

# Introduction

We are excited to host the fifth annual CARS (Creative Activity and Research Showcase) event, which highlights the achievements of Nazareth's undergraduate and graduate students. CARS 2016 features more than 190 students who will display their work in a variety of formats, including performances, posters, and paper presentations.

The CARS event highlights the remarkable breadth and depth of the academic activities available to the students at Nazareth, ranging from scientific research to theater and dance performances. It also underscores the value of a Nazareth education, which partners faculty and students who are dedicated to learning and discovery.

I hope you are as impressed as I am with the many achievements of our students.

Sincerely,

A handwritten signature in cursive script that reads "Daan Braveman".

Daan Braveman  
President, Nazareth College

On behalf of the Office of Sponsored Programs and Faculty Research, which hosts the annual CARS event, we would like to thank our volunteers who have given their time to serve on the planning committee or as judges. We appreciate your commitment to the CARS event and acknowledge that CARS would not exist without support of the College community. Thank you.

### **CARS 2016 Judges**

Rachel Bailey Jones  
Laura Barnard  
Andrew Bartlett  
Brendan Bond  
Priyanka Borpujari  
Celia Bradley  
Lisa Cerami  
Leanne Charlesworth  
Lindsay Chasse  
Amy Clements  
Heather Coles  
Isabel Cordova  
Michelle Donahue  
Kim Dunay  
Jacob Ertl  
Debbie Godsen DePalma  
Rose Hair  
Bill Hallahan  
Liz Hebert  
Stephen Hill  
Maria Hopkins  
Kelly Hutchinson

Nadine Hylton  
Shanna Jamanis  
Melissa Johnson  
Nicole Juersivich  
Carolyn Lagoe  
Mary Maher  
Lynne Marus  
Samantha Nolte-Yupari  
Cathy Rasmussen  
John Reef  
Jennifer Reid  
Linda Riek  
Kevin Riordan  
Elizabeth Robinson  
Margaret Rollins  
Marjorie Roth  
Matthew Schoell  
Beverly Smoker  
Leah Stacy  
Megan Tobin  
Steve Tolson

### **CARS 2016 Committee**

Mary Kay Bradley (Communication Sciences and Disorders)  
Michelle Donahue (Physical Therapy)  
Catherine Doyle (Library)  
Diane Enerson (Psychology and Higher Education Student Affairs Administration)  
Douglas Gutheil (Psychology)  
Jennifer Harman (Sponsored Programs and Faculty Research)  
Debra Mathewson (Sponsored Programs and Faculty Research)  
Kimberly McGann (Sociology and Anthropology)  
Stephen Tajc (Chemistry)  
Octavio Vazquez (Music)  
Edward Wiltse (English and Communication)  
Amanda Wright (Graduate Assistant)

## Program at a Glance

<b>Format</b>	<b>Location</b>	<b>Time</b>
Welcome/Opening with President Braveman	Arts Center: A14	<b>1:00 – 1:10 p.m.</b>
Paper Presentations	Arts Center: A71	<b>1:15 p.m.</b> Confronting Terrorism: A “Willingness to be Disturbed” <b>2:30 p.m.</b> Berlin: The Smelting Pot
Paper Presentations	Arts Center: A72	<b>1:15 p.m.</b> Youth Marginalization and The School to Prison Pipeline in “The Wire”  The Snitching Epidemic: Evidence of a Failed Police Initiative  Donde No Hay Doctor – Where There Is No Doctor <b>2:30 p.m.</b> Staying Green in a Sea of Purple: How the Emerald Isle Escaped the Roman Empire’s Reach  Core Religion Classes – Under-rated  Avoiding Death like the Plague
Performances	Arts Center: A13	<b>1:30 p.m.</b> Old Wine in New Bottles <b>1:45 p.m.</b> Petite Symphonie by Charles Gounod <b>2:00 p.m.</b> Two Flautists <b>2:15 p.m.</b> The Magician’s Daughter <b>2:30 p.m.</b> Until My Country Returns: A Story of Terror <b>2:45 p.m.</b> Selected Numbers from Grease <b>3:00 p.m.</b> Panel Discussion
Posters	Arts Center: Upper Lobby and Lower Lobby	<b>2:00 – 3:30 p.m.</b>
Award Announcements/ Closing Reception with Dr. Varhus	Arts Center Upper Lobby	<b>3:30 – 4:00 p.m.</b>

## **Core Milestone Experience**

The Core Milestone Experience (CME) gives students the opportunity to draw on the wide variety of perspectives from their Uncommon Core classes and do a creative project that explores an enduring or “messy” question that interests them.

Some of the enduring questions that students explored this semester include:

- Why do we play games?
- Can you measure knowledge?
- How is falling in love influenced by social forces?
- How do children view other children with disabilities?
- What does it mean to heal?
- How does language impact opportunity?
- How do concepts of young and old change by time and place?

