

Eleventh Annual
LOURDES UNIVERSITY

**Research
&
Scholarship
Symposium**



Monday, April 27, 2015

4 - 9 p.m.

Franciscan Center



LOURDES
UNIVERSITY



Schedule



Welcome	4 - 4:05 p.m.
James Chamberlain and James Minesky, Co-Chairs, Research and Scholarship Committee Dr. David J. Livingston, President, Lourdes University Dr. Geoffrey J. Grubb, Provost	
Keynote Speaker	4:05 - 4:20 p.m.
Tom Brady, Lourdes University Board of Trustees, Founder/Chairman/CEO of Plastic Technologies Inc.	
Poster Presentations	4 - 8:30 p.m.
Oral Presentations	4:30 - 9 p.m.





Eleventh Annual Research & Scholarship Symposium
April 27, 2015

PRESENTATION SCHEDULE

4 - 8:30 p.m.	Poster Presentations	<i>Franciscan Center Commons</i>
4:30 - 9 p.m.	Oral Presentations	<i>Conference Room A</i>
4:30 - 5 p.m.	Annie Morrison ~ Undergraduate	<i>Medicinal Larvae in Wound Healing</i>
5 - 5:30 p.m.	Ashley Menden ~ Undergraduate	<i>Nature vs. Nurture: Canine Aggression</i>
5:30 - 6 p.m.	Kelsey Schmidt ~ Undergraduate	<i>An Examination of Energy and Climate Change Programs at Universities and Colleges of the Western Basin of Lake Erie and Possible Approaches for Lourdes University</i>
6 - 6:30 p.m.	Mahalia Edwards ~ Undergraduate	<i>Direct Observation Therapy in the Treatment of Tuberculosis</i>
6:30 - 7 p.m.	Nadine Kalpakidis ~ Undergraduate	<i>Maternal-Fetal Crosstalk Immunity: Effects on Autoimmune Disease Development</i>
7 - 7:30 p.m.	Jacob RedFox ~ Undergraduate	<i>Chronic Wasting Disease in Cervid Populations</i>
7:30 - 8 p.m.	Kenneth Mohn ~ Undergraduate	<i>Benefits of Using Solar Energy to Power Golf Carts</i>
8 - 8:30 p.m.	Hillary West ~ Undergraduate	<i>Genetic, Biological, and Environmental Factors Affecting Alzheimer's Disease</i>
8:30 - 9 p.m.	Ben Kirsch ~ Undergraduate	<i>Stem Cell Therapy in Stroke Patients and Other Neurological Disorders</i>



Eleventh Annual Research & Scholarship Symposium
April 27, 2015

PRESENTATION SCHEDULE

4:30 - 9 p.m.	Oral Presentations	Conference Room B
4:30 - 5 p.m.	Austin Lake ~ Undergraduate <i>ACL Reconstruction: Bone-Patellar Tendon-Bone Autograft versus Hamstring Autograft</i>	
5 - 5:30 p.m.	Alyssa Schaub ~ Undergraduate <i>The Positive and Negative Effects of Energy Drinks on the Human Body</i>	
5:30 - 6 p.m.	Kristi Layman ~ Undergraduate <i>Depression and its Effects on the Quality of Life</i>	
6 - 6:30 p.m.	Kenneth Onubogu ~ Undergraduate <i>The Vaccine vs. Autism Controversy</i>	
6:30 - 7 p.m.	Shradha Bajpai ~ Undergraduate <i>Women and Heart Disease</i>	
7 - 7:30 p.m.	Amanda Burgy ~ Undergraduate <i>Neurocardiogenic Syncope: Understanding Impacts On Physiology</i>	
7:30 - 8 p.m.	Tiffany Ford ~ Undergraduate <i>The Use of Cinnamon Oil as an Ant Deterrent</i>	
8 - 8:30 p.m.	Frank Veres ~ Undergraduate <i>Non-Operative Prevention and Recovery of Ulnar Collateral Ligament (UCL) Injuries</i>	
8:30 - 9 p.m.	Dakota Bick ~ Undergraduate <i>Stroke Recovery: A Summary of Effective Therapies and Techniques</i>	



Eleventh Annual Research & Scholarship Symposium
April 27, 2015

PRESENTATION SCHEDULE

4:30 - 9 p.m.	Oral Presentations	Classroom #7
4:30 - 5 p.m.		Brianna Lievens Pilbeam ~ Graduate <i>The Impact of Study Abroad Programs and Student Leadership Development</i>
5 - 5:30 p.m.		Austin Duris ~ Undergraduate <i>Assessing the Grizzly Bear Recovery Plan to Restore Endangered Grizzly Populations in the North Cascades and Surrounding Ecosystems</i>
5:30 - 6 p.m.		Maya Denton ~ Undergraduate <i>How Do You Like the Picnic? A Satisfaction Survey Of Guests at a Saturday Morning Outreach Program</i>
6 - 6:30 p.m.		Theresa Morris ~ Graduate <i>Examining Experiences of Women Leaders from the Greater Middle East and Northern Africa (MENA) Region</i>
6:30 - 7 p.m.		Amy Parker ~ Undergraduate <i>The Past, Present and Future Treatments of Cerebral Palsy</i>
7 - 7:30 p.m.		Rachel Esposito ~ Undergraduate <i>Concussions in Sports</i>
7:30 - 8 p.m.		Deborah Kemper ~ Graduate <i>Training Clinical Nursing Instructors: Progressing from Novice to Expert</i>
8 - 8:30 p.m.		Patricia Newman ~ Graduate <i>HCAHPS: How Does the Nurse Sensitive Data Compare to the Literature and Overall Scores?</i>



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**Research
&
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Introduction

The Lourdes University community welcomes you to our Annual Research and Scholarship Symposium. We are proud to showcase the research of our graduate and undergraduate students. You will note that their research is presented in two formats: poster and oral presentations.

The poster presentations represent various research projects completed by students as capstone or course requirements. Oral presentations follow a prearranged program. Please consult the scrolling digital program/schedule for more information.

Thank you for joining us to celebrate the accomplishments of our students.

The abstracts in this booklet are arranged in five groups – Graduate M.B.A., Graduate M.Ed., Graduate M.O.L, Graduate M.S.N., and Undergraduate (alphabetically according to the first author's last name.)

Please Note: Not all colleges listed may have applications submitted for this symposium.



Table of Contents



Research & Scholarship Symposium Abstracts 2015

MASTER OF EDUCATION

Technology Integration, Professional Development and Ongoing Support
Teachers Need To Engage and Prepare 21st Century Learners 16

By: *Anthony Cutway*

Best Practices of Professional Learning Communities: Engaging Catholic
Educators through a Faith Based Book Study 17

By: *Jennifer Guzman*

Blended Learning: A Transformative Approach to Education and
Professional Development 18

By: *Matthew A. Horen*

MASTER OF ORGANIZATIONAL LEADERSHIP

Examining Experiences of Women Leaders from the Greater Middle
East and Northern Africa (MENA) Region 19

By: *Theresa Morris*

The Impact of Study Abroad Programs and Student Leadership
Development..... 20

By: *Brianna K. Lievens Pilbeam*



MASTER OF SCIENCE IN NURSING

A Triangulation Approach to Determine Patient Satisfaction.....	21
By: <i>Mitzi Chenault, RN</i>	
Culturally Competent Communication During End-of-Life Decision Making.....	22
By: <i>Deborah Kemper BSN, RN</i>	
Training Clinical Nursing Instructors: Progressing from Novice to Expert	23
By: <i>Deborah Kemper BSN, RN</i>	
HCAHPS: How Does the Nurse Sensitive Data Compare to the Literature and Overall Scores?	24
By: <i>Patricia Newman</i>	



Table of Contents



Research & Scholarship Symposium Abstracts 2015

UNDERGRADUATE

- Predicting Personality From Static Avatars..... 25
By: *Aaron Ashley, McKenzie Ball, Taylor Burroughs, Kaitlyn Bushong, Michael Calloway, Robert Cargill, Andrew Davis, Thomas Dubisky, Corinne Eber, Kayla Encalado, Christopher Evans, Amy Findley, Anna Hamann, Julie Hoffman, Delesha Hutchen, Arianna Ingraham, Alexis Lubas, Allison Mazey, Devon Ormsby, Leesha Petersheim, Kristin Sullivan, Jordan Westgate, Rachel Wilhelm, Alexis Willoughby*
- Women and Heart Disease 26
By: *Shradha Bajpai*
- Applying Physics for a Green Future for Lourdes..... 27
By: *Shradha Bajpai, Perry Bender, Victor Diaz, Mahalia Edwards, Jill Hojnacki, Yaritza Jimenez, Taylor Maley, Sara Ondrus, Brandon Oneail, Noah Roper, Ellie Smith, Hillary West, Payton Wojcinski*
- Spectroscopic Determination of Triclosan in Antibacterial Products and Environmental Waters..... 28
By: *Shradha Bajpai, Kyle Bertsch, David Dalton, Victor Diaz, Kelly Fischer, Tiffany Ford, Yaritza Jimenez, Nadine Kalpakidis, Wassim Kashen, Annie Morrison, Kevin Nemer, Matthew Olsavsky, Lauren Pelton, Gabriel Rivera, Noah Roper, Kelsey Schmidt, Grant Smalley, Elijah Walters, Payton Wojcinski*



Synthesis and Analysis of Paints and Reproduction of Van Gogh's "Starry Night".....	29
By: <i>CHM/CHL 182: John Bazydlo, Patrick Bronson, Mary Busse, Brooke Diekman, Ben Lapointe, Ruben Lopez, Nicholas Maurer, Erin O'Neil, Russell Pretty, Polina Roehrig CHM 165: Dorron Applin, Elizabeth Coley, Paige Doremus, Lydia Everly, Tamara Gozdowski, Sydney Klem, Cecil Luvene, Lindsey Moyer, Kiley Schroyer</i>	
Stroke Recovery: A Summary of Effective Therapies and Techniques.....	30
By: <i>Dakota Bick</i>	
Combat Exposure and Suicide.....	31
By: <i>Michael D. Burgess</i>	
Neurocardiogenic Syncope: Understanding Impacts On Physiology.....	32
By: <i>Amanda Burgy</i>	
A Demographic Comparison of the United States and Afghanistan.....	33
By: <i>Taylor Burroughs</i>	
Mental Illness and Substance Abuse within the United States.....	34
By: <i>Taylor Burroughs</i>	
The Jewish Holocaust: Who were Hitler's Other Victims?	34
By: <i>Katie Cerveny</i>	
Gender Role Portrayals of Disney's Latest Princess.....	35
By: <i>Shelly Clark, Carmen Gil, Grace Martin, Melissa McArthur</i>	
How Do You Like the Picnic? A Satisfaction Survey of Guests at a Saturday Morning Outreach Program	36
By: <i>Maya Denton</i>	
Assessing the Grizzly Bear Recovery Plan to Restore Endangered Grizzly Populations in the North Cascades and Surrounding Ecosystems.....	37
By: <i>Austin Duris</i>	



