Scholarship in Action:
AN ENGAGED COMMUNITY

Thursday, April 18, 2013
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Scholarship in Action: AN ENGAGED COMMUNITY

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Dr. Joyce Hayward

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Mark Swain
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To the Lewis University Community:

Welcome to the second annual Celebration of Scholarship here at Lewis University. This is an important academic initiative that follows last year’s highly successful inaugural Celebration. The purpose is to recognize the scholarly pursuits of undergraduate and graduate students, as well as on the part of faculty. This year’s ambitious and diverse program has as its theme, *Scholarship in Action: An Engaged Community*. Approximately 288 presentations, including 145 poster, paper and creative works, represent the sciences, business, humanities, arts, education and nursing. This very engaging and intellectually stimulating event occurs just a month after the rededication of the beautifully expanded Oremus Fine Arts Center, which provides several wonderful new settings for the scholarly and creative works of students and faculty through the display of art, drama and music.

Much gratitude for the considerable effort required to put together another excellent Celebration of Scholarship, including by co-chairs, Dr. Nan Yancey and Dr. Joyce Hayward, as well as by the other members of the Planning Committee. In particular, we are pleased and honored to welcome as the keynote speaker, Dr. Herb Childress, who is the Dean of Research and Assessment for the Boston Architectural College in Massachusetts. He is an internationally recognized scholar who is frequently invited to present at institutions of higher education and at conferences for professional organizations, such as the Association of American Colleges and Universities and the Council on Undergraduate Research, especially in support of an interdisciplinary perspective on the problems of society.

Finally, much appreciation to all who are responsible for the plethora of exceptional scholarly works, which are meant to generate many new insights that lead to a better understanding of our world and its potential. I trust that you will find *Scholarship in Action: An Engaged Community* to be enjoyable, informative and highly engaging.

Sincerely,

Brother James Gaffney, FSC
President
Dear Colleagues:

Building on the success of our inaugural Celebration of Scholarship in 2012, we will again be recognizing and honoring the excellent scholarly and creative endeavors of our undergraduate and graduate students. We will also recognize the research, scholarship, and creative works of our gifted faculty, who contribute so significantly to our Mission.

Planning for this year, through the dedicated efforts of many individuals and groups across the University, began well before the celebration of our inaugural event was over. Many faculty and staff enthusiastically served on the oversight committee, one of the several other subcommittees and/or as mentors for student projects.

The theme for this year’s Celebration of Scholarship is *Scholarship in Action: Creating an Engaged Community*. The title reflects how our faculty are directly engaged with students and each other in discovering new knowledge and creating solutions to the challenging problems facing society today.

Faculty have long recognized the importance of sharing their scholarship and research with students and in encouraging them to participate in these projects. These collaborative initiatives present new and creative ways of helping students learn. Student engagement in scholarly work during their undergraduate and graduate studies is increasingly acknowledged among high impact learning initiatives. Projects like these open doors for our students to exciting careers, graduate school opportunities and endless new possibilities.

Thank you to all who have planned so well for this Celebration of Scholarship and congratulations to the many students, faculty and staff participants whose work is being showcased.

The spirit of Association was clearly evident throughout the many months of preparation. Your excitement and enthusiasm was contagious as ideas were shared between disciplines and across campus. We are all grateful for your collaboration, creativity and intense dedication to learning. Congratulations to all on this significant contribution to advancing our Mission and student learning.

Sincerely,

[Signature]

Dr. Stephany Schlachter
Provost
General Information

Lewis University is proud to sponsor the Second Annual Lewis University Celebration of Scholarship. Providing an opportunity for the University to showcase the scholarly and artistic work of its graduate students, undergraduate students, and faculty, this scholarly event is being co-sponsored by the Culture of Inquiry Advisory Committee; the University Office of Graduate Studies; the Colonel Stephen W. and Lyla Doherty Center for Aviation and Health Research; the Lowell Stahl Center for Entrepreneurship and Real Estate Studies; the History Center: Urban, Cultural and Catholic History of the Upper Midwest; the Center for Ministry and Spirituality; the University Faculty Development Committee; and the Scholars Academy.

Brother James Gaffney, President of Lewis University, will open the Second Annual Celebration of Scholarship at the Plenary Session scheduled to begin in Sancta Alberta Chapel at 11 AM. This will be followed by the Keynote Address provided by Dr. Herb Childress, Dean of Research and Assessment at Boston Architectural College and a nationally recognized leader on the Council of Undergraduate Research.

The Lewis University Celebration of Scholarship will present scholarly work in three different formats throughout the afternoon and evening.

Concurrent Sessions – Students and faculty are encouraged to give a 15-minute presentation on a research topic or paper they have written. Concurrent sessions will be scheduled in rooms on the second floor of De La Salle Hall from 1-6:30 PM. Registration for presenters and information regarding the various Celebration of Scholarship events will be available throughout the day in DL250.

Creative Works – These can include any piece that has been written, published or produced in a fine arts field, including music, art, theatre, literary reading, poetry, etc. The newly renovated Oremus Fine Arts Center will provide a backdrop for creative works from 1-6:30 PM, with presentations occurring from 2-4 PM.

Poster Sessions – Research posters will feature the results of research projects, internships and class presentations. Registration for this event will take place in the Library. Posters will be displayed on the first floor of the Library from 12-6:30 PM with the authors present at times as designated in this program.
Wicked Problems:
Why All of You Are Architecture Majors
Herb Childress, Ph.D.

A nationally recognized scholar, researcher, and academic leader, Dr. Herb Childress is the Dean of Research and Assessment at the Boston Architectural College (BAC), a professional school offering undergraduate and master’s degree programs in several spatial design disciplines. Coming to the BAC in 2006 as Director of Liberal Education, Dr. Childress was appointed Dean in 2009. Subsequently, he has led an institution-wide curricular reform and developed critical educational assessment tools that make use of existing data to provide significant pedagogical direction.

Before coming to the BAC, Childress was a Mellon Postdoctoral Fellow in the University Writing Program at Duke University, where he taught first-year writing and led two major projects assessing the effectiveness of the writing curriculum. He has also worked in professional design practice and as a researcher in K-12 school reform with the Bay Area Coalition for Equitable Schools. In addition, since 2003, he has served in leadership roles with the Council on Undergraduate Research, where he was an Executive Board member for four years, helped to organize the 2008, 2010, and 2012 national conferences, was part of the negotiating and planning team for the merger of CUR and NCUR (the National Conferences on Undergraduate Research, a student conference of 2500 undergraduate researchers), and has facilitated eight CUR professional development workshops.

As a consultant to colleges on educational assessment, research and proposal writing for early-career faculty, using the local environment as a curricular focus, and facilities master planning and capital-campaign fundraising, Childress is committed to interdisciplinary scholarship. The author of many professional publications including two books, invited lecturer, and recipient of many awards and grants, he is recognized for his expertise in higher education, qualitative research, and interdisciplinary scholarship.

He received his B.A. in architecture from the University of California at Berkeley and his Ph.D. in Architecture focusing on environment-behavior studies at the University of Wisconsin, Milwaukee in 1996. His doctoral dissertation was titled *Landscapes of Betrayal, Landscapes of Joy: Curtisville in the Lives of its Teenagers.*
CONCURRENT
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Session III (4-5 PM) 21
Session IV (5:30-6:30 PM) 27
Session I
1-2 PM

DL-202
Moderator: Terry Karapas

The Shift Toward Alternative Medicine for Back Pain

*Undergraduate Student Project in Math/Science*

Andrew Vlosak

*Dr. Erin Zimmer*

This presentation will discuss Chiropractic and Acupuncture medicines.

The Role of Biofilms in Dreissenid Recruitment in Milwaukee Harbor - Ten Years Later

*Undergraduate Student Project in Math/Science*

Deirdre McCormick

*Dr. Jerry Kavouras*

Biofilms are an interdisciplinary and increasingly popular topic of interest in science and medicine. In nature, biofilms are involved in complex interactions with other organisms and their surroundings. This presentation will discuss the role biofilms play in the attachment of invasive mussel populations dominated by *Dreissena bugensis*, the quagga mussel.