Students used a wide variety of mediums to explore their questions, underscoring the creative and interdisciplinary perspectives they learned in the core. Some examples include:

- Original rap lyrics performed and recorded
- A set of sculptures
- A digital collage
- A website curating related social media posts as well as original blogging
- An iMovie with interviews and animates drawings

This year, the faculty teaching the CME have invited students who did projects of exceptional distinction to share their work during CARS. Please visit the Lipson Lounge during the poster session to see the wide variety of exciting and insightful projects that students have created!

### **The Nazareth Undergraduate and Graduate Art Exhibitions will be open from**

**12:00 p.m. – 5:00 p.m. in the Arts Center and the Colacino Galleries**

The Undergraduate Student Exhibition and the Graduate Exhibition are annual events in which Art students submit their best work in a variety of media to be considered for the shows. Faculty panels jury the work for acceptance into the shows. Students are involved in every aspect of the exhibitions, including designing the posters, hanging the shows, and preparing the receptions. Once the shows are mounted, an outside judge selects pieces for awards in each category (best painting, best sculpture, etc.) and an overall Best in Show.

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## Paper Presentations

### Diana Batchelor

**Title:** Staying Green in a Sea of Purple: How the Emerald Isle Escaped the Roman Empire's Reach

**Faculty Sponsor:** Professor Timothy Thibodeau, History

**Abstract:** This is a piece of historical research that prods the question as to why the Roman Empire never engaged in conquest in Ireland when it was clearly known by them. In this analysis, I engage in frequent historiographic analysis, assessment of ancient primary sources, and pieces of archeological evidence. This is one of my favorite parts of history.

**Reason for Participating:** I was encouraged by my Dr. Thibodeau; he advocated that I should showcase my hard work.

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### William Cleeton-Gandino

**Title:** The Snitching Epidemic: Evidence of a Failed Police Initiative

**Faculty Sponsor:** Professor Ed Wiltse, English

**Abstract:** David Simon's HBO drama *The Wire* effectively illustrates many problems with police-community relations. Comparing what is shown in the drama to real-life sources uncovers just how accurate Simon's drama truly is. Police are constantly trying to manipulate their way into higher conviction rates. In retaliation to this policing tactic, during the last 15 years, there has been a fight against snitching in environments most targeted by police. Mainstream media's condemnation of the stop snitching movement does not take into account the social as well as economic circumstances that lead to communal distrust of police. Police are a protected, and many times unregulated, force that act as "regulators" of marginalized communities. They try to manipulate individuals into snitching on their fellows, sometimes through illegal methods. They cannot understand these communities because the vast majority of police do not live in the neighborhoods that they police nor are they representative racially or socioeconomically of the people that they police. The fight against snitching is the fight against the white exploitation of a largely minority community. The distinct separation between police and members of impoverished areas causes a mistrust that cannot be corrected until these communities are allowed to police themselves.

**Reason for Participating:** I am participating to shed light on a topic that many Nazareth students and faculty may have never even thought about.

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## **Gwendolyn Dougherty**

**Title:** Avoiding Death like the Plague

**Faculty Sponsor:** Professor Timothy Thibodeau, History

**Abstract:** This is a research paper about wound care techniques used in Ancient Rome. I researched and analyzed different documents in order to understand how the Ancient Roman army took care of its wounded; were the techniques primitive or were they more advanced than people may believe? This paper was for Dr. Thibodeau's Roman Empire course and gave me the opportunity to combine my major, Physical Therapy, with my history minor and bring two seemingly different worlds together.

**Reason for Participating:** I will be presenting this paper at the Phi Alpha Theta conference in the beginning of April to a large number of people involved in the study of history. I wanted to also present this to the Naz campus to show that 1) history is fascinating, 2) that science and history can go hand in hand, and 3) Dr. Thibodeau asked me to.

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## **Elaina Hedberg, Alyssia Santiago, Ethan Kelley, Lauryn Krebs, Elisabeth Sojer**

**Title:** Berlin: The Smelting Pot

**Faculty Sponsor:** Professor Lisa Cerami, Foreign Languages and Literature

**Abstract:** Berlin is a very diverse city. As the capital of Germany, it is experiencing the largest mass migration of people since World War II. Due to this phenomenon, there have been many changes in the city leading to a blending of cultures, making it comparable to a "Smelting Pot." After brainstorming several different topics and discussing our shared experiences in Berlin, we decided to focus on certain contemporary cultural aspects that reflect the overall theme of this "Smelting Pot." Our topics include: gentrification, the district of Kreuzberg, craft beer, the Berlin International Film Festival, and the integration of immigrants. These topics were chosen based on our level of interest and their relevance to modern Berlin culture. Through both research and reflection of our own personal observations, we developed our conclusions. We prepared short papers on each of our topics which we will present at our panel, discussing what we have learned.

