Recital Hall</td>
</tr>
<tr>
<td>Ferguson, Jaime</td>
<td>Visual Communication Design Senior Portfolio Preparation</td>
<td>Rike Center 212</td>
</tr>
<tr>
<td>Ficke, Kelli</td>
<td>Every Day is Earth Day: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Fils, Luc-Rikardo</td>
<td>The Life &amp; Times of a Michigan Man: Bo Schembechler</td>
<td>222 Room</td>
</tr>
<tr>
<td>Flanders, Kelsey</td>
<td>Kicking Like A Girl: The Life and Times of Mia Hamm</td>
<td>222 Room</td>
</tr>
<tr>
<td>Fitzgerald, Maureen</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Developing Nations</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Fouke, Daniel</td>
<td>Investigation of the McCook Field Area and Associated Health Effects of Trichloroethylene Exposure</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Fortman, Kyle</td>
<td>2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries</td>
<td>KU, Boll Theatre</td>
</tr>
<tr>
<td>Franks, Robert</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>Miriam Hall 109</td>
</tr>
<tr>
<td>Fumagalli, Ross</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and close a for-profit company.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Gadde, Smileysusanna</td>
<td>Removal of a Bittering Agent Potentially Released to Water Supplies: Implications for Drinking Water Treatment</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Gandia, Zwisel</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and close a for-profit company.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Future of Physical Education</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Impact of Music Therapy on the Emotional Status of Youth in Residential Treatment</td>
<td>Humanities Center</td>
</tr>
<tr>
<td>Gardner, Michael</td>
<td>The Evolution of Sports Medicine</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Future of Health and Sport Science Careers in 10 Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Garven, Marcia</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Geiger, Donald</td>
<td>Assessing Wetland Plant Community Quality with a Vegetation Index of Biotic Integrity</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Geiger, Donald</td>
<td>Creekside Fen: Land Use and Its Impact on Biotic Integrity</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Glasson, L.</td>
<td>Visual Communication Design Senior Portfolio Preparation</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Gardner, Michael</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and close a for-profit company.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Frost-Pierson, Mary</td>
<td>Women in Mysticism: Building a Bridge between Christianity and Islam</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Gadde, Smileysusanna</td>
<td>Removal of a Bittering Agent Potentially Released to Water Supplies: Implications for Drinking Water Treatment</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Gardstrom, Susan</td>
<td>The Impact of Music Therapy on the Emotional Status of Youth in Residential Treatment</td>
<td>Humanities Center</td>
</tr>
<tr>
<td>Georgiou, L.</td>
<td>Visual Communication Design Senior Portfolio Preparation</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Georgiou, L.</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Evolution of Sports Medicine</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers in 10 Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Health and Sport Science Careers</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Athletics and the Impact of co-ops in our time in focusing on Physical Therapy, Physicians Assistants and Dentistry</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Goodwin, Donald</td>
<td>The Future of Career in Dentistry and Physician Assistants in Years</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Location/Time</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Davis</td>
<td>Visual Communication Design Senior Portfolio Preparation</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>University of Dayton Business Plan Competition</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>Evaluating the primary language loss changed over recent years</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>Book Review of a new book for a 5 &amp; UP section using relative evaluation methods</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>The Effects of Harmonic Power Level and Weld Duration on Tissue Sealing</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>Microscopy of &quot;Living Water World Ministries Campus&quot; in conjunction with the Civil Engineering Department - 2009 Senior Design Project</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>University of Dayton Business Plan Competition</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>Evaluating the primary language loss changed over recent years</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>Book Review of a new book for a 5 &amp; UP section using relative evaluation methods</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>The Effects of Harmonic Power Level and Weld Duration on Tissue Sealing</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
<tr>
<td>Davis</td>
<td>Microscopy of &quot;Living Water World Ministries Campus&quot; in conjunction with the Civil Engineering Department - 2009 Senior Design Project</td>
<td>KU Ballroom 10:30 AM - 3:30 PM</td>
</tr>
</tbody>
</table>
Name: Holloway, Rebecca
Title: The Impact of Music Therapy on the Emotional Status of Youth in Residential Treatment
Location/Time: Humanities Center 112|10:30 AM - 11:30 AM