Applications of Quantum Dots to Biological Imaging

*Undergraduate Student Project in Math/Science*

Thomas Campbell

*Dr. Erin Zimmer*

Quantum Dots are semiconductor nanocrystals with a wide range of applications. Here, their applications to biological imaging are explored.
The Phantom Limb Phenomenon and Treatments

Undergraduate Student Project in Math/Science
Catherine Reese
Dr. Jennifer Roberts

Phantom limb pain (PLP) is a condition that affects nearly 80% of amputees, causing them to feel stinging, burning, spasms, and cramps along with unpleasant involuntary sensation of movements of their missing limbs. By exploring new advances in technology, as well as the methods and results of different treatment options, it is possible to determine the proper plan of action for patients suffering from this condition.

Female Athlete Triad Syndrome

Undergraduate Student Project in Math/Science
Dominique Drouin
Dr. Jennifer Roberts

Female Athlete Triad Syndrome is a harmful condition with many medical risks that the female athlete might experience. The triad is composed of low energy availability (disordered eating), amenorrhea, and osteoporosis. This condition is noticed more in sports that promote weight loss and leanness.

Use of the Bone-Patellar Tendon-Bone Grafting Technique in ACL Reconstructive Surgery

Undergraduate Student Project in Math/Science
Brian Morgan
Dr. Jennifer Roberts

Tears to the anterior cruciate ligament (ACL) have become increasingly common in recent years. One common technique used to repair a torn ACL is the bone-patellar tendon-bone (patellar BTB) method. This presentation aims to explore how to most effectively perform ACL reconstruction using this method in order to maximize short-term and long-term results and to attempt to determine if the patellar BTB technique is in fact the best strategy for performing ACL reconstruction.
Adele Fay Williams Exhibit Research

Undergraduate Student Project in Humanities
Mallory Godinez, Mary Moran, Gregory Rossbach, Thomas Sharwarko and Tyler Finney

Dr. Dennis Cremin

Public History students draw on their qualitative research of Joliet artist, Adele Fay Williams, and make recommendations for an exhibit planned for the Joliet Area Historical Museum.

Lockport Historic District Property Values Project

Undergraduate Student Project in Humanities
Dr. Eileen McMahon and Jonathan Friberg

Dr. Eileen McMahon

Students from Fall 2012 History of Illinois class will present their findings on whether the National Trust Historic District designation affects property values in Lockport.

College Student’s Attitudes Toward Poverty Class Based on Religiosity

Undergraduate Student Project in Social Science
Kathryn Strait and Christopher Biag

Dr. Chwan-Shyang Jih

The study investigates undergraduate student attitudes towards poverty based on one's religiosity. It seeks a significant relationship between individual religious doctrines of helping those in need and attitudes towards poverty class. An understanding of a life in poverty is very important for policymakers.
Gestational Diabetes Mellitus and the Risk of Developing Type 2 Diabetes

Undergraduate Student Project in Math/Science
Kirsten Gerry
Dr. Valerie Vander Vliet

This paper will present the risks of developing Type 2 diabetes after having gestational diabetes.

The Disparities that Contribute to the Aggression of Breast Cancer Based on Ethnicity

Undergraduate Student Project in Math/Science
Sierra Tomas
Dr. Valerie Vander Vliet

This study brings awareness to the differences in breast cancer aggression in certain ethnicities. The various factors that influence the severity of the illness will be exposed in an attempt to reveal logical reasons behind the high aggression rate of breast cancer in African Americans.

Human Metabolite Characterization: Gut Microbiome’s Impact on Xenobiotic Metabolism

Undergraduate Student Project in Math/Science
Andrew Orasco
Dr. Valerie Vander Vliet

This presentation will explore newly found research indicating that the microbial specimens residing in the gut are critical to the proper metabolic fate of xenobiotics and more importantly, to the maintenance of human health.
Prevalence of Celiac Disease in Type 1 Diabetes Patients

*Undergraduate Student Project in Math/Science*

**Ramica Ford**

*Dr. James Rago*

Recent studies have shown celiac disease to be prevalent in individuals with Type 1 diabetes. This presentation will discuss both genetic and environmental factors influencing the prevalence of celiac disease in Type 1 diabetes patients.

Current and Future Treatment Options for Parkinson’s Disease

*Undergraduate Student Project in Math/Science*

**Cierra Gleffe**

*Dr. James Rago*

This presentation includes potential methods for treating Parkinson’s Disease such as dopamine-replacement drugs to aid mobility and muscle movement, and antioxidants to remove free radical build-up in the brain.

The Use of Probiotics as Treatment for Inflammatory Bowel Disease

*Undergraduate Student Project in Math/Science*

**Alexandra Wenckowski**

*Dr. James Rago*

Inflammatory Bowel Disease (IBD) is an autoimmune disease which causes the lining of the intestines in the digestive tract to become inflamed and irritated. This presentation will discuss how the use of probiotics, alone or in synergistic combinations with other medications, can reduce and improve patients’ remissions, negative side effects, as well as their overall quality of life.
Early Immune System Exposure and the Role in Developing Type 1 Diabetes

Type 1 diabetes (T1D) is an autoimmune disease that involves the slow destruction of insulin-producing cells. The trigger for Type 1 diabetes is unknown, but recent studies show that microbial environment and exposure during immune system development play a key role in the disease mechanism.

The Variance of Lux and Wavelength in the Efficacy of Seasonal Affective Disorder Phototherapy

Phototherapeutic treatment used prophylactically has led to significant improvement of symptoms associated with seasonal affective disorder.

The Contrast Between Human and Animal Studies Regarding the Depressive Effects of Isotretinoin Treatment

Isotretinoin (Accutane) is an efficacious treatment for various types of acne. However, there are still many concerns regarding depressive symptoms that the drug may induce. Interestingly, human studies looking at behavior and animal models focused on changes in brain morphology have conflicting results.
DL-251

Moderator: John Parker

Observations of a Pendulum with a Variable Center of Mass

Undergraduate Student Project in Math/Science

Erik Medina

Dr. Joseph Kozminski

Calculations show that the period of a physical pendulum is roughly 80% the period of a simple pendulum of the same mass. In this experiment, the change in period from a physical pendulum to a simple pendulum is observed in a system containing a rod and a large mass whose position can be varied.

Examining the Safety of Airport Backscatter X-Ray Scanners Using G4Beamline

Undergraduate Student Project in Math/Science

Elizabeth De Waard and Megan Szubert

Dr. Joseph Kozminski

The potential hazardous effects of airport backscatter X-ray security scanners was examined through computer simulations.

Interferometric Measurements of Liquid Indices of Refraction

Undergraduate Student Project in Math/Science

Matthew Moy, Michael Munar, Meghan Nichol and Bianca Garcia

Dr. Charles Crowder

This presentation studies the use of a Michelson interferometer with a novel liquid sample cell to determine the indices of refraction of various liquids.
Session II
2:30-3:30 PM

DL-202
Moderator: Betsy Wilber

I Brought Home a Coliform?
*Undergraduate Student Project in Math/Science*
*Victoria Colclasure*
*Dr. Jerry Kavouras*

After a day of playing in the water, have you ever left a piece of clothing, a towel, a shirt, or a swimsuit for days without washing it? Do you know what you have brought home or how long these little guests stick around? This presentation focuses on the world of coliform bacteria and their relationship to fabrics.

Epigenetics of Asthma
*Undergraduate Student Project in Math/Science*
*Daniel Nolan*
*Dr. Erin Zimmer*

This presentation highlights the possible epigenetic effects on the variable expression of the phenotypes that describe asthma.

Research and Development of Photosynthentic Algae for Biofuel Production
*Undergraduate Student Project in Math/Science*
*Patrick Smith*
*Dr. Erin Zimmer*

This study focuses on the research and development of photosynthetic algae and their use in creating biofuels that will help make this planet sustainable for human society.
The Evolution of Multiple Sclerosis and its Correlation with Blood Serum Vitamin D

Undergraduate Student Project in Math/Science
James Fitman
Dr. Jennifer Roberts

Multiple sclerosis (MS) is considered an immune-mediated disorder affecting the myelin sheath of nerve fibers in the central nervous system of diagnosed individuals. The search for the origins of this disease has led to several hypotheses including onset as the result of a viral infection, a genetic predisposition, or a nutritional deficiency — specifically, vitamin D. This research project is a comprehensive literature review that looked to assess the effects of serum vitamin D and the incidence/evolution of MS.