**Reason for Participating:** GER 223, German Immigration

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## **Maria C Lawson**

**Title:** Core Religion Courses - Under-rated

**Faculty Sponsor:** Professor Muhammed Shafiq, Interfaith Studies and Dialogue

**Abstract:** I am a 52 year old "Adult Learner". Back in college after 30 years, I am a part of the accelerated RN-BSN Program. I took my first World Religion class, a core course during my first semester at Nazareth. I would like to submit a paper that I will write based on several assignments from Religion and Nursing. I would like to share a PowerPoint presentation on the importance of, specifically, World Religion. How it has affected me as a learner and a Nurse. I feel that so many students feel core classes are just something they need to "get through". This is something that, for me, would have been a huge mistake because it has re-shaped my way of thinking, my views of the world and changed the way I intend to re-approach my role as a Nurse in today's society.

**Reason for Participating:** A desire to share what World Religion, a core course for my program, has done for my learning, my way of thinking about the world. It has helped me step out of my comfort zone and made me re-think life and my career, as a whole. I feel it is important to stress the value of core courses.

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## **Brittany Smith, Sabrina Squires, Ya'qub Shabazz**

**Title:** Confronting Terrorism: A "Willingness to be Disturbed"

**Faculty Sponsor:** Professor Yamuna Sangarsivam, Anthropology and Sociology

**Abstract:** This project is a collaborative, multidisciplinary effort of students working in several different courses including Anthropology of Terrorism in the Anthropology Program, Liberation Movements in the Religious Studies Program, and Trauma and Survival in the History Program. We are exploring what it means to live in a world where poverty becomes a form of terrorism, when detainment or incarceration becomes a form of terrorism, and what it means to cope with the aftermath of a terrorist attack. Employing a multidisciplinary methodological approach to the study of terrorism, we will be using ethnographic fieldwork, oral history and memoirs as primary documents, and textual analysis of the practice of a "willingness to be disturbed" as a process of researching the contradictions of how terrorism is defined by critically examining how and who we categorize as a terrorist. We are all committed to critically analyzing the systematic processes of creating structures and institutions to set in place the practice of marginalizing those we deem as a threat to us. Our intention is to confront the ways that governments have been justifying the use of terrorist tactics to further separate people and continue the underlying practices of racism and discrimination.

**Reason for Participating:** Our reason for participation is to come together as students from a multiplicity of backgrounds to engage others in our methodological approach of terrorism- that really contradicts what many individuals see as normal. By reversing our way of thinking we hope to share with others the underlying issues of racism and terror our Government uses.

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## **Sarah Speer**

**Title:** Youth Marginalization and The School to Prison Pipeline in "The Wire"

**Faculty Sponsor:** Professor Edward Wiltse, English

**Abstract:** For an English class taught by Dr. Wiltse at Nazareth I watched the television series "The Wire," which deals with issues of poverty, race, policing, and drug violence in the city of Baltimore. Season four of the show focuses on the lives of children attending a middle school in Baltimore and showcases how youths who are marginalized racially and socioeconomically as they are Black and poor and live in violent neighborhoods, are more "at risk" for getting into trouble in school, which can lead to later incarceration in life. We see this happen with two students, who come from particularly marginalizing situations, Randy and Laetitia, showing that it is often kids from marginalizing backgrounds (poverty, having parents in prison, coming from violent or broken homes or foster care,) who are the most likely to get in trouble at school and get caught up in the school to prison pipeline, through which they may face immediate incarceration, or be imprisoned later in life. For this class I wrote a fifteen page paper discussing how the characters of Randy and Laetitia showcase this phenomenon, to draw attention to the concept that the school to prison pipeline is a giant problem and that the zero tolerance policies in schools which expose children to police and suspend or expel them at high rates are problematic, as they disproportionately affect kids coming from harsher circumstances in life and serve to propagate these harsh circumstances that such kids must face.

**Reason for Participating:** I care about the issue of the school to prison pipeline very much and I plan on becoming an art teacher. I currently work in the Rochester City School district through Partners for Learning at Nazareth, and I see firsthand how this faulty system works. I appreciate any opportunity to write about and discuss this issue, and to practice my ability to talk about the issue.

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## **Anabel Torijano**

**Title:** Donde No Hay Doctor- Where There is No Doctor

**Faculty Sponsor:** Professor Esperanza Roncero, Foreign Languages and Literature

**Abstract:** This project focuses on translation from Spanish to English and from English to Spanish. The books translated were Donde no hay doctor (David Werner) and Where there is no Doctor (David Werner). The goal of this project was to experience the difficulties that one encounters while translating documents.

**Reason for Participating:** SPN 402, Spanish Senior Seminar

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## Performances

### **Katrina Angell**

**Title:** The Magician's Daughter

**Faculty Sponsor:** Professor John Reef, Music

**Abstract:** I would like to perform a spoken word poem (or 'performance poetry') piece, which is something that I perform vocally, onstage, relying only on the words (and some hand gestures) of a strong, personal poem. (I also wear a theme-related costume.) This piece is called "The Magician's Daughter" and it's about the struggles of living with a manipulative alcoholic father, and the elusive nature of addiction. I have enjoyed being a performance poet for years and like to express my feelings and opinions through this medium and engage the audience in thought-provoking pieces.