Direct Observation Therapy in the Treatment of Tuberculosis	38
By: <i>Mahalia Edwards</i>	
Concussions in Sports	39
By: <i>Rachel L. Esposito</i>	
A Proposal to Study the Impact of Support Services on Rural Farm Families Living in County Galway	40
By: <i>Emily Ferguson</i>	
The Use of Cinnamon Oil as an Ant Deterrent	41
By: <i>Tiffany Ford</i>	
A Demographic Comparison of the Dominican Republic and Puerto Rico	42
By: <i>Carmen Gil</i>	
A Proposal to Study the Impact of Positive Self-Esteem Campaigns on the Females Perception and Self-Esteem	43
By: <i>Carmen Gil</i>	
Are Men more Genocidal than Women?.....	44
By: <i>Carmen Gil</i>	
Demographic Characteristics of Hispanic Ethnic Groups and non-Hispanic Caucasians in the US	44
By: <i>Carmen Gil</i>	
A Demographic Comparison of the Solomon Islands and Australia.....	45
By: <i>Heather Hehl</i>	
Our Carbon Footprint	45
By: <i>Heather Hehl</i>	
Supreme Court Justice Thurgood Marshall.....	46
By: <i>Jenna Jennewine</i>	



The Effects of Sibling Birth Order on Locus of Control.....	46
By: <i>Jenna Jennewine</i>	
Mindful Behaviors in Practicing Occupational Therapy.....	47
By: <i>Megan Jerome</i>	
Bioaccumulation of Zinc in Radish and Lima Bean Plants	48
By: <i>Nadine Kalpakidis</i>	
Maternal-Fetal Crosstalk Immunity: Effects on Autoimmune Disease Development.....	49
By: <i>Nadine Kalpakidis</i>	
Stem Cell Therapy in Stroke Patients and Other Neurological Disorders.....	50
By: <i>Benjamin Kirsch</i>	
ACL Reconstruction: Bone-Patellar Tendon-Bone Autograft versus Hamstring Autograft	51
By: <i>Austin Lake</i>	
Depression and Its Effects on the Quality of Life.....	52
By: <i>Kristi M. Layman</i>	
The Fall of J.C. Penney.....	52
By: <i>Alyssa M. Lecurgo</i>	
Japanese Atrocities in Nanking, China, 1937	53
By: <i>Nicole Linn</i>	
The Clark Doll Experiment	53
By: <i>Nicole Linn</i>	
A Demographic Study of Divorce.....	54
By: <i>Earl Lovejoy</i>	
Causes of Death in the United States.....	54
By: <i>Jeanine Lyons</i>	



Demographic Information about Canada and Mongolia	55
By: <i>Nicholas Mazgay</i>	
Demographics of Excessive Force and Police Brutality	55
By: <i>Nicholas Mazgay</i>	
Nature vs. Nurture: Canine Aggression	56
By: <i>Ashley Menden</i>	
Benefits of Using Solar Energy to Power Golf Carts.....	56
By: <i>Kenneth Mohn</i>	
Medicinal Larvae in Wound Healing.....	57
By: <i>Annie Morrison</i>	
A Proposal to Explore How Behaviors Influence the Ideation and Suicide Attempts in Adolescents	58
By: <i>Kristi Mossing</i>	
Physiology of Dreams and Depression: The Relationship between Depression and Dream Recall for use in Therapy	59
By: <i>Kathryn Olson</i>	
The Vaccine vs Autism Controversy.....	60
By: <i>Kenneth Onubogu</i>	
The Past, Present and Future Treatments of Cerebral Palsy	61
By: <i>Amy Elizabeth Parker</i>	
A Proposal to Study Why Women Over 40 Gamble at Hollywood Casino	62
By: <i>Kimberly Y. Pullom</i>	
Chronic Wasting Disease in Cervid Populations.....	63
By: <i>Jacob RedFox</i>	



A Proposal Concerning Home and Community Based Services (HCBS) Compared to Long-term Care Facilities for Elderly on Medicaid: Which is More Economical for the State of Ohio?.....	64
By: <i>Stephanie Riggio</i>	
The Positive and Negative Effects of Energy Drinks on the Human Body	65
By: <i>Alyssa Schaub</i>	
An Examination of Energy and Climate Change Programs at Universities and Colleges of the Western Basin of Lake Erie and Possible Approaches for Lourdes University.....	66
By: <i>Kelsey Schmidt</i>	
Proposal for Research on Dyadic Synchrony between Fathers and Infants Using the CARE-Index	67
By: <i>Rachel Shields</i>	
The Relationship Between Locus of Control and Job Satisfaction	68
By: <i>Tyler Trame</i>	
Non-Operative Prevention and Recovery of Ulnar Collateral Ligament (UCL) Injuries.....	68
By: <i>Frank Veres</i>	
The Level of Twitter Use in Young People and the Observed Consequences for Youth Social Skill Development	69
By: <i>Cassandra Walker</i>	
Civil Rights Heroes of the Vote	70
By: <i>Blake M. Watkiss</i>	
Genetic, Biological, and Environmental Factors affecting Alzheimer’s disease.....	70
By: <i>Hillary West</i>	



Research & Scholarship Symposium Abstracts 2015



Graduate

MASTER OF EDUCATION

Title: **Technology Integration, Professional Development and Ongoing Support Teachers Need To Engage and Prepare 21st Century Learners**

Author: *Anthony Cutway*

Class: EDU 671 Principal Internship and Capstone

Faculty Advisor: Carolyn Jaksetic, MEd

Technology continues to change many aspects of our lives, including education. Schools have been challenged to keep up in order to achieve their goals. As districts adopt new Bring Your Own Device (BYOD) policies and 1:1 initiatives, many decisions must be made, including hardware, software, finances, training, and support. The purpose of this study was to investigate the professional development and ongoing support that teachers need as their building approaches a 1:1 technology initiative goal using Chromebooks and Google Apps for Education (GAPE). After completing this inquiry, teacher leaders with a recognized high level of technology, pedagogy, and content knowledge (TPACK) were asked to plan and implement a technology integration professional development session for teachers that included the introduction of a collaboratively created resource website. This website is accessible only to teachers in the building and offers ongoing and updated support, as needed.

This project was well received will continue to foster an increase in the TPACK of all teachers in the building. Educators will need continued training and support to prepare for the future. The support website will grow as new applications and technologies become available.



Title: **Best Practices of Professional Learning Communities:
Engaging Catholic Educators through a Faith Based
Book Study**

Author: *Jennifer Guzman*

Class: EDU 671 Principal Internship and Capstone

Faculty Advisor: Carolyn Jaksetic, MEd

The purpose of this study is to research and develop a meaningful approach to engage faculty and staff in the PLC process, through the effective implementation of a faculty book study to further enhance teachers' faith development, therefore impacting the faith formation of our students.

The proposed capstone will be founded on these focal questions:

1. Why is a book study an effective approach to professional development?
2. How can the PLC approach be applied to a faculty-based book study?
3. How does andragogy affect the planning, implementation, and longevity of professional development?
4. Why is a book study an effective catalyst for adult faith development?

Through the transformational plan change process, a professional book study can be introduced as an effective PD. A professional book study is a way to engage educators in critical reading, intentional dialogue, and job embedded learning with the purpose of enhancing teaching and students' learning (Flood, 1994). Professional book studies reflect the best practices of high quality professional development. Professional book studies are job embedded, sustained over time, experienced with colleagues, focused on student learning & achievement, and results oriented. One of the strongest components of a professional book study is the level of teacher engagement. Teachers are no longer passive attendees, they become active participants in their own PD. Professional book studies allow for the study of researched best practices. Teachers read and reflect on their reading before engaging in collaborative dialogue with their colleagues. Book club discussions are critical in two areas; teachers are able to make meaningful connections to their classroom and the collaboration promotes collegiality and professionalism among colleagues. Professional book studies help to deepen the teachers' knowledge by connecting the chosen text to their instructional planning (Burbank, 2010). This provides a practical application in connecting the 'what' and 'how' of their teaching.



Title: **Blended Learning: A Transformative Approach to Education and Professional Development**

Author: *Matthew A. Horen*

Class: EDU 671 Principal Internship and Capstone

Faculty Advisor: Carolyn Jaksetic, MEd

Technology is a reality. In the 21st century, technology integration and implementation of blended learning concepts are impacting the role of the teacher in the classroom and professional development. As a result, Perrysburg High School has instituted an initiative to provide every student with a laptop and shift toward a 1:1 device environment by the 2016 school year. This has created a transitional period within the school building where there is a need for the staff to receive professional development on the knowledge, skills and dispositions that surround the blended learning concept. Therefore, the intent of this inquiry is to focus on the transformative qualities of blended learning, the new role of a teacher in a blended environment and the implementation of a blended style of professional development for the staff. Furthermore, it will focus on the creation of a professional development team of skilled educators that will assist in planning, creating and implementing the development opportunities for the staff by utilized both face-to-face professional development opportunities with the convenience of using an online platform to deliver extended development opportunities that allowed the staff to individual control time, place and pace of their learning. As a result, the inquiry displayed a connection between blended learning practices for professional development and increased growth in the staff's knowledge, skills and dispositions of the blended learning concept. Also, it became evident that applying blended learning methods to education was transformative and impacted the role of the teacher in the process.