Name: Howson, Emily
Title: The Fate of Fantasy: Engaging the Fiction of J.R.R. Tolkien and Philip Pullman
Location/Time: Humanities Center 110|1:00 PM - 2:00 PM

Name: Hu, Tingyuan
Title: Green Light... Ballroom|3:00 PM

Name: Huacuja, Judith
Title: Classic Convention or Aesthetic Objection? A Juxtaposition of Public Art in Urban environments and the Contemporary Installations of Spencer Tunick
Location/Time: Humanities Center 110|10:30 AM - 11:30 AM

Name: Hudson, Natalie
Title: From the Global to the Local: Realizing the Human Rights of Resettled Refugees in Dayton, Ohio
Location/Time: St. Joseph's Hall 231|10:30 AM - 11:30 AM

Name: Hunt, Lauren
Title: Big Brothers Big Sisters, Big Impact: A Social Justice Living Learning Community Project
Location/Time: KU Ballroom|10:30 AM

Name: Huelsman, Bryce
Title: Moving the Young: A Social Justice Living Learning Community Project
Location/Time: KU Ballroom|10:30 AM

Name: Jabin, Rebekah
Title: A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project
Location/Time: KU Ballroom|10:30 AM

Name: Jackson, Steve
Title: Making International Law Work for the World’s Women
Location/Time: LTC Meeting Space|3:00 PM - 4:00 PM

Name: Jarosik, Jonathan
Title: Caddying for a Cure: On the Bag with Bruce Edwards
Location/Time: Ballroom|3:00 PM

Name: Jennings, Nora
Title: “Voices of Girls in Urban Schools: Collaborative Team Research"
Location/Time: KU Ballroom|10:30 AM

Name: Jing, Pan
Title: Vacuum Forming Benchmarking-Inteva Products
Location/Time: Ballroom|3:00 PM

Name: Kaercher, Matthew
Title: Excellence in Operations Research
Location/Time: Ballroom|1:30 PM - 2:20 PM

Name: Kaercher, Matthew
Title: Ali Industies Inc. Blade Process Analysis: Implementation and Training of Production Planning System
Location/Time: Miriam Hall 103|3:30 PM - 4:20 PM

Name: Jipson, Arthur
Title: Stop, Drunk, then Under Arrest: Analyzing Sobriety Checkpoint Effectiveness
Location/Time: St. Joseph's Hall 211|10:30 AM - 11:30 AM

Name: Jipson, Arthur
Title: Reviving a Village:Community Action through Networking and Building Trustful Partnerships
Location/Time: KU 310|1:00 PM - 2:00 PM

Name: Kanet, John
Title: Excellence in Operations Research
Location/Time: Ballroom|1:30 PM - 2:20 PM

Name: Kahlig, Sean
Title: 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries
Location/Time: KU, Boll Theatre|1:00 PM - 5:00 PM

Name: Jones, Bernard
Title: Reviving a Village:Community Action through Networking and Building Trustful Partnerships
Location/Time: KU 310|1:00 PM - 2:00 PM

Name: Jules, Alexander
Title: Accuracy of Bertec Force Measuring Platform in terms of noise and drift over time
Location/Time: KU Ballroom|10:30 AM

Name: Katte, Nkorni
Title: Super-lensing effects of metallo-dielectric stacks
Location/Time: Ballroom|3:00 PM

Name: Kearns, Robert
Title: Adiponectin, an Adipocyte-Derived Hormone, and its Relationship to Body Composition in Canines
Location/Time: KU Ballroom|1:00 PM

Name: Kaveney, Brenna
Title: Making a Splash in the World: The History of Swimming
Location/Time: 222|1:00 PM

Name: Kaveney, Brenna
Title: Personal Journal Writing: Effects of writing on mood and self-efficacy and the degree to which self-disclosure influences these effects.
Location/Time: LTC Meeting Space|1:00 PM - 2:00 PM