**Reason for Participating:** I would really love to be able to present my performance style here at Naz (I have mostly worked professionally in Colorado, where I used to live) and I like challenging and entertaining audiences about important, personal issues they can relate to.

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### **Stacey Coogan**

**Title:** Until My Country Returns: A Story of Terror

**Faculty Sponsor:** Professor Yamuna Sangarasivam, Sociology and Anthropology

**Abstract:** "Until My Country Returns: A Story of Terror" is a musical representation of the Israeli-Palestine conflict. It is an interdisciplinary portrayal from an anthropological, critical examination of terrorism. The composition is influenced by the countries different national anthems to showcase the effects of nationalism in war. I also utilize extended instrumental techniques to artistically illustrate components of the conflict such as hijacking airplanes, gun shots, and displacement. The final melody is influenced by John Lennon's "Imagine" to invite the audience to envision nonviolent solutions to violent issues of nationalism, terrorism, state-sponsored violence, and racism. I decided to employ my research through music because music seeks attention and draws connections to the audience on deep levels. This conflict is not discussed in America objectively and I hope this piece of music will represent the war, terrorism, and occupation in a truthful light.

**Reason for Participating:** ANT 336, Anthropology of Terrorism

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**Josh Feldman, Abby Prem, Abby Voss, Alexis Maxam, Anastasia Pembroke, Anna Kostakis, Chris Peterkin, Chris Salvaggio, Emily Mullin, Erich Bonitz, Ged Owen, Grant Richards, Jacob Smith, Janna Kozloski, John Connors, Justin Smith, Kaitie Buckert, Matt Combs, Meghan Palmer, Michaela Groth, Mike Schuetz, Olivia Bauso, Peter Smith, Regan Stacey, Seth Hatch**

**Title:** Selected Numbers from Grease

**Faculty Sponsor:** Professor Corinne Aquilina, Theater and Dance

**Abstract:** A brief preview of the upcoming Theatre and Dance Department musical theatre production of Grease.

**Reason for Participating:** BFA Musical Theatre Majors

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## **Enrico Iraci**

**Title:** Old Wine in New Bottles

**Faculty Sponsor:** Professor Jared Chase, Music

**Abstract:** 1) Conduct the Nazareth College Chamber Winds Ensemble. 2) Studied conducting privately with Dr. Chase as well as observed and rehearsed the Chamber Winds. 3) To obtain more live experiences as an instrumental conductor.

**Reason for Participating:** MUP 101, Applied Conducting

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## **Caroline Sharza and Heather Langley**

**Title:** Two Flautists

**Faculty Sponsor:** Professor Annette Farrington, Music

**Abstract:** Heather and I want to share our passion of music through our performance. We chose the pieces we did to remind us that wherever we may go in life we will always have music and each other. Heather will be graduating this May after completing four years here at Nazareth studying Music Therapy while Caroline will be continuing her undergraduate here at Nazareth studying Biology and preparing for medical school.

**Reason for Participating:** We are participating to gain experience in performance and working together in small groups.

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## **Stacey Yazo**

**Title:** Petite Symphonie by Charles Gounod

**Faculty Sponsor:** Professor Jared Chase, Music

**Abstract:** This semester I had the opportunity to take conducting lessons under Dr. Jared Chase and he extended the offer of conducting the Chamber Wind Ensemble during the CARS event. Over the course of this semester, I have been working with Dr. Chase as well as rehearsing with the Chamber Wind Ensemble to create a personal interpretation of this piece by Charles Gounod.

**Reason for Participating:** MUP 101, Applied Conducting

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## Posters

### **Isho Abukar (#1)**

**Title:** Project Homeless Connect

**Faculty Sponsor:** Professor Leanne Charlesworth, Social Work

**Abstract:** “Project Homeless Connect (PHC), is a day-long event held in the Blue Cross arena, serves people who are homeless or near homeless. The event connects this population to needed services.” At the 2015 PHC, I assisted homeless individuals with finding needed resources at the event. I discovered this event through my social work courses. This is an annual social work service learning project that is encouraged in all social work courses. This event was an amazing experience and I hope to participate in this event again in the fall of 2016. This project will include a summary of the event, a description of the types of services presented, and the overall benefits of this event for the Rochester community. I will also include a personal reflection on the event, in regards to the impact the event has had on my understanding of the interdependence of the different systems.