MASTER OF LEADERSHIP

Title: **Examining Experiences of Women Leaders from the Greater Middle East and Northern Africa (MENA) Region**

Author: *Theresa Morris*

Class: LS 698 MOL Capstone

Faculty Advisor: Jennifer Sader, PhD

The author interviews women with ties to the Greater Middle East and Northern African (MENA) region to obtain their perspective on leadership. This article explores the commonalities and barriers that exist for women in pursuing leadership in the MENA regions. As most of these countries are patriarchal countries, women historically have limited rights, both legally and culturally. Even less, women who decide to pursue leadership positions in their communities and religious organizations. Women are proven capable and dynamic leaders in many disciplines such as their own families, businesses, countries, and religious organizations.

As this region continues to change with extremist groups, leaders and regimes, women have the ability to play an important role in shaping its future. Creating permanent policies, ascending to leadership positions in religion, allowing veiling to be optional may help women make the move to leadership. As women rise to leadership positions, women would be able to create social change for future generations.



Title: **The Impact of Study Abroad Programs and Student Leadership Development**

Author: *Brianna K. Lievens Pilbeam*

Class: LS 698 MOL Capstone

Faculty Advisor: Jennifer Sader, PhD

Study abroad programs have become increasingly popular at U.S. colleges and universities, and the trend of increasing participation in study abroad programs is expected to continue. Researchers have found a myriad of benefits of participating in such programs; however, there has been little exploration of the impact of the study abroad programs on students' leadership practices and development. This study aimed to analyze this connection, using Kolb's (1984) Experiential Learning Theory, Astin's (1984) Student Involvement Theory, and Authentic Leadership Theory (Gardner et al, 2005) as a framework.

This study employed a pre- and post-test design, with follow-up interviews. Twenty MBA students who studied abroad in South Africa were surveyed about their leadership practices two months prior to departure and again one month after they returned. Additionally, students were interviewed about their experiences while abroad.

The survey results showed that students grew in four of the five dimensions of leadership practice after their participation in the study abroad program. Additionally, during the interviews, students reported increased feelings of confidence and open-mindedness as leaders. Overall, the study demonstrates the benefits of incorporating study abroad experiences in leadership development programs.



MASTER OF NURSING

Title: **A Triangulation Approach to Determine Patient Satisfaction**

Author: *Mitzi Chenault, RN*

Class: NUR 696 Professional Capstone Design

Faculty Advisor: Julie Kruse, PhD

The research I propose explores the various perspectives of inpatients, hospital administration, and nurses to determine the multiple components of patient satisfaction. The proposed research study will include a mixed method design that is guided by triangulation to analyze the data. The population will be patients who receive care on an inpatient medical unit at a large healthcare facility located in the Midwestern region of the United States. The purpose of this research is to explore the determinants of patient satisfaction from the standpoint of the major stakeholders. The theoretical framework of the study is Shewhart and Deming's "Plan, Do, Study, and Act" cyclic method which is congruent with the Institute of Healthcare Improvement's (IHM) guiding framework. This theoretical method will assist leadership through the implementation of incremental cultural changes within their organization based on the study results. Utilization of this research provides management and hospital leadership the necessary systematic approach that promotes positive patient outcomes and safety as well as increase patient satisfaction.



Title: **Culturally Competent Communication During End-of-Life Decision Making**

Author: *Deborah Kemper BSN, RN*

Class: NUR 622 Advance Nursing Inquiry and Evidence-based Practice

Faculty Advisor: Lynne Zajac, PhD

In Western culture, autonomy is highly valued. The Patient Self Determination Act (PSDA) ensures that patients in the United States have the right and power to make decisions regarding end-of-life care, including the use of advance directives (AD). Low AD completion rates are common among ethnic minorities. Perhaps this disparity is due to a more interdependent autonomy that is valued in other cultures. Cultural differences in communication can cause barriers in end-of-life decision making resulting in misunderstanding a patient's wishes. Cultures also have varying views on the value of truth telling when discussing a patient's diagnosis. Cultural competence during these crucial conversations is vital. Cultural competence is not having all the answers, as that can lead to stereotyping, but rather asking the right questions. Developing guidelines for the end-of-life discussion would aid nurses to communicate effectively with people from all cultural backgrounds resulting in improved outcomes for patients and families, providing peace with decisions made and improved quality of life as the patient nears the end of life.



Title: **Training Clinical Nursing Instructors:
Progressing from Novice to Expert**

Author: *Deborah Kemper BSN, RN*

Class: NUR 696 Professional Capstone Design

Faculty Advisor: Mary Jo Maurer, PhD; Lynne Zajac, PhD

Nursing faculty and students both recognize that the clinical experience is critical for preparation to succeed in the increasingly complex healthcare environment (Reid-Searl & Dwyer, 2005). However, a literature review reveals that most clinical nursing instructors received little or no orientation to the educator role, leading to feelings of fear, anxiety, and frustration (Cangelosi, Crocker, & Sorrell, 2009; Davidson & Rourke, 2012). While clinical nursing instructors are expert clinicians, they find themselves at a novice level as educators and need training in this new role (Crocetti, 2014; Roberts, Chrisman, & Flowers, 2013). The purpose of this proposal is to design a one-day workshop for clinical nursing instructors that will provide them with the knowledge and tools needed to progress from novice toward expert in their role. Utilizing Benner's model and the Self-Determination Theory as a framework, the workshop will be developed to include the following topics: learning theories and styles, teaching strategies, formative and summative evaluation techniques, and the legal aspects of clinical instruction. This workshop will be presented, after obtaining Institutional Review Board approval, at a small Midwestern university to its clinical nursing instructors. At its conclusion, evaluations will be collected to determine whether learning outcomes were met.



Title: HCAHPS : How Does the Nurse Sensitive Data Compare to the Literature and Overall Scores?

Author: *Patricia Newman*

Class: NUR 699 Capstone Project

Faculty Advisor: Judy Didion PhD

Medicare's value-based purchasing (VBP) program begins its reimbursement payment based on quality of care. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is the survey that queries the patients' opinion on the quality of care section of the VBP program. According to Press-Ganey (2013), "At no other point in history has patient perceptions of care had such a direct, quantifiable impact on health care organizations' financial performance and impact on clinical outcomes" (p. 1).

Due to the potential loss of revenue, hospitals are now focused on how to positively affect every patient's hospitalization experience. Much of the literature centers on how to obtaining consistently high scores in the different HCHAHPS categories to ensure reimbursements from Medical and Medicare. This project explores the relationship of the HCAHPS overall scores to specific nurse sensitive questions as well as other health care discipline's questions. This project also examines how these findings are supported in the literature. Data analysis is in process.





Research & Scholarship Symposium Abstracts 2015



Undergraduate

- Title:** **Predicting Personality From Static Avatars**
- Authors:** *Aaron Ashley, McKenzie Ball, Taylor Burroughs, Kaitlyn Bushong, Michael Calloway, Robert Cargill, Andrew Davis, Thomas Dubisky, Corinne Eber, Kayla Encalado, Christopher Evans, Amy Findley, Anna Hamann, Julie Hoffman, Delesha Hutchen, Arianna Ingraham, Alexis Lubas, Allison Mazey, Devon Ormsby, Leesha Petersheim, Kristin Sullivan, Jordan Westgate, Rachel Wilhelm, Alexis Willoughby*
- Class:** PSY 250 Experimental Psychology
- Faculty Advisor:** Robert Campbell, MA

In a recent study by Fong and Mar (2015) entitled “What does my avatar say about me?” the researchers created a series of avatars and had participants fill out the BFI-10 (Rammstedt & John, 2007) which measures five core personality characteristics known as the Big Five: Openness, Conscientiousness, Extroversion, Agreeableness, and Neuroticism (OCEAN). The purpose of the study was to determine whether or not an avatar can be used to predict the personality of its creator. The psychology class project was a modified replication of the Fong and Mar (2015) study. Results pending.



Title: **Women and Heart Disease**
Author: *Shradha Bajpai*
Class: BIO 410 Biology Capstone
Faculty Advisors: Christine Boudrie, MD, Anjali Gray, PhD,
Judi Nath, PhD, Sr. Barbara Stallman, PhD

Cardiovascular disease is the leading cause of death among both women and men in the United States, accounting for nearly half of all deaths and considerable morbidity. This study explores how heart disease affects women. Through the use of literature review the following knowledge will be gained: the biochemical aspects, the physiological aspects, the genetic factors and the lack of public education. In the studies reviewed it was found that women believed that breast cancer is more prevalent than heart disease therefore lacking the proper knowledge. Signs and symptoms of cardiovascular disease differ in women than men. Understanding the role of genetics in cardiovascular disease plays an important role in association between wide arrays of genetic modification and emerging cardiovascular risk markers among adult women. The impact on women has been traditionally underappreciated due to higher rates of heart disease in men. By gaining a better understanding of cardiovascular disease specific to females and doing further research prevention, lives can be saved.



Title: **Applying Physics for a Green Future for Lourdes**

Authors: *Shradha Bajpai, Perry Bender, Victor Diaz, Mahalia Edwards, Jill Hojnacki, Yaritza Jimenez, Taylor Maley, Sara Ondrus, Brandon Oneail, Noah Roper, Ellie Smith, Hillary West, Payton Wojcinski*

Class: PHS/PLA 202 College Physics II

Faculty Advisor: Cynthia Molitor, PhD

A conglomerate of energy-saving and environmental initiatives are researched through a physics perspective. The study applies data from literature research to examine potential Green Fund projects. The benefits, cost savings, and alternative uses of sustainable building materials, such as insulation and eco-friendly roofing materials, are examined. Using photovoltaic cells to collect solar energy can decrease electricity consumption. Incorporating white roofs can further maximize the use of solar energy. Photovoltaic cloth helps harness solar energy using a lightweight, flexible material in areas which do not lend themselves to traditional solar arrays such as walkways, parking areas, non-load bearing roofs, and covers for artificial turf athletic fields. Inside buildings, installation of dimmer switches will be studied by the amount of power used before and after installation. Simple changes such as eco-friendly plumbing fixtures in campus restrooms and in residence halls can conserve water and provide additional benefits. Another study explores recycling cooking oil for conversion into biodiesel fuel, focusing on the energy obtained through this process and reduced carbon dioxide emissions. Conservation, sustainable building, and investment in renewable energy can reduce the dependence on non-renewable forms of energy, lower energy costs for Lourdes, and positively impact the entire community.