Name: Kaveney, Brenna
Title: Women and War: Gender Issues in Contemporary Conflict
Location/Time: Marianist Hall 217|2:00 PM - 4:30 PM

Name: Kearns, Robert
Title: Adiponectin, an Adipocyte-Derived Hormone, and its Relationship to Body Composition in Canines
Location/Time: KU Ballroom|1:00 PM

Name: Johnson, Christopher
Title: "The Virtue of Solidarity: A Theological and Practical Analysis"
Location/Time: KU Ballroom|1:00 PM

Name: Johnson, Kelly
Title: The Virtue of Solidarity: a Theological and Practical Analysis
Location/Time: Ballroom|1:00 PM

Name: Johnson, Kelly
Title: Loving One Another: Two Christian Versions of Justice the in World
Location/Time: Ballroom|1:00 PM

Name: Johnson, Kelly
Title: Making the Positive on the Positive...The Meaning of Life in Catholic Colleges
Location/Time: LTC Theatre|1:00 PM

Name: Johnson, Kelly
Title: Loving One Another: Two Christian Versions of Justice the in World
Location/Time: Ballroom|1:00 PM

Name: Johnson, Kelly
Title: Personal Journal Writing: Effects of writing on mood and self-efficacy and the degree to which self-disclosure influences these effects.
Location/Time: LTC Meeting Space|1:00 PM - 2:00 PM

Name: Kaveney, Brenna
Title: Women and War: Gender Issues in Contemporary Conflict
Location/Time: Marianist Hall 217|2:00 PM - 4:30 PM

Name: Kahlig, Sean
Title: 2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries
Location/Time: KU, Boll Theatre|1:00 PM - 5:00 PM

Name: Jarosik, Jonathan
Title: Caddying for a Cure: On the Bag with Bruce Edwards
Location/Time: Ballroom|3:00 PM

Name: Jennings, Nora
Title: “Voices of Girls in Urban Schools: Collaborative Team Research"
Location/Time: KU Ballroom|10:30 AM