**Reason for Participating:** SWK 352, Social Work Research Methods

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### **Deja Antoine, Andral Harman, Marissa Walk, Magill Woodruff (#2)**

**Title:** The use of alternative therapies to combat compassion fatigue in registered nurses.

**Faculty Sponsor:** Professor Lynda J. Dimitroff, Nursing

**Abstract:** This project was initiated as an assignment in NSG 350 Evidence-Based Practice for Clinicians. We wrote a PICOT question, completed a brief literature review on the use of alternative therapies to combat compassion fatigue in registered nurses, critically appraised the articles, and completed a research paper. As student nurses we were curious about how alternative therapies may help to combat compassion fatigue in registered nurses.

**Reason for Participating:** NSG 350, Evidence-Based Practice for Clinicians

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### **Kristen Bachta and Yen Tan (#3G)**

**Title:** Are We Overthinking It? Seven Years of Multigenerational Course Design and Redesign

**Faculty Sponsor:** Professor David Steitz, Gerontology

**Abstract:** Since its creation in 2009, the St. John's Collaborative for Intergenerational Learning (SCIL) has brought Nazareth College students and elders from the St. John's Senior Living Communities together in the creation of multigenerational classroom environments. Various studies have shown the benefits of intergenerational pedagogies. These include the exploration of identities within and outside of self as a student, encouragement of learning from multiple social science viewpoints, and allowing for the experiencing of information in a more authentic context (Cole, 2010; Sánchez & Kaplan, 2014). However, these pedagogies have not been reviewed longitudinally to assess student learning impact and for purposes of program review. This poster will describe the various course assignments (presentations/facilitation/panels, community projects, poster min-conferences, video documentary creation), and course components (exams/no exams, textbook/no textbook) in the courses Adulthood and Late Life, Issue in Aging, and Aging and Community Service. Course assessment techniques, including paper-and-pencil and on-line surveys, and focus groups, will be discussed. Furthermore, pedagogical changes, based upon student and elder feedback and the changing and increasing demands of the younger and older students, will be presented and described.

**Reason for Participating:** I am a graduate assistant in the Gerontology Program.

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**Michael Batiste, Rhonda Carter, Erika Morales, Daniel Pasquarella, Haley Swaciak (#4)**

**Title:** Mindfulness-based stress reduction and registered nurses

**Faculty Sponsor:** Professor Lynda J. Dimitroff, Nursing

**Abstract:** This project was initiated as an assignment in NSG 350 Evidence-Based Practice for Clinicians. We wrote a PICOT question, completed a brief literature review on mindfulness-based stress reduction and registered nurses, critically appraised the articles, and completed a research paper. As student nurses we were curious about how mindfulness may impact registered nurses.

**Reason for Participating:** NSG 350, Evidence-Based Practice for Clinicians

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**Alexis Bell and Ethan Luta (#5)**

**Title:** Utilization of *Shewanella oneidensis* for remediation of toxic materials and biosynthesis of nanocrystals

**Faculty Sponsor:** Professor Sanela Lampa-Pastirk, Chemistry and Biochemistry

**Abstract:** The bacterium *Shewanella oneidensis* (*S. oneidensis*) has demonstrated capability of adaptation to a toxic environment, utilization of toxic nanoparticles, and metals for survival. Due to its ability to reduce toxic metal in its environment and naturally produce nanoparticles, *S. oneidensis* is a great candidate for 'green' syntheses of water soluble quantum dots. This process is beneficial to the environment because it does not produce other toxic byproducts and does not require excess energy to achieve. Here we demonstrate presence of extracellular charge transfer from *S. oneidensis* to toxic metals such as Cd, Zn, Se and Te. We have evaluated effects of toxic metals on bacterial growth rates, the critical first step for optimization of bacterial growth conditions during biosynthesis of nanocrystals. We will further this study by developing methods for utilization of *S. oneidensis* for biosynthesis of CdSe and CdS quantum dots that are naturally soluble in water. These results have an impact on bioremediation of toxic metals, production of alternative energy sources such as hydrogen, biomedical imaging, and solar cells.

**Reason for Participating:** CHM 300, Independent Research

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**Jordan Bigley, Paige Kopchak, Julia Marianetti, Jamie Seguss, Carly Tucker (#6)**

**Title:** Registered nurse educational preparation and patient outcomes

**Faculty Sponsor:** Professor Lynda J. Dimitroff, Nursing

**Abstract:** This project was initiated as an assignment in NSG 350 Evidence-Based Practice for Clinicians. We wrote a PICOT question, completed a brief literature review on educational preparation in nursing and patient outcomes, critically appraised the articles, and completed a research paper. As student nurses we were curious about educational preparation of nurses and patient outcomes and wanted to explore the differences in 2-year versus 4-year degrees.