- Title:** **Spectroscopic Determination of Triclosan in Antibacterial Products and Environmental Waters**
- Authors:** *Shradha Bajpai, Kyle Bertsch, David Dalton, Victor Diaz, Kelly Fischer, Tiffany Ford, Yaritza Jimenez, Nadine Kalpakidis, Wassim Kasben, Annie Morrison, Kevin Nemer, Matthew Olsavsky, Lauren Pelton, Gabriel Rivera, Noah Roper, Kelsey Schmidt, Grant Smalley, Elijah Walters, Payton Wojcinski*
- Class:** CHM 302 Organic Chemistry Lab
- Faculty Advisor:** Sr. Barbara Stallman, PhD

Triclosan, a common antibacterial substance added to soaps and other personal care products, has recently been determined to be an environmental toxin. Because of the increasing use of antibacterial soaps, the amount of Triclosan found in waterways, sewage plant sludge, and drinking water has increased over the past 25 years. The first focus of this project is to determine the concentration of Triclosan in antibacterial soaps and environmental water samples. This is accomplished by converting the Triclosan to a highly colored azo dye. Sodium nitrite and 4-sulfanilic acid are combined to form a highly reactive diazonium ion which reacts with any Triclosan present to form an azo dye that has a maximum absorption at 475 nm. The concentration of the azo dye present in the sample is determined using UV-visible spectroscopy. The second focus of this project is to determine the rate at which the Triclosan can be removed from an aqueous solution using activated charcoal. The maximum rate of removal of Triclosan is determined by varying the reaction conditions with regard to the amount of activated charcoal used, the pH of the solution, and the temperature.



Title: **Synthesis and Analysis of Paints and Reproduction of Van Gogh's "Starry Night"**

Authors: *CHM/CHL 182: John Bazydlo, Patrick Bronson, Mary Busse, Brooke Diekman, Ben Lapointe, Ruben Lopez, Nicholas Maurer, Erin O'Neil, Russell Pretty, Polina Roebrig*
CHM 165: Dorrton Applin, Elizabeth Coley, Paige Doremus, Lydia Everly, Tamara Gozdowski, Sydney Klem, Cecil Luvene, Lindsey Moyer, Kiley Schroyer

Class: CHM/CHL 182 General College Chemistry II
CHM 165 The Chemistry of Art

Faculty Advisor: Elizabeth Wise, PhD

The purpose of the project was to explore the role of chemistry in the creation, analysis, and conservation of art objects. Students in CHM/CHL 182 synthesized four pigments through precipitation reactions involving transition metals and used these pigments, as well as commercial pigments, to make acrylic, oil, and egg tempera paints. Each student in both classes reproduced a portion of Van Gogh's "The Starry Night" using the acrylic paint produced, while smaller paintings were created using different paints. CHM/CHL 182 students investigated these paintings - and others that students brought in from their own collections - utilizing three techniques that aid in the identification of art materials. Microscopes were used to observe differences in pigment particle size and differences in adhesion of the binder to the canvas support, ultraviolet light was employed to detect fluorescence of any materials, and Fourier transform infrared spectroscopy was used to identify structural components of binders and pigments.



Title: **Stroke Recovery: A Summary of Effective Therapies and Techniques**

Author: *Dakota Bick*

Class: BIO 410 Biology Capstone

Faculty Advisors: Christine Boudrie, MD, Clayton McKenzie, DDS, James Chamberlain, MA

Stroke is the leading cause of disability and the third leading cause of death behind heart disease and cancer (Lahano, Chandio, & Bhatti, 2014). The updated definition of a stroke and how a stroke is diagnosed are discussed. Taking a number of measures to promote a healthy lifestyle can prevent stroke. For those that have not yet adopted a lifestyle that wards off stroke, there needs to be techniques to treat those that have been impacted by a stroke. Several techniques are available: kinetic, mirror therapy, and robot assisted therapy. More techniques are being developed and show potential on improving stroke victim's rehabilitation outcome: brain stimulation techniques, axon remodeling, and other alternative therapies are discussed.



Title: **Combat Exposure and Suicide**
Author: *Michael D. Burgess*
Class: SWK 413 Practice Oriented Research
Faculty Advisor: Terry Keller, MSW

The research proposal being submitted is to better understand combat exposure and its influence on suicide. In addition to combat, it could be found that childhood development could have an impact. Suggesting, if children are not prepared to face challenges and cope with issues it could manifest itself later as an adult. Many risk factors can contribute to suicide ideation and or suicide attempts. One such theory that many professionals are using to identify suicidal ideation is the interpersonal-psychological theory of suicide (IPTS) created by Thomas Joiner. His thoughts give three components needed for suicide are perceived burdensomeness, thwarted belongingness, and acquired capability. Other risk factors contributing are mental health issues including anxiety issues and personality disorders. The possible research following the proposal may benefit active and non-active military members who have been exposed to combat; other benefits will help family and friends of veterans, Veterans Administration, DoD, and mental health professionals. I will attempt to draw comparisons between veterans of combat, veterans who have not experienced combat and civilians who have not served in combat. The findings will help with finding the significance of combat and other factors attributing to the rise of suicide.



Title: **Neurocardiogenic Syncope: Understanding Impacts On Physiology**

Author: *Amanda Burgy*

Class: BIO 410 Biology Capstone

Faculty Advisors: Elizabeth Wise, PhD, James Chamberlain, MA, Kristin Moline, MSED

This paper is a Literature review of normal human physiology compare to the physiology of a person who is diagnosed with Neurcardiogenic Syncope. Physiology in this case relates to blood pressure, heart rate, the body's elevation and the body's response to stimuli. The word Syncope is derived from the Greek meaning "to cut short" (Grub, 2005). Neurcardiogenic Syncope is defined as a temporary loss of consciousness associated with a drop in hear rate and is a disorder that has challenged physicians for thousands of years (Grub,2005). Some challenges include: where in the body does the miscommunication occur, and whether or not this disorder can be inherited. The challenges of understanding this disorder dates back to the time of Hippocrates, who was a Greek physician during Greece's Classical period and is credited as the father of the Hippocratic Oath. Neurcardiogenic Syncope can have a major impact on a persons life starting with a lack of recognition by physicians, and concern, fear and difficulty in returning to previous activity levels, up to fears of complete disability (Gubb,2005).



Title: **A Demographic Comparison of the United States and Afghanistan**

Author: *Taylor Burroughs*

Class: SOC 421 Population and Society

Faculty Advisor: Therese Hoffman, PhD

This project investigates population characteristics of two countries: The United States and Afghanistan. Afghanistan is a high growth country and the United States is a low growth country with very different demographic profiles and population projections. Basic demographic information is presented about fertility (i.e. birth rates, fertility rates, and contraception use), mortality (i.e. death rates, infant mortality rates, life expectancy, and causes of death), migration, and the age and sex structure of the population to explain the “demographic divide.” In addition, infant mortality rates and domestic violence against women highlight important demographic processes distinguishing the two countries. The infant mortality rates are very different: Afghanistan’s high infant mortality rate is caused by poor nutrition and lack of healthcare, while the United States’ moderately low infant mortality rate is caused by premature births. These two countries also differ by their attitudes concerning women; in Afghanistan, women believe that domestic violence is part of an everyday routine, while in the United States, domestic violence is less accepted.



Title: **Mental Illness and Substance Abuse within the United States**
Author: *Taylor Burroughs*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project examines demographic information on mental health and substance abuse in the United States. Substance abuse and deficits in mental health can have life changing effects, with death being the most tragic consequence. The demographic information presented includes data on treatments such as counseling, hospital care, rehabilitation facilities, and prisons; gender and age categories of affected populations, and national spending for both substance abuse and mental health care are also considered. Although the severity of substance abuse and mental health problems vary greatly in the US population, the findings are alarming in terms of prevalence of substance abuse and mental health problems in the United States.

Title: **The Jewish Holocaust: Who were Hitler's Other Victims?**
Author: *Katie Cerveney*
Class: SOC 399 Genocide: How Can it Happen?
Faculty Advisor: Therese Hoffman, PhD

The Jewish people were the victims of the one of most horrific events in the 20th century, the Jewish Holocaust. However, there were several other groups of people killed or persecuted during Adolf Hitler's reign in Germany. Hitler envisioned a Germany of racial, physical, and social purity. Several groups were identified as not belonging to the German race of "pure" people, and Hitler's strong and persuasive leadership skills captured the admiration of the German people and the support he needed to carry out his plan to create a better society. This plan not only included his strategies for the total extermination of the Jews, but several other groups were targeted, including Communists, asocials, Jehovah's Witnesses, homosexual men, people with disabilities, and the Romani people.



Title: **Gender Role Portrayals of Disney's Latest Princess**
Authors: *Shelly Clark, Carmen Gil, Grace Martin,
Melissa McArthur*
Class: SOC 436 Sociology Capstone
Faculty Advisor: Therese Hoffman, PhD

This project examines the Disney film *Frozen* for gender stereotypes of the character Princess Anna. A review of past research examining gender in children's programming shows that children regularly consume hours of animated programming that depict female and male characters in stereotyped ways. The regular consumption of stereotyped gender roles is thought to have an effect on the way that children come to think about males and females in the real world. Disney animated films are a staple of American culture and Disney princesses are a symbol of femininity for many children. *Frozen's* Princess Anna's character is studied for gendered behaviors using a coding system developed by previous researchers which identifies 13 masculine characteristics and 16 feminine characteristics. Comparing this latest Disney princess to Disney's historical princesses reveals both traditional and nontraditional gender role portrayals.