Name: Jing, Pan
Title: Vacuum Forming Benchmarking-Inteva Products
Location/Time: Ballroom|3:00 PM
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Location/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxwell, Kasandra</td>
<td>Femtosecond Laser Machining of Kapton Nanocomposites</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Markwell, John</td>
<td>Marketing Strategy Plan for the Department of Educational Leadership</td>
<td>Miriam Hall 214</td>
</tr>
<tr>
<td>Mariahugh, David</td>
<td>2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries</td>
<td>KU, Bolz Theatre</td>
</tr>
<tr>
<td>McAdams, Scott</td>
<td>Future 10 Year Career Projection of Health and Sport Science Majors: Dietetics, Exercise Science, and Sport Management</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>McDermott, Peter</td>
<td>Guiding Children Toward Good Choices: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Maybury, Lauren</td>
<td>The Power to Heal: Stem Cells, the Church, and the UD Community</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Maybury, Lauren</td>
<td>The Power to Heal: Stem Cells, the Church, and the UD Community</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>McGinley, Megan</td>
<td>The Fate of Fantasy: Engaging the Fiction of J.R.R. Tolkien and Philip Pullman</td>
<td>Humanities Center 110</td>
</tr>
<tr>
<td>Maier, Joanna</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Developing Nations</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Metz, Morgan</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Meyer, Eleanor</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
<tr>
<td>Miller, Tracy</td>
<td>The P&amp;G Marketing Challenge: Competing to Develop &amp; Present a Holistic Campaign to P&amp;G Brand Managers</td>
<td>Miriam Hall 109</td>
</tr>
<tr>
<td>Mingione, Carolyn</td>
<td>Aesthetic Preference for Unity Persists when Illusions are Present</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mingione, Carolyn</td>
<td>Health Perceptions in Women with Disordered Eating Patterns</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mitchell, Austin</td>
<td>3rd Annual University of Dayton Business Plan Competition</td>
<td>Miriam Hall 104</td>
</tr>
<tr>
<td>Morgridge, Benjamin</td>
<td>Marketing Strategy Plan for the Department of Educational Leadership</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morman, Christopher</td>
<td>Eating Right: Home, Workplace, and Media Literacies in Contemporary America</td>
<td>KU 311</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Morgridge, Benjamin</td>
<td>Marketing Strategy Plan for the Department of Educational Leadership</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morgridge, Benjamin</td>
<td>Marketing Strategy Plan for the Department of Educational Leadership</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>A Meal for Today Gives Hope for Tomorrow: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Monahan, Alissa</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>Miriam Hall 203</td>
</tr>
<tr>
<td>Morris, Michael</td>
<td>Entrepreneurship Capstone Business Consulting Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Location/Time</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>Title: Guiding Children Toward Good Choices &amp; Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>They Call it Puppy Love: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Mullins, Monalisa</td>
<td>The Other Place is Their Place: Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Orlowski, Alexander</td>
<td>Career Fields Projected 10 Years Into the Future</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Nevill, Ryan</td>
<td>Career Fields Projected 10 Years Into the Future</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Nainaparampil, Jaison</td>
<td>Drosophila eye model to understand the genetic basis of Alzheimer's disease</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Niekamp, Isaac</td>
<td>Moving the Young: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>O'Reilly, Brendan</td>
<td>Memory for Location: A Comparison Between Intercollegiate Athletes and PSY 101 Research Participants</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Orlowski, Michael</td>
<td>Understanding Overconfidence</td>
<td>UD RecPlex</td>
</tr>
<tr>
<td>Pan, Jingjing</td>
<td>Green Light</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Paulik, Jacklyn</td>
<td>Assessing Wetland Plant Community Quality with a Vegetation Index of Biotic Integrity</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Pasadyn, Matthew</td>
<td>3rd Annual University of Dayton Business Plan Competition</td>
<td>Miriam Hall 103</td>
</tr>
<tr>
<td>Paulus, Joshua</td>
<td>Competition Recital for the 2009 Department of Music Honors Recital</td>
<td>Sears Recital Hall</td>
</tr>
<tr>
<td>Patton, Kathleen</td>
<td>Rendered Relics: Portrayals of the Patron Saints of the Arts</td>
<td>ArtStreet Studio B</td>
</tr>
<tr>
<td>Peters, Bradley</td>
<td>RFID Wristband Manufacturing</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Peters, Michael</td>
<td>3rd Annual University of Dayton Business Plan Competition</td>
<td>Miriam Hall 103</td>
</tr>
<tr>
<td>Pestello, H Frances</td>
<td>First Year Students’ Attitudes and Opinions on Sexual Assault and Rape</td>
<td>St. Joseph's Hall 013</td>
</tr>
<tr>
<td>Perry, Matthew</td>
<td>The Relationship between Academic Performance and Video Game Usage in First Year, Male Students</td>
<td>KU 311</td>
</tr>
<tr>
<td>Pence, Jack</td>
<td>Student Satisfaction Students without a Home</td>
<td>LBE Foray</td>
</tr>
<tr>
<td>Phillips-Young, Lori</td>
<td>They Call it Puppy Love: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Phillips, Shannon</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
<tr>
<td>Phelps, Kyle</td>
<td>Barren Bowls</td>
<td>Studio C</td>
</tr>
<tr>
<td>Pestello, H Frances</td>
<td>Altruistic Behaviors of Genocide Movie Characters Depicted In Hollywood Movies</td>
<td>St. Joseph's Hall 023</td>
</tr>
<tr>
<td>Phillips, Shannon</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
<tr>
<td>Phillips, Shannon</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
<tr>
<td>Phillips, Shannon</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
<tr>
<td>Phillips, Shannon</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
</tbody>
</table>