**Reason for Participating:** NSG 350, Evidence-Based Practice for Clinicians

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**Ashley Bowen (#7G)**

**Title:** Mapping Movement Based Learning in the Visual Arts

**Faculty Sponsor:** Professor Samantha Nolte-Yupari, Art Education

**Abstract:** "What are we still mapping for?" This is a common question many artists consider in their work today. For this study I embarked on a cross-country road trip in the summer of 2015 that spanned 10,000 miles and the course of five weeks, while also keeping a journal and collecting artifacts. Through autoethnographic and arts based

research methods I aim to discover more about the many things we can learn from maps and the journeys they take us on. This study applies to the field of Art Education as a means for my own personal exploration of the pedagogies that inform my own teaching style. Learning is a journey. Travel is about discovery, and through maps we are able to learn and make meaning of what we experience. Maps are products of the journey of human culture of over time, and within their many complex layers they hold the potential to tell the story of a place. My overarching question for this study is, “When your classroom is a place out in the field—how do we learn?”

**Reason for Participating:** I want to share my independent study research

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### **Abbie Brennan (#8)**

**Title:** Intimate Partner Violence: An Exploration of Bystander Behavior

**Faculty Sponsor:** Professor Leanne Charlesworth, Social Work

**Abstract:** I would like to showcase this topic in order to better understand the factors shaping the behavior of those impacted by (not directly involved in) intimate partner violence. This poster is a presentation on available research of this topic as well as implications for prevention and intervention are identified.

**Reason for Participating:** SWK 352, Social Work Research Methods

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### **Chazzarae Burgess (#9)**

**Title:** The Effects of Frames of War

**Faculty Sponsor:** Professor Yamuna Sangarasivam, Sociology and Anthropology

**Abstract:** I am investigating the frames of war and how those frames have socialized the countless stereotypes that Americans have been shaped into believing. I will be applying the methods of discursive analysis to examine the use of metaphors to justify particular frames of war. Frames of war socialize the public to think of Middle Eastern people and the war on terror by relying on stereotypes. The docile bodies being created by the frames of war are not only manufacturing how we view the Middle East but are also limiting us from our own ability to think and ask critical questions. It is also creating a fear of an entire race of people that is driving Americans into the patriotic identity an identity that says we have to be at war with these people because it's our patriotic duty to protect Americans by means of war. I want to bring attention to how we are being sold a story about the war Iraq, but also bring attention to how the frames of war are impacting the way we perceive societies of the Middle East.

**Reason for Participating:** ANT336, Anthropology of Terrorism

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**Meirav Cafri (#10G)**

**Title:** PhotoArt Exploration: Addressing Low Self-Esteem and Low Body Image

**Faculty Sponsor:** Professor Renee van der Venet, Creative Arts Therapy

**Abstract:** Low body image and low self-esteem are rampant symptoms in today's society and can lead to clinically significant disorders such as depression and eating disorders. Phototherapy and art therapy are beneficial in increasing self-esteem and body image; but this writer wondered what the effect would be like if they were combined. The primary investigator created this heuristic self-study in order to investigate whether the PhotoArt Exploration intervention over the course of three months would increase self-esteem and body image. She focused her investigation on different life experiences, emotions, cognitions, goals, progressions, and accomplishments that prominently presented themselves each week for twelve weeks. She measured and assessed her experiences through both quantitative and qualitative data.

**Reason for Participating:** CAT 532, Culminating Project Seminar

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**Stephanie Casale, Victoria Genova, Katherine Reilly (#11)**

**Title:** Applying GAS to Increase Conversational Agility Among Young Adults with Intellectual Disabilities

**Faculty Sponsor:** Professor Mary Kay Bradley, Communication Sciences and Disorders

**Abstract:** Three CSD clinicians met for eleven, one-hour sessions with ten students from the LifePrep@Naz program. The goal of the group was to facilitate interpersonal skills needed in vocational, academic, and social environments, as well as for personal safety. To help the students understand that effective conversation includes the orchestration of several skills, we use the metaphor, "six pack" to illustrate the 'package' of skills (nonverbal skills, thinking/planning, conversational intent, listening/turn-taking, relevant details, timely responses). Instruction of the Goal Attainment Scale (GAS) helped individual students increase self-monitoring skills used in functional communication. Lessons were multifaceted, engaging, and included differentiated instruction. Elements of conversation covered in previous sessions were carried over and applied in each successive session. In addition to repetition, teaching techniques

included: role play, small group and individual problem solving, and peer review of conversations. Students were also held accountable for their own learning. Activities involved work on the SmartBoard, brief lectures, weekly quizzes, drama, showing and discussion of video clips depicting examples of effective and ineffective conversation, and games. As a culminating project, students created videos of themselves playing out scenarios of real-life situations. The videos showcased their advanced conversation skills acquired throughout the semester.

**Reason for Participating:** To reveal how the Goal Attainment Scale (GAS) is used to increase self-monitoring in functional conversation.