Statin Medications and Adverse Effects on Muscles

Undergraduate Student Project in Math/Science
Michael Hegazin
Dr. Jennifer Roberts

Contemporary research will be presented on the use of statin medications to treat hyperlipidemia. The focus will depict the adverse side effects these medications have on muscle health.

The Effect of Protein Supplementation and Resistance Training on Muscle Mass and Composition

Undergraduate Student Project in Math/Science
Steven Neubauer
Dr. William Chura

Protein supplementation has been used in many forms to augment muscle growth in the recovery after resistance training. Researchers argue what mechanism is most effective and which form of protein supplementation gives the best results.
DL-230

Moderator: Ibrahim Mescioglu

We Have It: An Essay Concerning the Privatization of Air Traffic Control

Undergraduate Student Project in Humanities
Mark Jacobs

Dr. Simone Muench

This persuasive essay emerged from a trilateral investigation of the potential impact of privatizing air traffic control in the United States.

Determining the Hazardous Effects of Flight Deck Laser Illuminations

Graduate Student Project in Math/Science
Richard Antoniolli, Jennifer Pfeifer, Jacob Luedtke and Elizabeth De Waard

Dr. Randal J. DeMik

Since 2005, reported laser attacks from people on the ground directed towards arriving and departing aircraft have increased more than 300%. A laser aimed at the windshield of an aircraft startles a pilot and may cause injury. This study determined empirical evidence of laser intensity in the flight deck and the potential for harm to the human eye at various distances.

Repercussions of Variable Dietary Carbohydrate Consumption

Undergraduate Student Project in Math/Science
Courtney Makowski

Dr. Erin Zimmer

This work looks into the major obesity epidemic in America and evaluates possible dieting solutions, more specifically, the popular dieting technique of eliminating carbohydrates.
Text Control: Voices of Abused Women

*Faculty Project in Social Science*

**Dr. Lynn Tovar and Dr. Tracey Nicholls**

This presentation is a result of a qualitative research study conducted with students from Lewis University and women residing in a domestic violence shelter. The study examines the use of short message service (SMS), also known as text messages, and their effect on domestic relationships. It focuses on the voices of respondents and their experience with abusive behavior and the prevalence of texting and GPS capabilities to control intimate partners. Their voices need to be heard!

**Effects of Corporal Punishment on the Development of Antisocial Behavior**

*Graduate Student Project in Social Science*

**Gabriela Zenati**

In recent years, the State of Illinois has considered proposing legislation against spanking as a form of punishment. Therefore, this research is currently relevant. The purpose of the study was to examine the effects of corporal punishment on developing antisocial behavior in children and later on, in adults. The results of the surveys showed that corporal punishment did not create or facilitate the development of antisocial behavior such as depression, mental illness or poor performance in school among the respondents surveyed, which was in contradiction with the literature review on this topic.
DL-232

Moderator: Sarah Powers

Modern Approaches for the Treatment and Prevention of Tuberculosis

*Undergraduate Student Project in Math/Science*

**Elizabeth Schuhler**

Dr. James Rago

This study involves research on the bacterial disease tuberculosis and its drug resistant forms. Emphasis will be placed on the many different drugs used for treatment and the new means of prevention, including vaccines.

Type 3 Diabetes: The Importance of Insulin Levels in the Brain

*Undergraduate Student Project in Math/Science*

**Heid Giusto**

Dr. James Rago

This presentation will discuss Diabetes Mellitus and Alzheimer’s disease and the correlation between the two. Recent advancements in the treatment of both diseases and how said treatments can improve health for patients affected by these diseases (both independently and in tandem) will be emphasized.

Effect of Omega 3 Fatty Acids on Type 2 Diabetes

*Undergraduate Student Project in Math/Science*

**Edwin Vargas**

Dr. Valerie Vander Vliet

Omega 3 fatty acids may help to improve many problems associated with Type 2 diabetes. This research paper focused on the effects Omega 3 fatty acids have on the cardiovascular problems associated with Type 2 diabetes.
Gender Gap in the 2012 Presidential Election

*Undergraduate Student Project in Social Science*

**Melissa Pointer**

*Dr. Joe Gaziano*

This study of gender differences among presidential voters in 2012 asks, “To what extent do men and women differ on the issues as well as choice of candidates?”

Young Voters and Ideology vs. Identity

*Undergraduate Student Project in Social Science*

**Brandon White**

*Dr. Joe Gaziano*

This presentation compares the self identity of voters with their actual political position as determined by a set of questions that determine ideology.

The Significance of the Pardoner’s Relics as Absence, Presence, and Reproduction in Chaucer’s “The Canterbury Tales”

*Undergraduate Student Project in Humanities*

**Ryan Arciero**

*Dr. Jackie White*

This essay discusses the role of the Pardoner in Chaucer’s “The Canterbury Tales” as a character who signifies both absence and presence. Regarding both his sexuality and disposition, it is argued that the Pardoner uses his relics to compensate for his lack of morality and as a eunuch, his inability to reproduce.
Machine Learning: Examining Naive Bayes Classification and its Role in Network Security

Undergraduate Student Project in Math/Science

Harrison May

Dr. Joseph Ninh

This research will develop an algorithm that will help identify what is acceptable Internet traffic from nefarious or questionable traffic.

Distributed IP Watchlist Generation for Intrusion Detection in the Electrical Smart Grid

Graduate Student Project in Math/Science

Brian Wilhelm and Dr. Ray Klump

Dr. Ray Klump

This work proposes a federated approach to identifying cyber threats to the nation’s electrical grid that can reduce their impact by limiting their spread.
Session III
4-5 PM

DL-202

Moderator: Dr. Gwen Svoboda

Family-School Collaboration

Undergraduate Student Project in Education
Jessica Lord, Katelyn Zawadzki, Stephanie Witz, Kelly Forney, Kristi Korzelik and Michelle Quinn

Dr. Rebecca Pruitt

A collaborative project highlighting strategies for family-school relations based on a collaboration paradigm will be presented. Participants will discuss and debate the benefits of the collaboration model vs. the traditional remediation model still prevalent in schools today.

Michael Foucault’s Discipline and Punish

Graduate Student Project in Education
Angela Patterson

Dr. Kip Kline

This research will explore components of power that are enacted upon the body, with influences on an individual's decisions and actions which are caused by inflicting subtle forms of control, and the impact it has on education.
DL-203
Moderator: Mary Adams

Professional Quality of Life of Perinatal Nurses

*Graduate Student Project in Nursing*

**Debora Painter, Cheryl Picard, Kelly Rayburn and Kelly Sulo**

**Dr. Janice Smith**

This study quantifies the professional quality of life of perinatal nurses at two Midwestern hospitals since very little research exists concerning the topic. Based on study results, an educational program will be created in order to promote professional quality of life.

Development of Twenty-First Century Teaching Methods

*Graduate Student Project in Nursing*

**Maria Ada, Marilyn Kloc, JoAnn Landstrom-Pelikan and Ramona Stanevicius**

**Dr. Janice Smith**

The purpose of this scholarly project was to develop interactive simulations for undergraduate nursing students to help students develop critical thinking skills and promote patient safety.