---

**Presenter & Advisor INDEX**
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Location/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picklo, Sarah</td>
<td>Get Started: East Development? A Tour of Development Precincts to Develop Neighborhoods</td>
<td>Miramar Hall 102</td>
</tr>
<tr>
<td>Pierce, Jason</td>
<td>The Future of Health and Sport Science Careers in 10 Years</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Pinnell, Margaret</td>
<td>Lego Robotics Program, Kiser Elementary PK-8</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Poe, Danielle</td>
<td>Operation Theater, Project and Media Decision on Texas Theater</td>
<td></td>
</tr>
<tr>
<td>Powers, Peter</td>
<td>Generating Terahertz Frequencies</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Pratt, David</td>
<td>Feasibility of Using Algae for Carbon Sequestration</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Pruli Gajendranath, Oorvashi</td>
<td>A Drosophila model to study the role of the Notch ligand Serrate (Jagged-1) in growth and cancer.</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Pulsifer, Stephanie</td>
<td>The Sorption of Denatonium Benzoate, n-Butylpyridinium Chloride, and 3-Methyl-n-butylpyridinium Chloride to Kaolinite and Montmorillonite Clay Minerals</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Qumsiyeh, Maher</td>
<td>Bootstrapping with SAS and Exploring Dirty Data</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Rable, Frank</td>
<td>Alcohol &amp; Drug Abuse Prevention Team 2009 Research Project Underclassmen “Sanctioned” Drinking Trends vs. Upperclassmen non-sanctioned drinking trends at Carlow University</td>
<td></td>
</tr>
<tr>
<td>Rajanahalli.K, Pavan</td>
<td>Eating Right: Home, Workplace, and Media Literacies in Contemporary America</td>
<td>KU 311</td>
</tr>
<tr>
<td>Reeves, Elizabeth</td>
<td>Big Brothers Big Sisters, Big Impact: A Social Justice Living Learning Community Project</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Renzetti, Claire</td>
<td>Domestic Violence: Police Response</td>
<td>Joseph's Hall 230</td>
</tr>
<tr>
<td>.................................</td>
<td>Domestic Violence: Police Response</td>
<td>Joseph's Hall 023</td>
</tr>
<tr>
<td>Rhoads, Elizabeth</td>
<td>The application of molecular techniques for identifying Ambystoma salamanders</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sanchez, Maria Teresa</td>
<td>Galicia, Spain</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Santoianni, Arthur</td>
<td>Automating Server Deployment at a Fortune 500 Data Center</td>
<td>Miriam Hall 214</td>
</tr>
<tr>
<td>Ryan, Courtney</td>
<td>The Psychological Effects of Pediatric Illness on Healthy Siblings</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Ryckman, Hayley</td>
<td>2009 Civil Engineering Senior Design Project for Living Water World Master's Thesis</td>
<td>KU, Boll Theatre</td>
</tr>
<tr>
<td>Robbe, Amanda</td>
<td>Determining the Prevalence of Community-Acquired Methicillin-Resistant Staphylococcus aureus (CA-MRSA) Colonization in Student-Athletes at the University of Delaware</td>
<td></td>
</tr>
<tr>
<td>Roell, Alison</td>
<td>The Future of Health and Sport Science Careers in 10 Years</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Santoli, Daniel</td>
<td>Visual Communication Design Senior Portfolio Preparation</td>
<td>Rike Center 212</td>
</tr>
<tr>
<td>Sarpong, Nana</td>
<td>Guardian Light</td>
<td>Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>A Quantitative Model For Selecting Growth at a Reasonable Price (GARP) Stocks: A Bull and Bear Market Appraisal</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>.................................</td>
<td>Developing Valuation Models for Industrials and Consumer Discretionary Sectors: An Econometric Approach</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Evaluating the Social Impacts of Consumer Products</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sanz, David</td>
<td>Quantitative Research and First-Quarter Forecast</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Sanz, David</td>
<td>Managing the Agency</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sanz, David</td>
<td>Montgomery County Family and Children First Case Indicators Web Site Update</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Sarver, Daniel</td>
<td>Visual Communication Design Senior Portfolio Preparation</td>
<td>Marian 112</td>
</tr>
<tr>
<td>Sarver, David</td>
<td>Social media for pharmaceuticals</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>A Quantitative Model for Selecting Growth at a Reasonable Price (GARP) Stocks: A Bull and Bear Market Appraisal</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>An Empirical Analysis of a Random Forest Based Model for Bull and Bear Markets</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Developing Valuation Models for Healthcare and Consumer Staples Stocks: An Econometric Approach</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Developing Valuation Models for Individuals and Consumer Discretionary Sectors: An Econometric Approach</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Developing valuation models for the utilities, telecoms, and information technology sectors: An Econometric Approach</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Equity Valuation Modeling</td>
<td>KU 311</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Finding a fair price treatment for valuations and auctions of assets</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Finding a fair price treatment for valuations and auctions of assets</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Finding a fair price treatment for valuations and auctions of assets</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Finding a fair price treatment for valuations and auctions of assets</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>Finding a fair price treatment for valuations and auctions of assets</td>
<td>Marian 103</td>
</tr>
<tr>
<td>Name</td>
<td>Location/Time</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Schuster, Casey</td>