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### **Nicole Charette (#12)**

**Title:** From Russia with Love: Cross Cultural Comparisons of Romantic Love Norms

**Faculty Sponsor:** Professor Kimberly McGann, Sociology and Anthropology

**Abstract:** While many U.S. college students study abroad, so too do many students from other countries attend college in the U.S. One potential difference in culture international students may bring with them is their understanding of what romantic love is. This research uses survey data to explore the difference in ideas of romantic love between American students and international exchange students. Ann Swidler's explanation of how people use the culture around them is used to explain the findings. I researched what American college students and International Exchange students think about romantic love by creating and distributing a questionnaire. I conducted this research to find out if there is a difference in the perception of romantic love between American and International students and if so, what that difference is. This research is important to find how likely students from countries around the globe adapt to American cultural scripts when they enter a college atmosphere in the United States.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Meaghan Connors (#13)**

**Title:** Effects of Vitamin D Deficiency on Fetal Mice

**Faculty Sponsor:** Professor Brian Witz, Biology

**Abstract:** Mice were given a vitamin D deficiency and the femur bone growth of fetal mice was measured. Two groups of mice were given a vitamin D deficient diet and one group was given a vitamin D supplement. This interests me because most women in western New York are vitamin D deficient.

**Reason for Participating:** Dr. Witz asked me to present a poster of my senior research

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**Calley Constance, Wegahtha Ghebregabiher, Rachel Knickerbocker, Clare St. Leger, Jaclyn Styker (#14)**

**Title:** The effects of the night shift on registered nurses

**Faculty Sponsor:** Professor Lynda J. Dimitroff, Nursing

**Abstract:** This project was initiated as an assignment in NSG 350 Evidence-Based Practice for Clinicians. We wrote a PICOT question, completed a brief literature review on the impacts of the night shift on registered nurses, critically appraised the articles, and completed a research paper. As student nurses we were curious about effects that working the night shift has on registered nurses.

**Reason for Participating:** NSG 350, Evidence-Based Practice for Clinicians

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**Julia Delgatti, Danielle DiSalvo, Caitlin Keator, Natasha Silva (#15)**

**Title:** The impact of shift length on burnout in registered nurses

**Faculty Sponsor:** Professor Lynda J. Dimitroff, Nursing

**Abstract:** This project was initiated as an assignment in NSG 350 Evidence-Based Practice for Clinicians. We wrote a PICOT question, completed a brief literature review on the impact of the length of a shift in burnout in registered nurses, critically appraised the articles, and completed a research paper. As student nurses we were curious about how shift length may impact burnout in registered nurses.

**Reason for Participating:** NSG 350, Evidence-Based Practice for Clinicians

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**Kevin Denny (#16)**

**Title:** CdSe Nanoplatelet Photosensitizers to Improve Efficiency in Artificial Photosynthetic Systems

**Faculty Sponsor:** Professor Sanela Lampa-Pastirk, Chemistry and Biochemistry

**Abstract:** Hydrogen gas may be harvested and utilized as an alternative energy source. The fuel boasts many advantages over traditional energy sources including decreased toxicity to the environment and renewability. Previous research has shown that hydrogen gas may be produced via artificial photosynthesis, however current systems

yield low rates of hydrogen and are plagued by inefficiency often due to limitations imposed by the photosensitizer. The goal of this research is to synthesize CdSe nanoplatelets for the purpose of improving the efficiency of current artificial photosynthetic systems, specifically by using nanoplatelets as the light absorbing material within the system. We believe that nanoplatelets are particularly suited for this role due to their high aspect ratio, photostability, and quantum yield. Presently, we have successfully synthesized CdSe nanoplatelets. Our future goals include performing ligand exchange procedures and ultimately investigating their viability in an artificial photosynthetic system in collaboration with the Krauss group at the University of Rochester.

**Reason for Participating:** CHM 300, Independent Research

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### **Kevin Denny and Jacob Cuyler (#17)**

**Title:** Synthesis of Functionalized NBD-556

**Faculty Sponsor:** Professor Stephen Tajc, Chemistry and Biochemistry

**Abstract:** HIV targets the immune system of an infected host resulting in an increased chance of acquiring immunodeficiency, rendering the host susceptible to infection and disease. HIV persists as a global epidemic infecting approximately 36.9 million individuals worldwide. While there is no cure for HIV, antiviral therapy can help control the virus allowing for longer life expectancy and a reduction in the ability to transmit the disease. The advantages of early detection are widely understood however, current methods which rely on the presence of HIV antibodies lack the ability to detect HIV quickly after initial exposure. Past research has shown that NBD-556 has the ability to bind directly to HIV envelope glycoprotein (GP-120). Our goal is to attach a functional group, which can be monitored via spectroscopic methods, to NBD-556. Naturally, the binding of NBD-556 to GP-120 will induce electronic and structural changes to NBD-556. By monitoring this change it is therefore possible to determine whether or not GP-120, and by consequence HIV, is within an individual. This proposed method will offer a realistic way to rapidly detect HIV while the disease is still in its infancy.