Integration of Evidence-based Practice (EBP) to Meet the Quality and Safety Education for Nurses (QSEN) Competencies in the Undergraduate Nursing Curriculum

*Graduate Student Project in Nursing*

**Michelle Bassett, Amber Wright and Jennifer Wolinski**

**Dr. Janice Smith**

A research study was conducted at Lewis University focusing on undergraduate nursing students’ attitudes, knowledge, and behaviors towards evidence-based practice. The results of the survey guided the development of interactive teaching strategies to assist the undergraduate and adjunct faculty with integrating EBP into the new curriculum within the classroom and clinical settings.
Applying Cognitive Perspective to Second Language Acquisition: The Results of the Pilot Study

*Faculty Project in Humanities*

**Dr. Serafima Gettys**

The presenter will share the results of the pilot study conducted by the Foreign Language Program demonstrating the efficiency of Usage-Based Instruction, an innovative approach to teaching oral communication in foreign languages. The development of the approach was inspired by the Cognitive Perspective in Second-Language Acquisition. Students taught in the UBI classrooms are able to produce more language with almost 100% accuracy and near-native fluency than students taught in more traditional settings.

Using Logical Fallacies to Rebut Pseudoscientific Claims

*Faculty Project in Humanities*

**Dr. Val Rendel**

As part of the First-Year Writing program’s effort to develop themes for all sections of College Writing II, Dr. Rendel’s Spring 2013 course asks students to examine extraordinary claims such as Bigfoot, alien abductions, and other similar or like phenomena. Students apply Toulmin’s argumentation model and identify fallacies in reasoning/evidence that allow such misconceptions to thrive in popular culture.

A Tale of Two Sisters: The Monstrosity of the Mother and the Horror of the Home

*Undergraduate Student Project in Humanities*

**Christine Sellin**

**Dr. Simone Muench**

This presentation is about the technical and psychological complexities of the South Korean horror film, “A Tale of Two Sisters.”
An Investigation into the Use of Psychotropic Medications vs. Alternative Methods in the Treatment of ADHD

*Graduate Student Project in Social Science*

**Rukiya Johnson, Al White and Nicole Serle**

*Kimberly Duris*

The use of psychotropic medications is a common practice in the treatment of Attention Deficit Hyperactivity Disorder (ADHD). However, there are many alternative forms of treatment also available for the treatment of this disorder in children. This presentation will investigate those alternative options and their effectiveness in the treatment of childhood ADHD.

Steps for Maintaining a Deceased Client’s Confidentiality, Post-Suicide

*Graduate Student Project in Social Science*

**Nicole Cregan, Matt Breiner and Brittany Weber**

*Kimberly Duris*

Issues involved in maintaining deceased client confidentiality post-suicide will be examined across selected populations. Steps to promote confidentiality will be explored and potential ethical issues will be addressed.

Therapy or My Gun: The Impact of Mental Health on 2nd Amendment Liberties

*Graduate Student Project in Social Science*

**Jamie LaFegers-Traynere, Frederick Jefferson and Samantha Bill**

*Kimberly Duris*

Proposed gun control laws may act as a deterrent for potential clients seeking treatment. Individuals may choose in favor of foregoing mental health treatment out of concern that their 2nd Amendment rights may be revoked by their therapist or counselor. This presentation will explore the various concerns related to this sensitive issue in the counseling field.
Effects of Equine-Assisted Therapy on Autistic Children

Graduate Student Project in Education
Carole Ross

Dr. Jung Kim

This presentation will discuss the literature examining the positive effects of equine-assisted therapy on autistic children, particularly in regard to increased balance, improved communication and socialization, self-confidence and patience, proving that equine assisted therapy is a viable therapeutic option for autistic children.

Does Tweeting in the Primary Classroom Help Increase Parental Involvement?

Graduate Student Project in Education
Mary Jo Heiberger

Dr. Jung Kim

Microblogging is becoming a popular form of communication and can quickly engage the user by giving instant information. Twitter, a form of microblogging is becoming a highly engaging form of communication. Will it help increase parental involvement?
The Role of Speculators in the Derivative Market

Undergraduate Student Project in Business
Jonathan Hicks and Andrew Quinlan
Dr. Frank Rose

This project seeks to uncover and more deeply examine the role of speculators in the derivatives market in relation to more traditional investors and hedgers. The project’s goal is to show that speculators ultimately are an asset to the market and are a vital component of the market.

Lenovo - A Chinese Computer Dynasty or Myth?

Graduate Student Project in Business
Venkata Alle and Major Roman Ortega, Jr.
Dr. Frank Rose

Lenovo’s strategies that helped the firm grow globally at a rapid rate in a short period of time are examined and analyzed. The research results will provide insights regarding the likelihood for long-term viability and success of the firm’s global strategies.

A Partnership Between Enactus and Note Karacel to Help a Community in Uganda Obtain Clean Water

Undergraduate Student Project in Social Science
JoEllen Steinberg, Derek Frommel, Lara Jones and Casey McKenzie
Dr. Frank Rose

The Lewis chapter of Enactus and Note Karacel join forces to help a community in Uganda satisfy its need for clean water. The research will define the problem, evaluate potential short- and long-term solutions, and identify specific ways Enactus can help.
Session IV
5:30-6:30 PM

DL-202

Moderator: Linda Niedringhaus

Post-Concussion Syndrome in High School Athletes

Graduate Student Project in Nursing
Lisa O’Neill, Ann Podoba and Jennifer Paszkowski

Dr. Gwen Svoboda

Information about the dangers of head injury in young student athletes will be presented. Guidelines and resources for the ideal management of athletes with post-concussion syndrome will be showcased.

Using Organic Inquiry: Qualitative Transpersonal Research Method to Explore the Experiences of Long-Term Practitioners of Integral Yoga

Faculty Project in Social Science
Dr. Michele Kramer

Organic inquiry is a transpersonal qualitative method of exploration in research that represents a unique way to understand phenomena. This presentation will describe the organic inquiry process and how it was used for a study that explored the spiritual experiences of long-term practitioners of Integral Yoga, a spiritual practice developed by Sri Aurobindo, a 20th century sage from India.
Is Existential Therapy Beneficial for Cancer Patients?

Graduate Student Project in Humanities
Samantha Parratore, Emily McKenna, Dana Pauley, Jessica Kush and Nicole Spencer

Martha Jarmuz

This study looks at the process of Existential Therapy and how it may be beneficial for people who have received a cancer diagnosis. Using literature review and previously conducted research, the benefits of Existential Therapy and how it may lead to quality of life improvement are explored.

Adlerian Theory in the Treatment of Eating Disorders

Graduate Student Project in Humanities
Gia Saviano, Whitney Beck, Mary Larson, Neveen Shalabi and Danielle Posey

Martha Jarmuz

This paper discusses how an Adlerian approach can be effective in the treatment of individuals with eating disorders.

Narrative Therapy as a Treatment for Anger and Aggression

Graduate Student Project in Humanities
Jamie Henrickson, Melissa Jelinek, Kristine Chojnacki, Jessica Jackson, Chivanda Goffin and Amanda Perniciaro

Martha Jarmuz

This study addresses Narrative Therapy as a treatment option for individuals with anger and aggression.
DL-230

Moderator: Dr. Pramod Mishra

English Translation of Sherezada Vicioso’s “Algo Que Decir” (Something Worth Saying: Feminist Essays on Caribbean Women Writers)

Faculty Project in Humanities
Dr. Jackie White

This translation project presents 23 essays, previously available only in Spanish and now out of print, by an eminent and contemporary Caribbean (Dominican) scholar and poet, Chiqui Vicioso. By creating an English translation of not only her essays, but also of many poems and passages from Caribbean feminist writers who are virtually unknown in the U.S., the presentation strives to reach and inform while adding to the resources necessary for those doing scholarship in the areas of Caribbean studies, Latin American literature, and Latin American/Third World Feminism.

“The Whole Truth”: Sexual Betrayal and Contagion in Anne Bronte’s The Tenant of Wildfell Hall

Faculty Project in Humanities
Dr. Nancy Workman

This presentation is an examination of sexual contagion as seen in this Victorian novel and sets the context for how the audience of the era would have understood its references.
Reducing Fraud in Community Colleges: A Study in Ethical Decision-making and Social Responsibility

Graduate Student Project in Social Science
Linda Campbell

Dr. Lesley Page

Students today are exposed to a variety of technology and methods to create fraudulent documents in order to gain access and reduce tuition and fees at higher education institutions. They see opportunity as an acceptable means of behavior. The ethics and social responsibility education may reduce the propensity to cheat.