<td>Distant Thunder: The University of Dayton Looks at the Spanish Civil War</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Schnurr, Barbara</td>
<td>Methods for modeling and remediating contaminated groundwater: an analysis of southern California</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Schlingman, Sarah</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Developing Nations</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Schaller, Molly</td>
<td>The Relationship between Academic Performance and Video Game Usage in First Year, Male Students</td>
<td>KU 311</td>
</tr>
<tr>
<td>Shephard, Sandra</td>
<td>Predicting the job opportunities of our careers in ten years. Focusing on...</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Shin, Jeong</td>
<td>Got Growth? Got Development? A Tour of Development Predicaments in Developing Nations</td>
<td>Miriam Hall 102</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>The Dividend Discount Model: A Stochastic Approach</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Schaller, Molly</td>
<td>The Relationship between Satisfaction of Intimate-Partner Relationships and Depressive Symptoms among Law Students</td>
<td>LTC Forum</td>
</tr>
<tr>
<td>Schaeffer, Dane</td>
<td>Ali Industies Inc. Blade Process Analysis: Implementation and Training of Production Planning System</td>
<td>Miriam Hall 103</td>
</tr>
<tr>
<td>Sauer, David</td>
<td>The Dividend Discount Model: A Stochastic Approach</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Schaller, Molly</td>
<td>The Relationship between Satisfaction of Intimate-Partner Relationships and Depressive Symptoms among Law Students</td>
<td>LTC Forum</td>
</tr>
<tr>
<td>Schaller, Molly</td>
<td>Challenges of Learning: Academic Self-Esteem in First-Year Students Placed on University-Sanctioned Academic Probation and the Impact of Academic Probation</td>
<td>KU 101</td>
</tr>
<tr>
<td>Sievers, Michael</td>
<td>Exploring Expressions of Vocation and Art ...</td>
<td>Hall 101</td>
</tr>
<tr>
<td>Smith, Elaine</td>
<td>Small Group Communication - Promotional Video for Prospective UD Students and Parents</td>
<td>Marianist Hall Commons</td>
</tr>
<tr>
<td>Soto, William</td>
<td>Flyer Enterprises/SBA Non Profit Business Plan Analysis &amp; Implementation</td>
<td>Miriam Hall 207</td>
</tr>
<tr>
<td>Singh, Amit</td>
<td>A Drosophila model to study the role of the Notch ligand Serrate (Jagged-1) in growth and cancer</td>
<td>KU Ballroom</td>
</tr>
<tr>
<td>Soto, William</td>
<td>Flyer Enterprises/SBA Non Profit Business Plan Analysis &amp; Implementation</td>
<td>Miriam Hall 207</td>
</tr>
<tr>
<td>Spurgeon, Sarah</td>
<td>University of Dayton Service/Immersion Experiences in Cameroon &amp; Zambia</td>
<td>KU 331</td>
</tr>
<tr>
<td>Sprouse, Alyssa</td>
<td>Exploring Expressions of Vocation and Art ...</td>
<td>Hall 101</td>
</tr>
<tr>
<td>Starkowicz, Melissa</td>
<td>Classic Convention or Aesthetic Objection? A Juxtaposition of Public Art in Urban Environments and the Contemporary Installations of Spencer Tunick</td>
<td>Miriam Hall 207</td>
</tr>
<tr>
<td>Stawicki, Michelle</td>
<td>Exploring Expressions of Vocation and Art ...</td>
<td>Hall 101</td>
</tr>
<tr>
<td>Starrett, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>KU 301</td>
</tr>
<tr>
<td>Stawicki, Michelle</td>
<td>Exploring Expressions of Vocation and Art ...</td>
<td>Hall 101</td>
</tr>
<tr>
<td>Starrett, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>KU 301</td>
</tr>
<tr>
<td>Starrett, Robert</td>
<td>The Sophomore Entrepreneurship Experience is a linked two semester course where sophomore entrepreneurship majors propose, staff, launch, operate and...</td>
<td>KU 301</td>
</tr>
</tbody>
</table>
Name  Title  Location/Time
Whitten, Zach  2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries  KU, Boll Theatre|1:00 PM - 5:00 PM
Wilbers, Timothy  Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project  .....................
Wigton, Stephanie  Future Projection of Dietetics and Physical Education careers beyond 2011  .....................
Williams, Kelsey  A Look into the Future for Selected Health and Sport Science Careers  .....................
Williams, Kelsey  My Career in Ten Years as a Dietitian, Physical Therapist, Physician’s Assistant and College Athletic Director  .....................
Williams, Kelsey  Homerun! The History of the Cleveland Indians  .....................
Wittstock, Jennifer  Examining Social Change Model Leadership: Men and Women in Student Organizations  .....................
Williams, Patrick  The application of molecular techniques for identifying Ambystoma salamanders  .....................
Wilson, Sean  A New Jersey State of Mind: A Social Justice Learning Living Community Project  .....................
Wolfe, Bradley  Hobart Corporation Pallet & Frame Synergy  .....................
Woeste, Christopher  Tiger Woods: Man or Machine?  .....................
Withrow, Vicki  7th Annual Integration Bee  Science Center 251, Chudd Auditorium|1:00 PM - 2:30 PM
Wright, Shirley  Regulation of Apoptosis by Caspase - 3  .....................
Wright, Shirley  Chromatin Staining Method for Canine Oocytes  .....................
Wu, Shuang-Ye  Investigation of Structural Modification inside LiNbO3 with Tightly Focused Femtosecond Lasers  .....................
Yang, Li  Vacuum Forming Benchmarking-Inteva Products  .....................
Yang, Shuangyang  Optimal Plasmonic Focusing and Applications  .....................
Zhan, Qiwen  Optimal Plasmonic Focusing and Applications  .....................
Zhan, Qiwen  Studying of solid DMAPN thin film using Nano-reflectometry  .....................
Zhou, Xulu  Norwood Medical Lean Manufacturing Study  .....................
Zhou, Zhou  Vacuum Forming Benchmarking-Inteva Products  .....................
Zhou, Yanji  UD Sustainability Sculptures  .....................
Zhou, Zhongjun  Norwood Medical Lean Manufacturing Study  .....................
Zukowski, Angela  Exploring Expressions of Vocation and Art  Alumnus Hall 101|10:30 AM - 11:30 AM