Title: **How Do You Like the Picnic? A Satisfaction Survey of Guests at a Saturday Morning Outreach Program**

Author: *Maya Denton*

Class: SWK 418 Social Work Process III

Faculty Advisor: Joyce Litten, EdD

Each Saturday morning, a coalition of community partners provide sack lunches to people who gather on a vacant street corner lot in downtown Toledo. The purpose of the event - the Saturday morning picnic - is to provide opportunities for people to engage in fellowship with those who are homeless and/or disconnected from other social connectedness. For the past seven years, Food for Thought, Lifeline, 1matters and Fellowship Matters pack sack lunches and provide hot food for as many as 100 guests at each picnic. Over the past year, the partners have searched for new and different ways of operation. In an effort to inform the decision-making process, Maya Denton (Lourdes University student) under the supervision of Dr. Joyce Litten, developed an agreement with the community partners to provide a survey-based reporting of data. The objective of this research was to explore the contextual factors that influence the guests' perception of the picnic. This student-faculty research project considered the opinions, ideas and insights of individuals (guests) who visit the Saturday morning picnic. Specifically, the research focused on the guests' identified needs in order to best inform a community response. Maya and Dr. Litten co-created a brief survey to gather data, and engaged participants in survey completion over 3 nonconsecutive Saturdays in summer 2014.



Title: **Assessing the Grizzly Bear Recovery Plan to Restore Endangered Grizzly Populations in the North Cascades and Surrounding Ecosystems**

Author: *Austin Duris*

Class: BIO 410 Biology Capstone

Faculty Advisors: Anjali Gray, PhD, James Minesky, PhD,
Robin Parker, BS

This literature review covers the methods and details related to the Grizzly Bear Recovery Plan enacted by the United States Fish and Wildlife Service in 1982. Management of habitat systems for grizzly bears to recover and repopulate has currently made significant progress in the Yellowstone ecosystem, leaving high hopes for the other designated areas of recovery. Revising and applying this knowledge to the North Cascades ecosystem may prove successful for grizzly bear restoration with the inclusion of specialized adaptive management practices. Conservation strategies must account for litter size, area of habitat, food availability, hunting requirements, and habitat and climate changes on populations. These topics and more should be addressed on a small, localized scale to effectively utilize resources and total effort. Learning from the policy battles the U.S. Fish and Wildlife Service has faced with delisting the promising Yellowstone population can be used to avoid similar errors and promote action more quickly in the policy arena. It is also certain that the Fish and Wildlife Service should continue to ensure that public education and outreach are expanded upon to maintain and gather more support for their cause as the bears become more apparent in the wild again.



Title: Direct Observation Therapy in the Treatment of Tuberculosis

Author: Mahalia Edwards

Class: BIO 410 Biology Capstone

Faculty Advisors: James Chamberlain, MA, Claudia Jonah, MD, Lisa Wahl, MSN

Tuberculosis (TB) continues to be a public health threat. Since the introduction of antibiotics and improved living conditions, especially in the Western world, TB rates have been dropping; however, in recent decades new, drug-resistant strains of TB have emerged (CDC, 2015). Non-adherence to TB treatment has been identified as one of the major reasons for the emergence of drug-resistant TB strains. Because non-adherence is prevalent, especially in the developing world, Direct Observation Therapy (DOT) has been advocated as a means to improve treatment adherence in TB patients. DOT includes the direct supervision of the patient taking their medication through a healthcare worker, family member, or community member. Significantly, while the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC, 2015) advocate the use of DOT, evidence from research including randomized controlled trials suggests that DOT is not effective in improving treatment adherence, reducing drug-resistance, and relapse. The following paper evaluates the research-evidence and WHO recommendations as they pertain to DOT and discusses ethical dilemmas of DOT. (WHO, 2013)



Title: **Concussions in Sports**
Author: *Rachel L. Esposito*
Class: BIO 410 Biology Capstone
Faculty Advisors: Anjali Gray, PhD, Christine Boudrie, MD,
Jason Hines, MS

Concussions, or mild traumatic brain injury (mTBI), are a common sports injury caused by an applied force. They are often underrated, and can require special attention. If not allowed to heal, a concussion can develop into a more serious problem, such as second impact syndrome. Repeated mTBIs have been associated with long-term illnesses such as Chronic Traumatic Encephalopathy. The optimal treatment of concussions appears to be rest for the first few days followed by symptom-specific treatment. Current safety equipment has been shown to decrease damages to the skull, but not the possibility of concussions. The current laws in place also appear to be adequate, but further general public understanding of the possible risks and long-term effects is advised. This research review looks at the treatments, complications and prevention of mTBIs.



Title: **A Proposal to Study the Impact of Support Services on Rural Farm Families Living in County Galway**

Author: *Emily Ferguson*

Class: SWK 413 Practice Oriented Research

Faculty Advisor: Terry Keller, MSW

The purpose of this research proposal is to study the impact of support services on rural farm families living in county Galway, Ireland. Farmers in the Western Region of Ireland are experiencing life changes in their family as well in their environment. Currently, support services are offered to farmers through FORUM Connemara Ltd., an agency that works to develop strategies and programs to tackle changes in the rural environment. Literature supports that farmers and their families seek support services, but little is known about the quality and effectiveness of these services. I have chosen a qualitative research design to study the impact of support services. A sample of twelve ($n=12$) will be selected for this study. The goal of this research is to recognize the quality of services in order to make improvements on existing support services and implement new developments if necessary. This research is not only important for the farmers and their families, but for local support agencies, rural farming advocates, policy makers, and members of the community.



Title: **The Use of Cinnamon Oil as an Ant Deterrent**
Author: *Tiffany Ford*
Class: BIO 410 Biology Capstone
Faculty Advisors: Anjali Gray, PhD, James Minesky, PhD,
Sr. Barbara Stallman, PhD

Most household pests are controlled by the use of insecticides, which can have damaging effects on your health and to the environment. This experiment was designed to test the effectiveness of cinnamon oil against two ant species that are common to northwest Ohio. The ants were kept in artificial habitats, on a day/night schedule. Temperature was kept at a constant 72 degrees. Acetone was placed on filter paper and allowed to evaporate over night. 1% and 10% cinnamon leaf oil was placed on filter paper and allowed to evaporate over night. The filter paper was cut to size, to fit into glass petri dishes. The filter paper was then cut in half and placed into the petri dish. One side of the petri dish had filter paper with 1% cinnamon leaf oil and the opposite side had filter paper with acetone (used as the control). The ants were then placed in the center of the petri dish, and observed every hour for eight hours. The number of ants on either side were counted and recorded every hour. This was repeated for the 10% solution of cinnamon leaf oil. The 10% solution caused 100% mortality within two hours of placing the ants in the petri dishes. The 1% solution did show some repellent effects, although more data is needed.



Title: **A Demographic Comparison of the Dominican Republic and Puerto Rico**

Author: *Carmen Gil*

Class: SOC 421 Population and Society

Faculty Advisor: Therese Hoffman, PhD

This project investigates population characteristics of two countries: the Dominican Republic and Puerto Rico. The Dominican Republic is a high growth country and Puerto Rico is a low growth country with very different demographic profiles and population projections. Basic demographic information is presented about fertility (i.e. birth rates, fertility rates, and contraception use), mortality (i.e. death rates, infant mortality rates, life expectancy, and causes of death), migration, and the age and sex structure of the population to explain the “demographic divide.” In addition, health access and how the countries are trying to reduce specific diseases (i.e. Dengue and HIV/AIDS) that affect each region highlight important demographic processes distinguishing the two countries. This research will also focus on the different organizations and tactics that are being utilized in order to decrease the number of people that are being affected by these diseases.



Title: **A Proposal to Study the Impact of Positive Self-Esteem Campaigns on the Females Perception and Self-Esteem**

Author: *Carmen Gil*

Class: SWK 413 Practice Oriented Research

Faculty Advisor: Terry Keller, MSW

This project would study whether or not female positive self-esteem campaigns such as Dove's "Real Beauty" campaign and Always "#LikeAGirl" campaign affect a female's self-esteem. The purpose of these campaigns are to show females in a different perspective such as studying fields that tend to be male dominated and that natural beauty is acceptable. Some of these campaigns are relatively new and there isn't enough research behind them to know whether or not these campaigns are having the impact that they were created to have. This project would study how females exposed to these campaigns view themselves and whether or not the campaigns have changed their perception of themselves in a positive manner. The data would be collected through multiple interviews. A modified version of the Rosenberg self-esteem scale will be used to measure the individual's self-esteem pre-exposure to the campaigns and post-exposure to the campaigns. Data collected would be transcribed for any patterns of themes that would be based off the modified Rosenberg self-esteem scales. The data collected would show whether or not being exposed to these campaigns creates a change in the female's self-esteem or perception in terms of beauty.



Title: **Are Men more Genocidal than Women?**
Author: *Carmen Gil*
Class: SOC 399 Genocide: How Can it Happen?
Faculty Advisor: Therese Hoffman, PhD

Men are more likely than women to be perpetrators of genocide. Whether it is nature or nurture that causes this has been the topic of debate. Ghiglieri (1999) proposes that male violent behaviors are hardwired and natural. Wrangham and Peterson (1996) propose that environmental factors trigger violent male behavior, such as the scarcity of resources which causes greater competition. Joeden-Forgey (2010) suggests that genocide may be connected to the very expression of masculinity within a culture, especially through masculinized conceptions of war. Although genocides have been primarily planned by males and more likely perpetrated by males, females also have played an important role in several genocides. The role of genocidal females was particularly prevalent in the Rwandan genocide. Women were encouraged to participate and demonstrated that they were willing to engage in genocidal activities.

Title: **Demographic Characteristics of Hispanic Ethnic Groups and non-Hispanic Caucasians in the US**
Author: *Carmen Gil*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This research focuses on the population characteristics of three Hispanic ethnic groups (Cuban, Mexican, and Puerto Rican) within the United States and how they differ from one another demographically, as well as how they differ from non-Hispanic Caucasians. Demographic data will be used to highlight the following population characteristics: annual income, high school and college graduation rates, and life expectancy in order to identify the differences among population groups. The project will examine what factors may contribute to these group differences and will conclude with a cursory look at the demographic predictions for the future.



Title: **A Demographic Comparison of the Solomon Islands and Australia**
Author: *Heather Hehl*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project investigates population characteristics of two countries: Solomon Islands and Australia. Solomon Islands is a high growth country and Australia is a low growth country with very different demographic profiles and population projections. Basic demographic information is presented about fertility (i.e. birth rate, fertility rate, and contraception use), mortality (i.e. death rates, infant mortality rates, life expectancy, and causes of death), migration, and the age and sex structure of the population to explain the “demographic divide”. In addition, “Island’s Genetic Quirk: Dark Skin, Blond Hair” and “Australia PM Abbott wants indigenous referendum in 2017” highlight important demographic processes distinguishing the two countries. Although both stories discuss the native populations of each country, the high-growth and low-growth nations discuss natives in a different light. The Solomon Island story displays a strange but fascinating phenomenon in which a portion of the native population has very dark skin but blond hair; whereas the Australian government is debating whether the indigenous population were the first Australians.