A Leadership Development Program for the Chicago Fire Department Emergency Medical Services Division

Graduate Student Project in Social Science
Dawn Dow

Dr. Lesley Page

Preparing the leaders of an organization for the future is a mainstay of most progressive institutions, but bureaucracies do not always rise to the occasion. The urgency created by the impending retirement of a majority of leaders and supervisors for this organization and the lack of ready replacements may cause the administration to venture outside their comfort zone and institute a leadership development program to ensure their future success in providing Emergency Medical Services to their constituents.
Retention Strategies in the Early Childhood Field

Graduate Student Project in Business
Annette Herbert
Dr. George Klemic

The strategies currently being used to retain employees and the effect of these strategies on retention will be discussed.

Nonprofits and the Battle for the Best Employees

Graduate Student Project in Business
Jonathan Hannah
Dr. George Klemic

Today’s nonprofit organizations are not totally separate from the government and profit-seeking companies. Nonprofits do compete for the most valuable asset in the marketplace—productive employees. This study suggests that nonprofits are primed to compete to a greater degree for the best employees due to the shifting priorities and worldview of the Millennial generation.

Leading without Formal Authority: Working with Volunteers

Faculty Project in Social Science
Mary Woods

This research study highlights the leadership and culture essential to effectively lead an ever-changing group of individuals who are unpaid so that volunteers, paid staff, and the organization receive value.
How Does Sexism Operate in Schools and the Wider Society?

Graduate Student Project in Education
Danielle Ligocki

Dr. Brad Porfilio

This paper looks to uncover the ways in which sexism is still alive and well in both education and the wider society. It uncovers the hidden curriculum that permeates the classroom and the effects it has on both male and female students. Finally, this paper examines the difficulties involved in not subscribing to traditional gender roles, both in school and in society as a whole.

Transformative Leadership and the Student Voice: The Gifts Within

Graduate Student Project in Education
Erica Vuilleumier

Dr. Lauren Hoffman

Reflecting on the meaning of transformative leadership, picture images of students - students who are ignored, forgotten, destroyed - by adults in society. How does pop culture influence society’s view on youth? Transformative leaders interested in hearing the voice of youth, ask society, do we do this enough? Are adolescents treasured members of our community?

Critical Transformative Leadership: Knowing the Crises, Taking Action, and Knowing Oneself

Graduate Student Project in Education
Kevin Beirne

Dr. Lauren Hoffman

Schools are in need of critical transformative leaders. This paper explores the behavior of these leaders and how their work can not only transform schools, but restore vibrancy to our democracy.
Notes
CREATIVE WORKS
(See Presenters Index on Page 58)

Art Exhibits (1-6:30 PM)  35
Performances (2-4 PM)  37
Art Exhibits
1-6:30 PM

Untitled Car

*Marker on Bristol*

**Alfredo Melendez**

*Mark Swain*

This piece marks a change from the artist’s usual treatment of the subject of automobiles. This artwork, on a larger scale, uses a more aggressive feeling of the car charging at the viewer, rather than a depiction of a stationary car.

Untitled

*Watercolor and Ink*

**Jillian Carlberg**

*Mark Swain*

The piece is an exploration of character and setting. By placing forest animals in a seemingly normal setting, but giving them each a distinct personality, this piece is able to portray not only a sense of whimsicality, but also reality.

Inception of Imagination

*Silk Screen and Ink Print*

**Cassandra Pruitt**

*Mark Swain*

From the initial drawing to the finalized product, this piece has been created with the use of free thought and wandering imagination. The idea behind this piece was a mixture of philosophy and imagination meeting at the junction. Experimentation was a big key to finding the right balance of color and design.

Elegant Graffiti

*Spray Paint and Charcoal*

**Bridget Cunningham**

*Mark Swain*

The artist used layers of soft colored spray paint to outline placed objects and then went back in with white charcoal for a final layer. The artist used natural plants and also lace, cut outs, and feathers.
Waiting #4

Oils, Watercolor, Acrylic, Spray Paint on Masonite

Connor McLennan

Mark Swain

This piece simply shows two musicians, waiting on each other’s next move within the song. The figure to the right is physically looking for signals of change while the figure on the left is listening for them. The models Angie Aguilar and Cassaudra Ikeler (also known as Jupiter) were asked to “jam” a couple of songs as they were being photographed.

Angel Above

Acrylic Paint, Magazine, Paper, Glue, Glitter

Nikki Nellen

Mark Swain

This painting is about the artist’s experience in Hawaii. The artist is in the middle of the painting and is looking over the city from a hotel room.

The Exploration and Process of Merging Multiple Images

Photography

Michael Progress

This project will describe the process of taking multiple images and merging them together to create one final image through the utilization of CS6 Illustrator and Photoshop. The project will explore the planning and thought process involved in creating the visual image not only verbally, but also through the presentation of both the raw images and one final image.

Remake in Rain

Oil on Canvas

Kate O’Neil

Mark Swain

This piece is a remake of one of Lenoid Fremov’s paintings. The artist experimented with a different color palette and a different texture. The use of bright, intense colors made this piece a particularly stunning re-creation.
Performances  
2-4 PM

Cut-up: From “Mistress Stella Speaks”
Undergraduate Student Project in Humanities
Christine Sellin
Dr. Simone Muench

This is a performance of a cut-up poem created from a pre-existing text “mistress stella speaks” by Tyehimba Jess.

A Humming Hunger
Undergraduate Student Project in Humanities
Christine Sellin
Dr. Simone Muench

This presentation is a bouts-rimés poem highlighting identity-consumption and futility that comes with trying to attain perfection.

Dinner with Dan
Undergraduate Student Project in Performing Arts
Roslyn Summerville
Dr. Simone Muench

“Dinner with Dan” is a flash fiction written piece that explores the link between domesticity and violence, the strange and the mundane.

Creationism and a Candy Dish
Undergraduate Student Project in Humanities
Deirdre McCormick
Dr. Simone Muench

“Creationism and a Candy Dish” is an imagistic series of poems inspired by the laws of nature and mystery of unanswered questions. Melding science and poetry, this series blends the boundaries between the two forms to produce a set of fantastic hypotheticals. Recently, this same series of works was accepted for presentation at the Sigma Tau Delta English Honors Society convention in Portland, Oregon.
Not Quite Ken

*Undergraduate Student Project in Performing Arts*

**Melissa Carrington**

*Dr. Simone Muench*

The poem “Not Quite Ken” focuses on the horrifying effects that harassment and bullying have on its victims.

Shane’s Journal: A Look at Love in the Zombie Apocalypse

*Undergraduate Student Project in Humanities*

**Megan Schlegel**

*Dr. Dawn Walts*

This project is a work of creative writing, looking at the events surrounding the zombie apocalypse in Robert Kirkman’s “The Walking Dead” through the eyes of Shane Walsh. As he is one of the most hotly debated characters of the series, this is an attempt to show what may be going through his head as the world ends.

Night Owl

*Undergraduate Student Project in Humanities*

**Alyssa Shershen**

*Dr. Simone Muench*

“Night Owl” is a creative short story which forces the reader to relate to the protagonist’s personal struggles as she tries to make a living in today’s world through impractical methods which are displayed as seemingly acceptable.

Self Portrait of I Am

*Undergraduate Student Project in Performing Arts*

**Timothy Fitzpatrick**

*Dr. Simone Muench*

Featured is a poem that explores the idea that an individual does not present a single face to the world. Instead we present multiple facets of ourselves.

The Word of the Rock

*Undergraduate Student Project in Performing Arts*

**Timothy Fitzpatrick**

*Dr. Simone Muench*

This is a short story that examines the value that is attached to ordinary objects.
An Erasure of Howl

*Undergraduate Student Project in Performing Arts*

**Timothy Fitzpatrick**

*Dr. Simone Muench*

Two poems will be presented that look for the poetry that has yet to be uncovered in previously crafted works.