Name  Title  Location/Time
Whitten, Zach  2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries  KU, Boll Theatre|1:00 PM - 5:00 PM
Wilbers, Timothy  Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project  .....................
Wigton, Stephanie  Future Projection of Dietetics and Physical Education careers beyond 2011  .....................
Williams, Kelsey  A Look into the Future for Selected Health and Sport Science Careers  .....................
Williams, Kelsey  My Career in Ten Years as a Dietitian, Physical Therapist, Physician’s Assistant and College Athletic Director  .....................
Williams, Kelsey  Homerun! The History of the Cleveland Indians  .....................
Wittstock, Jennifer  Examining Social Change Model Leadership: Men and Women in Student Organizations  .....................
Williams, Patrick  The application of molecular techniques for identifying Ambystoma salamanders  .....................
Wilson, Sean  A New Jersey State of Mind: A Social Justice Learning Living Community Project  .....................
Wolfe, Bradley  Hobart Corporation Pallet & Frame Synergy  .....................
Woeste, Christopher  Tiger Woods: Man or Machine?  .....................
Withrow, Vicki  7th Annual Integration Bee  Science Center 251, Chudd Auditorium|1:00 PM - 2:30 PM
Wright, Shirley  Regulation of Apoptosis by Caspase - 3  .....................
Wright, Shirley  Chromatin Staining Method for Canine Oocytes  .....................
Wu, Shuang-Ye  Investigation of Structural Modification inside LiNbO3 with Tightly Focused Femtosecond Lasers  .....................
Yang, Li  Vacuum Forming Benchmarking-Inteva Products  .....................
Yang, Shuangyang  Optimal Plasmonic Focusing and Applications  .....................
Zhan, Qiwen  Optimal Plasmonic Focusing and Applications  .....................
Zhan, Qiwen  Studying of solid DMAPN thin film using Nano-reflectometry  .....................
Zhou, Xulu  Norwood Medical Lean Manufacturing Study  .....................
Zhou, Zhou  Vacuum Forming Benchmarking-Inteva Products  .....................
Zhou, Yanji  UD Sustainability Sculptures  .....................
Zhou, Zhongjun  Norwood Medical Lean Manufacturing Study  .....................
Zukowski, Angela  Exploring Expressions of Vocation and Art  Alumnus Hall 101|10:30 AM - 11:30 AM