Title: **Our Carbon Footprint**
Author: *Heather Hehl*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project examines the carbon footprint of Americans. The size of the average American’s carbon footprint will be identified as well as some of the factors that lead to such a large footprint. Specifically, the following questions are addressed: 1) What is a carbon footprint and why it is important? 2) How is the carbon footprint calculated? 3) How does the carbon footprint of Americans compare to the carbon footprint of citizens of other nations? 4) What common activities and habits increase or decrease the footprints in the US? and 4) How can individuals reduce their footprint?



Title: **Supreme Court Justice Thurgood Marshall**
Author: *Jenna Jennewine*
Class: SOC 313 The Civil Rights Movement
Faculty Advisor: Therese Hoffman, PhD

This project is a collection of research and stories about Thurgood Marshall, an underrated but key element in the social revolution known as the Civil Rights Movement. All children learn about Martin Luther King, Junior, and maybe even Malcolm X, at some point in their academic careers, but Thurgood Marshall has been a somewhat overlooked historical figure. As an important leader in the Civil Rights Movement, Marshall was an instrumental litigator who argued some of the most important cases in United States history. This research serves to enlighten those who do not know of the legacy left by the first African American Supreme Court Justice.

Title: **The Effects of Sibling Birth Order on Locus of Control**
Author: *Jenna Jennewine*
Class: PSY 489 Psychology Capstone
Faculty Advisor: Patricia Bellomo, PhD

Early birth order research has received significant public backlash because of methodological issues. Yet many researchers and theorists continue to believe that birth order does have an impact on personality characteristics. A variety of experiences affect the development of personality, specifically locus of control. This study described how the birth order of siblings might affect the development of locus of control. The study utilized six television shows with at least one sibling. Half the shows were reality television shows and half were scripted television shows. Internal and external locus of control characteristics of each character were recorded. It is expected that first-born siblings will have an external locus of control while middle and last born siblings will display an internal locus of control.



Title: **Mindful Behaviors in Practicing Occupational Therapy**

Author: *Megan Jerome*

Class: PSY 489 Psychology Capstone

Faculty Advisor: Patricia Bellomo, PhD

Occupational therapy is a health profession that assists physically and mentally ill patients achieve activities of daily living. These are activities essential to a person's health and important to patient's well being. This study described mindful behaviors used in occupational therapy practice. The field of positive psychology describes mindfulness as being consciously aware and perceiving what is going on in the moment. The experimenter watched 30 YouTube videos on occupational therapy sessions and recorded the mindful behaviors portrayed by the therapists. The mindful behaviors assessed included social perceptiveness, judgment, actively listening, speaking effectively, service orientation, critical thinking, instructing, and negotiating. Describing which mindful behaviors are used most often by occupational therapists may provide useful knowledge to occupational therapists in practice and in training.



Title: **Bioaccumulation of Zinc in Radish and Lima Bean Plants**
Author: *Nadine Kalpakidis*
Class: CHM 299 Topics in Chemistry
Faculty Advisor: Sr. Barbara Stallman, PhD

This paper discusses an experimental study of the bioaccumulation of zinc in radish and lima bean plants. Some plants are able to absorb heavy metals, such as zinc, and the metals may be stored in the roots, stems, and/or leaves. Radish and lima bean plants were grown for 6 weeks and then a solution containing 50.9 mg/L zinc was added to the plants in varying concentrations: a onetime high dose to one set of plants, a low dose for 7 days to another set of plants, and a high dose for 7 days to another set of plants. The plants displayed signs of metal contamination after the zinc solution was added for a few days. The leaves became deformed and miscolored. The plants were then dried and ashed to determine if the plants stored the zinc, and if they did so, if the zinc was stored in the roots, stems, and/or leaves. If the plants are able to store the metal in any part that will later be consumed by animals or humans, the metal may bioaccumulate and this may have deleterious effects.



Title: **Maternal-Fetal Crosstalk Immunity: Effects on Autoimmune Disease Development**

Author: *Nadine Kalpakidis*

Class: BIO 410 Biology Capstone

Faculty Advisors: Clayton McKenzie, DDS, Christine Boudrie, MD, Anjali Gray, PhD

This presentation will discuss the special immune mechanisms that are present only during pregnancy. An in depth understanding of the mechanisms that the fetus uses to evade detection by the mothers immune system, and the ability of the fetus to alter the maternal immune response can be used to develop treatments for certain cell mediated autoimmune disorders such as Multiple Sclerosis(MS) and Rheumatoid Arthritis (RA). Pregnancy has an inflammatory limiting effect on symptoms in patients previously diagnosed with MS or RA. Pregnancy can also have a negative effect on autoimmune disorders, which is generally the case for patients with Systemic Lupus Erythematosus (SLE), who experience an exasperation of symptoms during pregnancy. The exact reason for the remission, or exasperation, is unclear, however there are theories which involve the change in immune cell populations, and/or the increase in circulating hormones, such as estrogen and progesterone. Most women develop no immune response to the fetus during pregnancy; rather the maternal immune system creates a specific recognition for the fetus. Each pregnancy is unique, and the recognition appears to also be unique as well. This specific mechanism can be paralleled to transplant surgeries, and may help patients who cannot be fully matched to an organ/tissue.



Title: **Stem Cell Therapy in Stroke Patients and Other Neurological Disorders**

Author: *Benjamin Kirsch*

Class: BIO 410 Biology Capstone

Faculty Advisors: Anjali Gray, PhD , Clayton McKenzie, DDS,
Sandra Beach, PhD

This project will explore the use of harvested stem cells from the body to help change the recovery process for stroke patients and people with other neurological disorders. It will look at the background on stem cells from adult to embryonic and the role they can have on these patients. Adult stem cells are harvested from cells already generated in the body, and does not involved killing the cell once it has been harvested like with embryonic. This research will look into the tests conducted that show a promising result in patients who have received treatment, and changed what was once a grim prognosis to an optimistic result.



Title: **ACL Reconstruction: Bone-Patellar Tendon-Bone Autograft versus Hamstring Autograft**

Author: *Austin Lake*

Class: BIO 410 Biology Capstone

Faculty Advisors: James Chamberlain, MA, Christine Boudrie, MD, Clayton McKenzie, DDS

The purpose of this literature review was to compare the stability, pain, and recovery time of hamstring autografts versus bone-patellar tendon-bone (BPTB) autografts for reconstruction of the anterior cruciate ligament (ACL). A review was done on multiple journals pertaining to: what the knee joint is comprised of, function of the knee joint, and which autograft benefits the patient more post-surgery. Several journals suggest that BPTB autografts provided greater stability for the patient's knee. This was tested using KT-1000 test, Lachman test, range-of-motion evaluations, and pivot test. Most journals suggest that the hamstring autograft allowed the patient to have greater extension in the knee weeks after the surgery, and less anterior knee pain (Bhandari, 2010). The IKDC survey also suggested that hamstring autografts gave the patient less pain in knee, and allowed them to go back to normal activities (Bhandari, 2010). There was not statistically significant evidence overall to support the BPTB autograft over the hamstring autograft, or vice versa (Denti, 2006).



Title: **Depression and Its Effects on the Quality of Life**
Author: *Kristi M. Layman*
Class: BIO 410 Biology Capstone
Faculty Advisors: Anjali Gray, PhD, Larry Godfrey, PhD,
Judi Nath, PhD

Depression has been connected to several other disorders in the body including ones that can be considered physical, mental, and emotional. Based on previous research, depression can have implications for anxiety, low self-esteem, accelerated brain aging, and dementia later in life, among other issues. The objective of this study is to analyze the various negative effects that depression can have on a person and its impact on quality of life. The majority of participants studied were either being treated for depression or not in the control groups. Studies related to later life and dementia risk were based on people without dementia at the start of the study. The key results showed that unmanaged depression could lead to development of dementia and Alzheimer's disease later in life, symptoms of anxiety and insomnia, as well as weight gain and poor body image. The research has implications that prevention as well as proper management of depression can significantly help with the associated disorders and ultimately improve overall quality of life for those at risk for depression.

Title: **The Fall of J.C. Penney**
Author: *Alyssa M. Lecurgo*
Class: BUS 304 Corporate Finance
Faculty Advisor: Patrick Cassity, MBA, Kimberly Yost, PhD

The focus of my finance research paper was how J.C. Penney was one of the largest clothing retailers in the U.S. and with a change of leadership, it fell to near bankruptcy. The paper further discusses how a second change in leadership took J.C. Penney from near bankruptcy to making slow progress on its financial statements. Finance calculations were provided and/or extracted from press releases and financial statements to show the steady improvement. Details of each leader's plan to bring J.C. Penney to its full potential is also included.



Title: Japanese Atrocities in Nanking, China, 1937
Author: *Nicole Linn*
Class: SOC 399 Genocide: How Can it Happen?
Faculty Advisor: Therese Hoffman, PhD

In 1937, the Japanese military invaded China. What started as a war turned into one of the most brutal genocides in history. Tens of thousands of people were murdered and raped. This research project investigates the genocidal strategies used, the most well-known rescuers, and the state of Japanese denial of the massacre in Nanking and other cities across China. Mass executions, mass rapes and sexual slavery, and the use of chemical and biological weapons were the primary strategies of genocide used against the Chinese civilian population. As new evidence emerges, so does the victim count; we may never know the true number. Westerners, who were in Nanking at the time of the Japanese invasion, created “safety zones” for refugees. These “safety zones” saved thousands of Chinese lives. Even after decades of study, producing clear evidence of the massacres and mass rape, Japan still denies the atrocities they committed against the Chinese people.