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The Angel in the House:
An Exploration of the Female Identity

*Undergraduate Student Project in Performing Arts*

**Samantha Rydberg**

*Dr. Simone Muench*

The poem entitled “The Angel in the House” is an exploration of female identity and illustrates how under the threat of stereotypes, a young female responds to oppression. The self-portrait poem uses various perspectives and personas to add commentary on how the young female should identify herself in regards to female identity. The goal or result of the work is to inspire a strong female identity and help promote equality among all people.

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Piano Recital

*Adjunct Faculty Project in Performing Arts*

**Leandro Varady**

Pianist and Composer Leandro Lopez Varady will be performing a variety of music styles including Jazz, Latin, Bossa Nova, Tango and compositions by Bill Evans, Thelonius Monk, Bud Powell, Chick Corea, Keith Jarrett, Antonio Carlos Jobim and Ástor Piazzolla among others.
POSTERS
(See Presenters Index on Page 58)

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Session III (5:30-6:30 PM) 53
Session I  
2:30-3:30 PM

Novel Methods for Evaluation of the Effectiveness of Antimicrobial Nanoparticles

*Undergraduate Student Project in Math/Science*

Thomas Campbell, Kevin Burke, Alex Low and Julianne Sipos

*Dr. Jason Keleher*

This presentation is a look at improved methods for characterizing alternative antimicrobial agents.

Let’s Take Action: Applying Science Knowledge and Technology Skills through Service Learning Projects

*Undergraduate Student Project in Education*

Venessa Aguilar, Ashley Heckler, Lauren Biggs, Erin Cox, Ryan Newberry and Dr. Lauren Rentfro

*Dr. Lauren Rentfro*

Future elementary, special education, and secondary teachers designed and participated in a science-based service learning project.

Quantifying Parabens in Shampoos

*Undergraduate Student Project in Math/Science*

Kelsey Schmitt

*Dr. Teresa Bixby*

This study uses high-performance liquid chromatography (HPLC) to quantify what parabens are in shampoos.
Guided Imagery Use in Hospitalized Patients

*Undergraduate Student Project in Nursing*

**Kristin Kupczyk, Timothy Martin and Gianna Pavone**

*Dr. Kathleen Fitzgerald*

Evidence-based nursing research is the forefront for providing quality, cost effective and holistic patient care. For accelerated BSN students, the goal was to further explore the practice of guided imagery in the reduction of pain and anxiety for postoperative patients.

Effect of Quantum Dot Aggregation on Fluorescence

*Undergraduate Student Project in Math/Science*

**Russell Johnson, Zachary Widel and Logan Johnson**

*Dr. Jason Keleher*

The size-dependent properties of semiconductor quantum dots (QDs) make them ideal candidates for tunable absorbers/emitters in a wide range of applications, specifically solar energy harvesting. The fluorescence properties of these QDs can influence their efficiency in applications such as solar cells. Therefore, the factors that influence QD fluorescence need to be explored in order to achieve the highest efficiencies.

Content Analysis and Comparison of Music Video Genres

*Undergraduate Student Project in Social Science*

**Jeff Weiss**

*Dr. Gail Gehrig*

Music videos appealing to youth, featuring hip hop, R&B and pop music performances were analyzed and compared for their potential portrayal of extreme male or female body images, drug and alcohol use, and the consequences of drug and alcohol use. Findings revealed no negative consequences of drug and alcohol use in videos for any of the three music genres. However differences in the frequency of drug and alcohol use, and portrayal of extreme body images were found.

Surface Chemical Characterization of ZnO Nanoparticles

*Undergraduate Student Project in Math/Science*

**Anton Uhlen and Christopher Rimmke**

*Dr. John Parker*

This work examines the surface characterization of ZnO nanoparticles that are used as templates for forming micro and mezzo porous nanostructures.
The Impact of Population Growth

*Undergraduate Student Project in Humanities*

**Katy Newberg**

*Br. Tom Dupré, FSC*

The future of our planet is very uncertain. Rapid population growth has caused social, environmental, and economic consequences that are only getting worse. With limited resources, humanity must find ways to curb population growth in order to provide for the wellbeing of future generations.

Synthesis of Functionalized Nanoparticles for Enhanced Latent Print Quality

*Undergraduate Student Project in Math/Science*

**Cassandra Myers and Dominic Rebollar**

*Dr. Jason Keleher*

In the current capacity of forensic investigation, a myriad of different fingerprint powders are utilized to develop latent fingerprints. However, some powders are superior to others when outlining prints for visual comparison. This research sought to develop an aerosol-based reagent to develop latent prints on different surfaces.

Treating an Atypical Injury in an Adolescent Baseball Player: A Case Report on Brachial Plexopathy/Erb’s Palsy

*Undergraduate Student Project in Nursing*

**Joshua Streacker, Brent Smith and Lark Welch**

*Brent Smith*

This case report studies an adolescent who has had Brachial Plexopathy/Erb’s Palsy from birth and participated in baseball. It provides a detailed review of the condition as well as a discrimination of the clinical treatment.

Observing Electric Dipole and Quadrupole Effects from Scattered Laser Light

*Undergraduate Student Project in Math/Science*

**Ernest Knight**

*Dr. Joseph Kozminski*

This presentation highlights the development of an apparatus that allows the direct observation of electric dipole and quadrupole effects resulting from the scattering of polarized laser light.
Comparison of Bullying Perceptions and Bullying Prevention Programs Across Three Samples of Youth

Undergraduate Student Project in Social Science
Jennifer Collins, Molly McDonald, Jeremy Wiseman, Brianna O’Rozco and Karnilla Kalfus

Dr. Gail Gehrig

Applied Sociology students surveyed and observed three samples of children, including two groups considered to be “at-risk” youth, who were involved in youth mentoring and bullying prevention programs. Findings from the research were compared with those of national studies and were incorporated to improve the bullying awareness and prevention programs offered through the Lewis University Big Brothers Big Sisters program and River Valley Elementary School in Lemont.

Molecular Level Evaluation of the Binding Mechanism Between Pesticides/Herbicides and Soil

Undergraduate Student Project in Math/Science
Lauren Jacobson, Sara Meyer, Emily Grimm, Cassandra Myers and Dipa Patel

Dr. Jason Keleher

This work explores the physiochemical interactions between simulated soil particles and a widely used agricultural herbicide for weed management. More specifically, this work determined which conditions had a significant effect on the binding/adsorption of the herbicide to the simulated soil media. Langmuir binding isotherms coupled with molecular simulation provide mechanistic understanding that will play a role in shaping the design of next generation remediation technologies for reduction of herbicide transport in the soil.
Family Presence During Resuscitation

*Undergraduate Student Project in Nursing*

**Jade Diaz, Melissa Kerr and Kimberly Yung**

**Dr. Kathleen Fitzgerald**

Three nursing research articles were critically appraised for the purpose of devising a recommendation related to allowing family members to be present during resuscitation and invasive procedures. Recommendations were based on evidence from surveys of different healthcare professionals, family members, and patients on the topic of family presence during resuscitation and invasive procedures.

Investigation of the Chemical Mechanical Planarization (CMP) of Sapphire

*Undergraduate Student Project in Math/Science*

**Kelly Tillman**

**Dr. Jason Keleher**

Effective sapphire Chemical Mechanical Planarization (CMP) is still evolving. The efforts of this study focused on basic chemical and mechanical investigations in an attempt to better understand interactions at the sapphire surface. This was accomplished via changes in the material removal rate (MRR) of the substrate.

Determining Slurry Additive Binding Relevant to Shallow Trench Isolation (STI) CMP

*Undergraduate Student Project in Math/Science*

**Daniel Cash**

**Dr. Jason Keleher**

Chemical Mechanical Planarization (CMP) has emerged as a critical technology for achieving global planarization in advanced integrated circuit manufacturing. The CMP process is used to remove surface irregularities and to obtain uniform planarization of a silicon wafer surface. This research will focus on elucidating key interactions between slurry additives and substrates.