Name  Title  Location/Time
Whitten, Zach  2009 Civil Engineering Senior Capstone Design Project for Living Water World Ministries  KU, Boll Theatre|1:00 PM - 5:00 PM
Wilbers, Timothy  Visualization of “Living Water World Ministries Campus” in conjunction with the Civil Engineering Department - 2009 Senior Design Project  .....................
Wigton, Stephanie  Future Projection of Dietetics and Physical Education careers beyond 2011  .....................
Williams, Kelsey  A Look into the Future for Selected Health and Sport Science Careers  .....................
Williams, Kelsey  My Career in Ten Years as a Dietitian, Physical Therapist, Physician’s Assistant and College Athletic Director  .....................
Williams, Kelsey  Homerun! The History of the Cleveland Indians  .....................
Wittstock, Jennifer  Examining Social Change Model Leadership: Men and Women in Student Organizations  .....................
Williams, Patrick  The application of molecular techniques for identifying Ambystoma salamanders  .....................
Wilson, Sean  A New Jersey State of Mind: A Social Justice Learning Living Community Project  .....................
Wolfe, Bradley  Hobart Corporation Pallet & Frame Synergy  .....................
Woeste, Christopher  Tiger Woods: Man or Machine?  .....................
Withrow, Vicki  7th Annual Integration Bee  Science Center 251, Chudd Auditorium|1:00 PM - 2:30 PM
Wright, Shirley  Regulation of Apoptosis by Caspase - 3  .....................
Wright, Shirley  Chromatin Staining Method for Canine Oocytes  .....................
Wu, Shuang-Ye  Investigation of Structural Modification inside LiNbO3 with Tightly Focused Femtosecond Lasers  .....................
Yang, Li  Vacuum Forming Benchmarking-Inteva Products  .....................
Yang, Shuangyang  Optimal Plasmonic Focusing and Applications  .....................
Zhan, Qiwen  Optimal Plasmonic Focusing and Applications  .....................
Zhan, Qiwen  Studying of solid DMAPN thin film using Nano-reflectometry  .....................
Zhou, Xulu  Norwood Medical Lean Manufacturing Study  .....................
Zhou, Zhou  Vacuum Forming Benchmarking-Inteva Products  .....................
Zhou, Yanji  UD Sustainability Sculptures  .....................
Zhou, Zhongjun  Norwood Medical Lean Manufacturing Study  .....................
Zukowski, Angela  Exploring Expressions of Vocation and Art  Alumnus Hall 101|10:30 AM - 11:30 AM