Title: The Clark Doll Experiment
Author: *Nicole Linn*
Class: SOC 313 The Civil Rights Movement
Faculty Advisor: Therese Hoffman, PhD

Kenneth and Mamie Clark designed an experiment known as the “doll tests” to study the effects of segregation on African American children. The experiment used four dolls, all identical except for color. The majority of children chose white dolls and associated their choice with positive characteristics of the white dolls. The Clarks concluded that prejudice, discrimination, and segregation created a feeling of inferiority among African American children that damaged their self-esteem. This experiment was vital to the Supreme Court ruling in *Brown V. Board of Education of Topeka, Kansas*.



Title: **A Demographic Study of Divorce**
Author: *Earl Lovejoy*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project is a demographic study of divorce in the United States. Information about how divorce is measured by demographers will be explained, as well as the divorce rates by state and by race and ethnicity. Long term trends in divorce rates through the twentieth century are presented, including the historical events that help explain those trends, such as, the Roaring Twenties, the economic depression, and wars. Other societal factors (e.g. cultural values) and demographic factors (e.g. age, employment) that affect divorce rates in the United States will be reported.

Title: **Causes of Death in the United States**
Author: *Jeanine Lyons*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project will focus on the top ten causes of death in the United States. A cause of death is defined as a condition or conditions officially determined to have resulted in a person's death and is used on governmental death certificates. US data on the causes of death are presented, including how many people die from particular causes, as well as the causes of death by age cohort, by ethnic group, and by sex. Also, changes in causes of death in the United States over time will be described. Finally, the federal agencies which collect cause of death data, how these agencies use these data to predict population growth, and why these data are important will be reported.



Title: **Demographic Information about Canada and Mongolia**
Author: *Nicholas Mazgay*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project investigates population characteristics of two countries: Canada and Mongolia. Mongolia is a high growth country and Canada is a low growth country with very different demographic profiles and population projections. Basic demographic information is presented about fertility (i.e. birth rates, fertility rates, and contraception use), mortality (i.e. death rates, infant mortality rates, life expectancy, and causes of death), migration, and the age and sex structure of the population to explain the “demographic divide.” Information about Canada’s health care system and Mongolia’s child death rate and health care will be presented to highlight important demographic processes distinguishing the two countries.

Title: **Demographics of Excessive Force and Police Brutality**
Author: *Nicholas Mazgay*
Class: SOC 421 Population and Society
Faculty Advisor: Therese Hoffman, PhD

This project is a demographic analysis of factors that are involved in today’s police force concerning the use of excessive force and police brutality. The investigation includes factors affecting excessive use of force and brutality by police and how this has changed over time. Information about what factors play a role in forming the officers that are involved in these incidents is presented. Demographic variables related to police treatment of civilians include age, gender, and race. Finally, some of the reasons reported to explain why police officers turn to force are examined.



Title: **Nature vs. Nurture: Canine Aggression**

Author: *Ashley Menden*

Class: BIO 410 Biology Capstone

Faculty Advisors: James Chamberlain, MA, Judi Nath, PhD,
Clayton McKenzie, DDS

Aggressive behavior in canines is a serious threat to human health and animal welfare. The majority of dog bites that occur require hospitalization (Duffy, 2008). The reason for this canine aggression has been studied using many different methods; however more research needs to be conducted to arrive at a conclusion. The debate for the cause of aggression in canines is a nature vs. nurture discussion. One side claims that canine aggression can be caused by genetic factors, while the other believes that aggression in canines can be caused by environmental factors. Whether canines are born aggressive or are trained to be aggressive is an issue, because if it is found that the cause is environmental, those factors can be controlled to prevent aggression and any attacks that may occur. Some breeds are targeted due to certain physical characteristics, so research in this area could discredit any stereotypes associated with these breeds therefore they can get fair treatment (Duffy, 2008). This paper, which is a review of the literature, will attempt to expose whether a dog is aggressive due to its genetics or its environment.

Title: **Benefits of Using Solar Energy to Power Golf Carts**

Author: *Kenneth Mohn*

Class: BIO 410 Biology Capstone

Faculty Advisors: Anjali Gray, PhD, Earl Heath, MA

This project will focus on the benefits of using solar energy to power golf carts. Golf carts that are used today are either gas powered or electric. These old fashioned carts can be retrofitted to harness the power of the sun to power them. This retrofitting could save golf courses thousands of dollars every year in electric costs. My project will break down the process of integrating these carts and the amount of money that golf courses could save through this process.



Title: **Medicinal Larvae in Wound Healing**
Author: *Annie Morrison*
Class: BIO 410 Biology Capstone
Faculty Advisor: James Chamberlain, MA, Sr. Rosine Sobczak, MS, and Julie Kruse, PhD

Chronic wounds have become more prevalent in the general population because of the increase in chronic illnesses such as Diabetes Mellitus. Diabetes can cause neuropathy, which may lead to non-healing wounds, and can lead to amputation. These chronic wounds have become harder to treat with antibiotics, because of bacterial resistance to the drugs. An alternative to treating these serious wounds is the use of different species of insect larvae, which eat different types of microorganisms while leaving the uninfected tissue unmolested. This experiment looked at two different species of bacteria that are prevalent in chronic wounds and two different species of insect larvae to quantify which species was better able consume microorganism. The species of larvae used were *Musca domestica* and *Sarcophaga bullata* to consume the bacteria *Pseudomonas aeruginosa* and *Staphylococcus aureus*.



Title: **A Proposal to Explore How Behaviors Influence the Ideation and Suicide Attempts in Adolescents**

Author: *Kristi Mossing*

Class: SWK 413 Practice Oriented Research

Faculty Advisor: Terry Keller, MSW

This paper discusses adolescent behaviors and how they play a role in their thinking and suicidal attempts. The researcher will randomly selected forty adolescent students (boys/girls) to conduct a study on them based upon a suicidal behavioral questionnaire and behavioral assessment checklist. The adolescent student will be given the suicidal behavioral questionnaire while the researcher is observing and completing a checklist upon the behaviors portrayed within the adolescents. The research proposal is to focus on the behavior of adolescents (ages 13-18) who are in high school and how the behaviors influence suicide ideation and attempts. This research is to investigate and compare results with other sources to see why so many adolescents think, feel, and commit suicide. The saying “think before you act” is not always an accurate thing to follow when a student is engaged in drugs or any other negative influences that affect their behaviors.



Title: **Physiology of Dreams and Depression:
The Relationship between Depression and Dream
Recall for use in Therapy**

Author: *Kathryn Olson*

Class: PSY 489 Psychology Capstone

Faculty Advisor: Patricia Bellomo, PhD

Throughout history there has been abundant speculation about the purpose of dreams, including whether dreams have deep, personal meaning, or if dreams are used as a means of cognitive cleanup. Due to sleep laboratories and new advancements in science and technology, researchers can now create visual representations of dreams in an effort to better understand their purpose. Research has shown that dreams can reflect waking thoughts and anxieties. There is evidence to support that dreams can be used as an effective therapeutic tool, promoting self-efficacy and creating a more insightful session for the client. This study examined whether individuals with depression recall interpret dreams differently than non-depressed individuals, by looking at dream descriptions and interpretations on public Internet forums. The goal of this research was to provide a better understanding of the relationship between dream interpretation and depression in the effort to explore the benefits of dream recall in the therapeutic setting for the treatment of depression.



Title: **The Vaccine vs Autism Controversy**
Author: *Kenneth Onubogu*
Class: BIO 410 Biology Capstone
Faculty Advisors: Anjali Gray, PhD, Judi Nath, PhD
Larry Godfrey, PhD

The importance of safe vaccination has become an issue and has raised questions that have not yet been answered. One of the most important questions is does Thimerosal, a compound used as a preservative in vaccines to prevent bacterial and fungal contamination, have a link with autism? Thimerosal has been added to pediatric vaccines as a preservative since the 1930s, without being adequately tested for safety in developing organisms. In the body Thimerosal is metabolized first to ethyl-mercury and further to inorganic mercury compounds, which accumulate in the brain and other vital organs. With mercury from the vaccines accumulating in a young infant's brain it could cause damage to brain tissue resulting in neurodevelopmental disorders in children. There has been no consistent evidence that confirms that there is a link between the Thimerosal and the increase of autism in infants. This project will explore various issues linked to this topic.



Title: **The Past, Present and Future Treatments of Cerebral Palsy**

Author: *Amy Elizabeth Parker*

Class: BIO 410 Biology Capstone

Faculty Advisors: James Chamberlain, MA, Christine Boudrie, MD, Elaine Ault, BS

Cerebral palsy (CP) occurs in 22.5 per 1000 live births (Jelsma, 2013). Those with cerebral palsy are usually limited by motion, but this can also be combined with other disorders, hearing and vision reduction as well as slowed learning and speech disorder, just to name a few (Gavrankapetanović-Smailbegović, 2011). CP is classified into four main types, Spastic, Dyskinetic (this includes athetoid, choreoathetoid, and dystonic cerebral palsy), Ataxic, and Mixed Cerebral Palsy CP (Facts About Cerebral Palsy, 2015). It is a disorder over looked by many and yet it holds near to some hearts. It affects about two to three live births out of 1,000 in the United States alone (Prevalence of Cerebral Palsy, 2015). Whether it is their feet, legs, and or arms their physical movements are restrained. Throughout the years various forms of treatment(s) have been developed to help those afflicted with this disorder. There have been experiments done with chemical therapy, physical and speech therapy, and fairly new is hyperbaric Oxygen Therapy to treat those with CP. These forms of therapy will be the main topic of discussion for this paper.



Title: **A Proposal to Study Why Women Over 40 Gamble at Hollywood Casino**

Author: *Kimberly Y. Pullom*

Class: SWK 413 Practice Oriented Research

Faculty Advisor: Terry Keller, MSW

Gambling is a pastime that has been around for a very long time. It takes place in many forms, from making a best guess about who will win a ball game, to scratching off a ticket and hoping to find a winning combination, to placing ones entire paycheck on a roulette table and inspiring to have the selected number and color. Throughout history, gambling was primarily viewed as an activity more inclined towards male involvement; however, what we know today is that females also engage in this activity, and unfortunately sometimes to the point of it becoming problematic. This literature review examines the subject of gambling behaviors specifically in women over 40 years of age in relation to Casino gambling. The research study will use the South Oaks Gambling Screen to identify women in this age group whom gamble regularly, and may be at risk for gambling addiction. It will also use individualized screening interviews to further expound upon information gathered from the SOGS. The data will be analyzed using S.P.S.S, and the means of that data will be compared to identify patterns and causations. The analysis of this data will help to increase knowledge of potential risk factors for problem gambling, and begin a more proactive approach to the prevention and treatment of gambling addiction amongst middle to older aged women.