Interferential Current: An Effective Pain Modulator as Described by Patients

*Faculty Project in Math/Science*

**Lark Welch**

This study was conducted on patients who were reporting to skilled physical therapy for conditions of the knee, the shoulder and the spine. Plans of care of the patients’ treatments included electrical stimulation of interferential current (IFC) to modulate their pain during rehabilitation. Patients’ overall outcomes are described and quantified in terms of number of visits as well as effects of the IFC modality on pain modulation for the medical conditions.
Session II
4-5 PM

Health Risk Assessment, Management, and Health Promotion for Head Start Caregivers

Undergraduate Student Project in Nursing
Blake Honiotes
Anne McShane

The goal of this project was to provide over 100 Catholic Charities Diocese of Joliet Head Start staff, including teachers and administrators, with education at the annual Health Institute Pre-Service Training session. The topics included information regarding common childhood conditions that may prevent a child from participating in program activities. After this instruction, they were able to effectively recognize whether or not the child should be sent home from school.

Efficient Synthesis Method for Modulating Particle Size of Antimicrobial Nanoparticles

Undergraduate Student Project in Math/Science
Kevin Burke, Thomas Campbell, Alex Low and Julianne Sipos
Dr. Jason Keleher

This research focused on the photochemical synthesis of silver (Ag) functionalized nanoparticles with antibacterial capabilities. More specifically, a synthetic method utilizing the photochemical properties of titanium dioxide (TiO2) to reduce Ag+ ions onto the surface as nano-metal was developed. As pH levels increase, particle size increases slowly until the particles reach their isoelectric point.
Apply The Right
Undergraduate Student Project in Social Science
Dominika Niemiec, Wendy Hutchinson, Giselle Ochoa and Julie Howes
Dr. Gail Gehrig

Students in three Lewis University Cultural Diversity classes, participated in a pre-election survey designed to determine the most important political issues, the students’ political affiliations, and their anticipated participation in the 2012 Presidential election. Survey respondents chose the five most pressing political issues from a list of 28 issues in addition to answering questions pertaining to demographics, party affiliation, registration status, voting plans, and main sources of political information.

Mu2e Fast Extinction Proton Flux
Undergraduate Student Project in Math/Science
Andrew Trovato and Alec Pickett
Dr. Ryan Hooper

G4beamline simulations were run to determine the off beam axis proton flux that is generated after a high intensity 8GeV proton beam collides with a 5 m titanium target. This measurement will be useful in the design of the Fast Extinction monitor for Fermi National Accelerator Laboratory’s (FNAL) Mu2E experiment.

Integrating iPads into the Mathematics Curriculum
Undergraduate Student Project in Education
Magdalena Jazowski
Erica Kwiatkowski-Egizio

The goal of this project is to obtain an understanding of how and why technology, particularly iPads, plays a role in elementary math classrooms. The main aspect of the project will be acquiring results from students who use math iPad applications during Family Math, Science, and Literacy Night at Lewis University. Results will be analyzed and compared to what has been already concluded in the current research on iPads in the elementary classroom.

Construction of a Cosmic Ray Telescope for Measuring Muon Flux
Undergraduate Student Project in Math/Science
Elizabeth De Waard and Megan Szubert
Dr. Joseph Kozminski

A home-built Berkeley Lab-style cosmic ray telescope has been constructed and used to measure the muon flux at ground-level.
Bringing Health Education to Families in Need: A Service Learning Project

*Undergraduate Student Project in Nursing*

Mary Kate Kitchin, Brandon Cruz and Ivette Manzo

Anne McShane

Pediatric nursing students presented bilingual health education to underserved families at St. John’s Head Start in Joliet. Using an interdisciplinary approach, the nursing students, translators, and faculty collaborated to create posters in Spanish and English that relate to current and relevant health concerns. The goal was to promote health and prevent illness for the parents and their children by empowering them with knowledge.

Biomimetic Antimicrobial Hydrogel Nanocomposite for Next Generation Wound Management Materials

*Undergraduate Student Project in Math/Science*

Samantha Rinehart, Amy Mlynarski, Bianca Garcia and Samantha Brain

Dr. Jason Keleher

This research works on designing a new wound management material with biomimetic polymers. With the addition of nanoparticles, these hydrogels are effective in reducing bacterial growth, swelling and absorbing water found in the ever-changing wound environment, and currently, these gels are being tested on the effect of human dermal cell growth.
Re-entry of Women to Society after Incarceration: One-stop Shop Re-entry Services that Help Reduce Recidivism

*Undergraduate Student Project in Social Science*

**Martenia Elizabeth**

*Ruth Osuch*

The research presents findings from 50 case records from AGAPE Mission to help women return to society after incarceration. The particular focus is on the types and amount of services women need to prevent recidivism.

Tunable Quantum Dots for Scintillator and Waveshifter Applications

*Undergraduate Student Project in Math/Science*

**John Ephraim and Kathleen Skopec**

*Dr. Joseph Kozminski*

Organic plastic scintillators and waveshifters play a very important role in detecting charged particles and have applications in high energy and nuclear physics, beam therapy monitoring, and homeland security. Scintillators luminesce when ionizing radiation excites molecules in the scintillator, and waveshifters absorb light at one wavelength and emit it at a longer wavelength. The tunable QDs are synthesized using basic, cost-efficient methods and are subsequently dispersed homogenously in a polymer matrix.
The Presence of Children and Youth with Disabilities on Charter and Private School Websites

Undergraduate Student Project in Education
Ashley Gazda, Nader Batayeh, Megan Blum, Samantha Bosi, Michelle Brandon, Christine Carey, Brendan Casey, Jordan Dobbyn, Kaitlyn Evoy, Guluzar Incekara, Sarah Langheld, Kyle McKinley, Sandra Saunders

Dr. William Blackwell

This is an undergraduate team research project conducted by the 13 students in the Development and Characteristics of Learners course, designed for future special education teachers in the College of Education. The project examines the extent to which Web content on Illinois charter and private school Websites welcomes and encourages the enrollment of children and youth with disabilities in these schools.

Evaluation of Mechanisms Relevant to the Chemical Mechanical Planarization of HDD Media

Undergraduate Student Project in Math/Science
Jordan Kaiser and Meghan Nichol

Dr. Jason Keleher

This research involves the use of a benchtop polisher, monitored motor current, and contact angle values between the substrate and slurry to test surface wetting and material removal rate (MRR). Altering the type of polyurethane-based polishing pad, abrasive particle size/concentration, as well as the chain length/concentration of additives present in the slurry, will provide critical mechanistic information necessary for the development of next generation NiP slurries.
**Nursing and CAM: Keeping our Patients Comfortable**

*Undergraduate Student Project in Nursing*

**Melissa Pagliaro, Allysha Jones, Roxana Barrios**

*Dr. Kathleen Fitzgerald*

This poster presentation regards the effects of complementary and alternative medicine on pain and anxiety levels in pregnant women, women undergoing mastectomy, and post-operative cardiac patients. Research conducted by nurses regarding yoga and music therapy were critically appraised for this presentation.

**Flexible Anodic Quantum Dot Nanocomposites for Bio-inspired Solar Energy Applications**

*Undergraduate Student Project in Math/Science*

**John Ephraim, Russell Johnson, Natalie Garcia, Hubert Bilan, Dominic Rebollar and Logan Johnson**

*Dr. Jason Keleher*

Building on a molecular understanding of photosynthesis and the established electron transfer principles of quantum dot-sensitized solar cells (QDSSC), this work has begun to develop flexible anodic nanomaterials for use in solar energy production.

**Application of Quantum Dot Nanocomposites for Photo-induced Production of Hydrogen**

*Undergraduate Student Project in Math/Science*

**Zachary Widel, Hubert Bilan and Dominic Rebollar**

*Dr. Jason Keleher*

The excitation of quantum dots (QDs) by light sources make them ideal candidates for the splitting of water molecules involved in hydrogen production. The properties of the QDs directly impact their ability to effectively split water molecules into hydrogen and oxygen gas. Therefore, the factors that affect the reaction between the QDs, water, and the light source need to be explored in order to maximize the efficiency of hydrogen production.
The Use of Confocal Fluorescence Microscopy to Characterize Quantum Dots

*Undergraduate Student Project in Math/Science*

**Thomas Rickhoff and Matthew Kubacki**

*Dr. Teresa Bixby*

Quantum dots are nano-sized semiconductor crystals that hold unique properties due to their very small size. Their applications range from electronics to cell imaging and cancer therapy. Here, a confocal fluorescence microscope is constructed and used to characterize quantum dots synthesized for solar cell applications.

Translating Evidence into Practice: Redesigning a Nursing Research Course

*Faculty Project in Nursing*

**Dr. Kathleen Fitzgerald and Dr. Stacie Elder**

The purpose of this study was to determine if changes in a Nursing Research course resulted in changes in the students perception of evidence-based practice.
Session III
5:30-6:30 PM

Counseling and Technology: Pros, Cons, and Areas to be Protected

*Undergraduate Student Project in Social Science*
*Kelly Ortega, Joseph LoBue, Jeanette Alksnis and Brittany Shereyk*

*Kimberly Duris*

This poster presentation will explore the various uses of telecommunication in mental health counseling. The many positive and negative consequences of introducing the use of technology in the client-counselor relationship will be identified. In addition, the need for acute attention to the various ethical issues related to the use of technology will be examined.

The Value of Healthcare Leadership Certification

*Graduate Student Project in Nursing*
*Kara Nelis, Dana Rickard, Pamela Perona and Jorge Bolanos*

*Dr. Michele Kramer*

The purpose of this project was to learn not only the number of leadership certifications within the Illinois Organization of Nurse Leaders (IONL) but also the motivators, barriers, and benefits to obtaining these certifications.

Confidentiality vs. Duty to Protect: Ethical Issues Among Clients Diagnosed with HIV/AIDS

*Graduate Student Project in Social Science*
*Cyndie Penrose and Samantha Tyree*

*Kimberly Duris*

This presentation examines the ethical issues related to providing mental health counseling services to clients diagnosed with HIV/AIDS. Confidentiality, duty to protect, and compliance with federal and state laws regarding this piece of protected health information will be reviewed.
STEM to STEAM: How Science Shapes Art

*Graduate Student Project in Education*

**Lauren Rentfro, Brenda Rentfro, Laura Kerlin, Anthony Romeo, Matthew Macaluso and Kelly Rose**

*Dr. Lauren Rentfro*

This study highlights the true connections between art and science. The application of science concepts to the creation of artwork has been explored with high school students.

Interpersonal Therapy Applied to the Case of Jessica

*Graduate Student Project in Social Science*

**Ashlyn Alexander, Renee Makris, KaSandra Johnson, Shawnna Strausberger and Alisa Wood**

*Dr. Katherine Helm*

This presentation will evaluate the effectiveness of interpersonal therapy regarding treatment in the case study of Jessica, a client diagnosed with major depression.

An Interventional Study on Self-Efficacy of Exercise in Patients Receiving Cardiac Resynchronization Therapy

*Graduate Student Project in Nursing*

**Valerie Fleishman and Dr. Daisy Sherry**

*Dr. Daisy Sherry*

Though the benefits of regular physical activity are well known, it is difficult for people to adopt this health-promoting behavior. A randomized controlled study was performed to investigate the intervention of motivational interviewing (MI) on self-efficacy levels of a patient population with known barriers to physical activity. The group receiving MI showed a greater increase in self-efficacy for exercise levels than the control group, predicting that this intervention may be useful for other populations struggling with the performance of physical activity.
The Fellow Traveler: Existential Therapy and Adolescent Identity Conflicts

**Graduate Student Project in Social Science**

**Lindsay Grajek, Lee Carr, Pamela Robinson, Shauntel Bolton and Tamika Drew**

**Dr. Katherine Helm**

This poster will explore how Existential therapy can be used to identify, understand and treat adolescent identity conflicts. Existential therapy is uniquely qualified to examine adolescent conflicts because it explores how anxiety is fundamental to the human experience.

College Preparatory Advising Throughout K-12 Leads to College Graduation

**Graduate Student Project in Education**

**Joni Scott**

**Dr. Lesley Page**

A college-readiness approach is incorporated in the curriculum during K-12 years to prepare students and their parents in developing a college-bound mindset. Students and their parents are instructed by implementation exercises to get hands-on methods which are expected to develop skill sets that promote high school and college graduation.

An Exploration of the Attachment Relationship Between Caregivers, Infants, and Family Dynamics Using Object Relationship Theory

**Graduate Student Project in Social Science**

**Elizabeth Ruberry, Rachel Keen, Joe LoBue, Rodney Williams and Albert White**

**Dr. Katherine Helm**

This poster will explore attachment relationships between caregivers and infants and their impact on family dynamics and future interpersonal relationships utilizing an object relations lens. Object relations explore how early attachment relationships impact our ability to form healthy attachment patterns with others later in life. This poster will explain specific treatment interventions in object relations that can help provide clients with corrective emotional/relational experiences in therapy that then get generalized to client’s relationships outside the therapeutic setting.
Changing Hospital Culture: Collaborative Response to Emergency Cesarean Sections

*Undergraduate Student Project in Nursing*

**Katherine Hodur, Sally Krempel, Joan Rucker and Barbara Schuch**

*Dr. Gwen Svoboda*

This project involves a process improvement plan in response to the 2012 Illinois Department of Public Health’s (IDPH) recommendation from the Level II redesignation site visit at this group’s institution. This recommendation called for an ongoing audit process of, and compliance with the American College of Obstetrics and Gynecology’s (ACOG) “30-minute rule” standard, i.e. the decision to incision time for emergency cesarean sections.

Practitioner Perspectives Regarding Evidence-based Practices

*Graduate Student Project in Education*

**Nataly Toubassi and Dr. Mary Fisher**

*Dr. Mary Fisher*

This poster session will present findings from an interview study with teacher practitioners regarding their process for selecting effective evidence-based practices for their students.

www.counselme.com

*Undergraduate Student Project in Social Science*

**Michael Harper, Marisa Caballero, Kristine Cain-Kulig and Shinelle Taylor**

*Kimberly Duris*

Distance counseling is becoming a prominent part of the field and professionals have expressed concerns about the efficacy of distance counseling compared to traditional counseling. This poster presentation will investigate the different types of distance counseling including, but not limited to, tele-counseling and web counseling, and compare those to the traditional counseling setting.

The Use of Interpersonal and Narrative Therapies in Trauma Treatment

*Graduate Student Project in Social Science*

**Kimberly Falbo, Samantha Tyree, Samantha Bill, Gabrielle Abogado and Cyndie Penrose**

*Dr. Katherine Helm*

This study explores the use of narrative and interpersonal theories for the treatment of trauma cases and those with PTSD.
A Professional Development Program for Meso-Level Nurse Leaders

Graduate Student Project in Nursing
Reidun Juszczak, Anu Stephen and Amanda Los

Dr. Anne Porter

Literature supports the need for professional development programs for meso (middle) level nurse leaders, such as charge nurses, to help increase employee retention and to support high quality, safe patient care. Creating a professional development program specifically for the meso-level nurse leader, will help the nurse grow professionally and will also allow leadership to meet its strategic vision, which in the end leads to organizational success. The graduate nursing student team worked with a large Midwestern health system’s nursing leaders to create a prototype for a professional development program for meso-level nurse leaders that could be offered in addition to the current development program for staff nurses.

Shoot! The Counselor Took My Gun!

Graduate Student Project in Social Science
Kristina Annerino, Shawnna Strausberger and J. Connor Self

Kimberly Duris

The presentation is an examination of the client-counselor relationship and the ethical issues that may arise when working with a “dangerous patient” and regulations attached to the client’s firearm ownership.

Toolkit for Success: Optimizing Utilization of APNs and PAs

Graduate Student Project in Nursing
Mary Summins, Marjorie Wisniewski and Erin Slade-Smith

Dr. Anne Porter

To assist healthcare leaders more effectively utilize Advanced Practice Nurses (APN) and Physician Assistants (PA) in their organizations, a team of graduate nursing students researched successes, barriers and misinformation about APN and PA preparation and practice. The team created a toolkit of materials and media for Chicago area leaders and clinicians. The toolkit includes APN/PA educational program grids, lists of available certifications, an annotated bibliography, FAQs and a PowerPoint presentation.
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