Title: **Chronic Wasting Disease in Cervid Populations**
Author: *Jacob RedFox*
Class: BIO 410 Biology Capstone
Faculty Advisors: James Chamberlain, MA, Sr. Rosine Sobczak, MS,
Judi Nath, PhD

Chronic Wasting Disease (CWD) is a transmissible spongiform encephalopathy (TSE) that effects members of the Cervidae family which include mule deer, white-tailed deer, and elk. Transmissible spongiform encephalopathies are a unique infectious set of diseases that correlate to abnormally folded proteins called prion proteins (PrP) (Prusiner 1998). Once one of these proteins become misfolded they become a prion disease which have neurodegenerative effects. CWD is unique for its high level of transmissibility (Haley, N., 2011).. Transmission of CWD is not completely understood but some correlation has been identified for direct contact with infected tissue and environments. There is also some evidence that CWD has been detected in tissues that produce excrements to the outside environment. CWD can be detected throughout parts of the lymphatic system and the central nervous system (CNS) (Haley, N., 2011). Cervids are considered a game animal that provide food to many people, causing concern for humans possibly becoming infected with CWD. There is no evidence that supports the possible cross species infection of CWD to humans (Belay, 2004).



Title: **A Proposal Concerning Home and Community Based Services (HCBS) Compared to Long-term Care Facilities for Elderly on Medicaid: Which is More Economical for the State of Ohio?**

Author: *Stephanie Riggio*

Class: SWK 413 Practice Oriented Research

Faculty Advisor: Terry Keller, MSW

This proposal will focus on understanding and preparing financially for the growing aging population. The aging population is growing rapidly and the state of Ohio needs solutions for the financial deficits that this is causing. Citizens, politicians and taxpayers are responsible for making sure that the low income elderly are properly cared for and have the resources they need to live. This research proposal will use financial and population data collected by interviewing the 12 Ohio Area Agencies on Aging as well as the Ohio Department of Aging to measure the most cost-effective and economical ways to provide care for the low income elderly population, with a focus on the Medicaid waiver program.



Title: **The Positive and Negative Effects of Energy Drinks on the Human Body**

Author: *Alyssa Schaub*

Class: BIO 410 Biology Capstone

Faculty Advisors: Barbara Stallman, PhD; Larry Godfrey, PhD;
James Chamberlain, MA

The overall topic that will be explored is the effects of energy drinks on the body as a result of over consumption and misleading labels. This topic has not yet been examined thoroughly. As a result, consumers are continually unsure of what is truly inside their caffeinated beverage. False advertisement may lead to health issues if/when the energy drink industry releases misleading information to consumers. This is because the majority of energy drinks are labeled with contents having the ability to enhance performance. One example of this is with Red Bull who advertises the benefits of consuming their product will leave the consumer with an increased metabolism, improved performance of reaction speed, endurance, and concentration. This claim can be misleading to the consumer because the consumer may believe that the more they drink, the better the side effects will be. Although one may believe this to be true, it is false. The more caffeine a person drinks in a short amount of time can result in the person experiencing terrible side effects. These side effects are very harmful to your body, especially if caffeine overdose is a regularly occurring action. This then leads to examining the chemistry of the psychological and physical aspects of caffeine addiction (Chan, 2015).



Title: **An Examination of Energy and Climate Change Programs at Universities and Colleges of the Western Basin of Lake Erie and Possible Approaches for Lourdes University**

Author: *Kelsey Schmidt*

Class: BIO 410 Biology Capstone

Faculty Advisors: James Minesky, PhD, Mary Kaczinski, PhD (Owens), James Chamberlain, MA

Certain Greenhouse gas, GHG, emissions are causing changes in Earth's climate. The changing climate has a variety of impacts on society and ecosystems. Carbon dioxide is the primary greenhouse gas that is contributing to recent climate change. Human activities, such as the burning of fossil fuels for electricity, heat, and transportation are releasing large amounts of carbon dioxide into the atmosphere. Universities are becoming the leaders in solving environmental issues that threaten the planet. They are beginning to make ambitious commitments to reduce greenhouse gas emissions. Colleges and universities have formed associations and organizations to account for and promote their members' efforts to address GHG emissions and climate change. This capstone project examined the actions and programs of a set of universities and colleges of the western basin of Lake Erie, as well as Ohio State, as case studies. Examination of these case studies then provided a means to outline possible opportunities for Lourdes University to address its GHG emissions and contributions to reducing climate change.



Title: **Proposal for Research on Dyadic Synchrony between Fathers and Infants Using the CARE-Index**

Author: *Rachel Shields*

Class: SWK 413 Practice Oriented Research

Faculty Advisor: Terry Keller, MSW

Parenting plays a huge part in a child's development from the beginning of his/her life. Attachment between an infant and his/her parents affects many areas of life, including: scholastics, emotions, social and behavioral adjustment, and peer-rated social status (Svanberg, Barlow, & Tigbe, 2013). Unfortunately, there is a significant gap in research in this area. The majority of studies completed on attachment and/or dyadic synchrony between parents and infants have focused almost exclusively on mothers, leaving fathers with little attention and researchers with little data (specific to fathers and their children). A video-based intervention that evaluates dyadic synchrony is the CARE-Index. This tool has been shown to be reliable, valid, and valuable in coding parent-infant interactions and identifying appropriate interventions. It is also used to determine if a dyad is abusing, neglecting, problematic, or adequate (Svanberg, et al., 2013). The researchers propose to investigate the level of dyadic synchrony between fathers and their infants (0-15 months old) according to the CARE-Index. This research will be conducted in a qualitative design using snowball sampling with a sample size of 25-30 fathers. The fathers must be 18 years or older with infants 0-15 months old.



Title: **The Relationship Between Locus of Control and Job Satisfaction**
Author: *Tyler Trame*
Class: PSY 489 Psychology Capstone
Faculty Advisor: Larry Godfrey, PhD

The relationship between locus of control orientation and job satisfaction is an area of interest to most organizations. Competition demands maximizing employee performance in order to positively impact an organization's performance. Employee performance levels may be affected by numerous factors, including job satisfaction. Understanding the relationship between locus of control and job satisfaction may provide valuable insights for organizations who wish to maximize employee performance in the workplace. This research will be conducted by surveying students in psychology classes at Lourdes University during the Spring 2015 semester. Two self-report instruments will be used to survey the students: an 8-item work locus of control scale (WLCS) and a 36-item job satisfaction scale (JSS). Each of these instruments assesses their specific construct through self-reported questioning. The WLCS and JSS asks participants to rate how much they agree with a statement on a scale of 1 to 6.

Title: **Non-Operative Prevention and Recovery of Ulnar Collateral Ligament (UCL) Injuries**
Author: *Frank Veres*
Class: BIO 410 Biology Capstone
Faculty Advisors: Anjali Gray, PhD, Judi Nath, PhD, Jason Hines, MS

The purpose of this research is to inform the general athletic community of UCL injuries. The aim of this research is to explore the non-operative techniques to repair partial UCL tears and ways of treatment, recovery, and prevention of this injury. This research is important to get athletes back on the field sooner. Surgery for a partial UCL tear requires longer shut down and recovery time. Alternative forms of treatment than surgery for this injury that can reduce recovery and return athletes to the pre-injury level of play sooner, will also be discussed.



Title: **The Level of Twitter Use in Young People and the Observed Consequences for Youth Social Skill Development**

Author: *Cassandra Walker*

Class: PSY 489 Psychology Capstone

Faculty Advisor: Patricia Bellomo, PhD

The extent of technology use and the weaknesses in social skills among young people was examined, using the social networking site Twitter, in search of a possible connection between the two variables. It was predicted that as technology use increased, the amount of weakness and problems with social skills would also increase. Sixty youths appearing between the ages of 18 and 25, half male and half female, were chosen at random from the results of a content search using key terms applicable to the research. Using the information gathered from tweets, subjects' onset and frequency of Twitter use was measured, along with their performance in four specific categories of traditional social skills. Subjects were then assigned to a 5-point scale which rated their general level of social skills. It was discovered that the more time subjects spent as members of Twitter, the more frequently they tweeted. A trend also appeared in alignment with the initial research predictions, where subjects who were rated higher on the Social Skills Rating Scale, signifying weaker social skills and more social difficulties, also tended to exhibit a higher amount of tweets. The findings of this research highlight the necessity for the creation of intervention strategies and awareness raising measures targeted to young people.



Title: **Civil Rights Heroes of the Vote**
Author: *Blake M. Watkiss*
Class: SOC 313 The Civil Rights Movement
Faculty Advisor: Therese Hoffman, PhD

Many people were murdered in the south during the 1940's, 50's and 60's. They were killed simply because they not only believed that all people had the right to vote, regardless of the color of their skin, but they did something about it. These and other people were heroes of democracy and the Civil Rights Movement and knew that everyone had the right to vote.

Title: **Genetic, Biological, and Environmental Factors Affecting Alzheimer's Disease**
Author: *Hillary West*
Class: BIO 410 Biology Capstone
Faculty Advisor: Anjali Gray, PhD, Cynthia Molitor, PhD., Judi Nath, PhD

Alzheimer's research can have an affect on current and future victims, families, and friends affected by the disease. Any sort of breakthrough can save and improve lives. This disease is devastating and detrimental, and it is important to be able to advance in treatment and prevention. The cause of the disease is unknown. The proposed research attempts to unify and advance research that has already been conducted within the field of Alzheimer's disease. It will concentrate on what is currently known about the disease and look to expand this knowledge. This proposal also aims to make connections within the research and development methods to combat the disease.



Thank you to...

*The participating
faculty and students,*

*Research & Scholarship Symposium Committee:
James Chamberlain and James Minesky, Co-Chairs
Philip Fink, Joyce Litten, Judi Nath, Rebecca Zechman*

Linda Stout,

Theresa Holup,

Dr. David J. Livingston,

Dr. Geoffrey J. Grubb.

Café Lourdes,

University Relations,

and Franciscan Center Staff.



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