**Reason for Participating:** CHM 300, Independent Research

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### **Meghan Denny (#18)**

**Title:** The Apparent Digestive Efficiency of Bufo Species When Fed Crickets and Mealworms.

**Faculty Sponsor:** Professor Brian Witz, Biology

**Abstract:** I measured the digestive efficiency of several toads by calculating the calorie content of fecal samples obtained after each toad was fed either a cricket or mealworm. This will give insight to food preference in the wild based on which is more energetically favored.

**Reason for Participating:** Research is required by the Biology Department to graduate, but I thought it helpful to be able to showcase my research as well.

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### **Eric Disbro (#19)**

**Title:** Sexuality Against Bio-Political Terrorism in the Cuban Autobiographical Novel of Reinaldo Arenas

**Faculty Sponsor:** Professor Esperanza Roncero, Foreign Languages and Literature

**Abstract:** This project demonstrates the evolution of my capacity for literary analysis and represents a major component of the Capstone Experience in Spanish and Latin American Languages and Literatures. By performing a detailed analysis of Reinaldo Arenas's autobiographical novel *Antes que anochezca* (Before Night Falls, 1992) influenced by Foucauldian concepts of "panopticism" and "bio-power", I may argue that Reinaldo Arenas uses his unique applications of sexuality as a force with the potential to subvert sanctions put into place by the Communist Regime of Fidel Castro at every stage of its installation. The writing of Reinaldo Arenas emphasizes a communal resistance to communist indoctrination by the intellectuals within the LGBTQ+ communities of the mid-twentieth century in Cuba as the government made attempts to censure all lifestyles and practices that did not fit the mold put forth by Castro. My argumentation will also shed light upon the reception of Arenas's oeuvre in Europe and the United States while propagating the distinction between official Castrista propaganda and queer testimonial.

**Reason for Participating:** SPN 402, Spanish Senior Seminar

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### **Chloe Dudla (#20)**

**Title:** Insecurity and Confidence in the Art Room

**Faculty Sponsor:** Professor Samantha Nolte-Yupari, Art Education

**Abstract:** I completed 35 hours of fieldwork observations in a middle school art classroom. I used the data from my field notes to create an arts based research project about causes of both insecurity and confidence in the classroom. My ceramic sculpture demonstrates ideas from both my own observations and art education theory.

**Reason for Participating:** AED 305, Psychological Approach to Learning in the Arts

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**Kira Duffy, Cecelia George, Sarah Godnick, Katie Koshak, Elizabeth Marek (#21)**

**Title:** The effects of an educational intervention on lateral violence in nursing

**Faculty Sponsor:** Professor Lynda J. Dimitroff, Nursing

**Abstract:** This project was initiated as an assignment in NSG 350 Evidence-Based Practice for Clinicians. We wrote a PICOT question, completed a brief literature review on lateral violence in nursing, critically appraised the articles, and completed a research paper. As student nurses we are concerned with the issues of lateral violence in our profession and wanted to explore possible prevention strategies.

**Reason for Participating:** NSG 350, Evidence-Based Practice for Clinicians

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**MaryLynn Eddington (#22)**

**Title:** Honeoye Creek watershed analysis for the Genesee RiverWatch Report Card on the Genesee River watershed

**Faculty Sponsor:** Professor William Hallahan, Biology

**Abstract:** Recently, The Genesee RiverWatch released a report card, providing data on water quality protection that is already in place and restoration actions for the Genesee River Basin. A major purpose of this report card was to raise awareness of the overall state of the Genesee River Basin and also to provide a basis for what's necessary to improve water quality in the Genesee River (Genesee RiverWatch). By using the Genesee River Watch report card as well as the Brockport Report (Makarewicz, J et al. 2013) as a basis for our study, we were able to primarily focus on looking at the influence of the abiotic features of Honeoye Creek by measuring total phosphate concentration (TP) as well as total suspended solids (TSS). More specifically, we analyzed the impact of increased creek discharge and the possible impact of the Honeoye Falls Sewage Treatment Plant (STP) on the water quality of Honeoye Creek before it discharges into the Genesee River.

**Reason for Participating:** Experience

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**Stephanie Fernaays (#23)**

**Title:** Dream a little dream of me: The textual and graphic creation of identity in The Sandman comics

**Faculty Sponsor:** Professor Gregory Foran, English

**Abstract:** I analyzed the graphic novel series *The Sandman*, and its complex manner of creating identity for its various main characters. Not only did I close read the text but I added complexity to the argument by examining the art of the series. Not only is it a literary masterpiece but it is a feast of the eyes as well. I did it for my own personal curiosity and satisfaction.

**Reason for Participating:** Expansion of personal knowledge and ability

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### **Shane A. Fuentes and Jacob Moose (#24)**

**Title:** Binding Group II Cations with DPA derivatives

**Faculty Sponsor:** Professor Stephen Tajc, Chemistry and Biochemistry

**Abstract:** The use of natural gas has become a popular, clean-burning, source of energy in the United States. Despite emitting 50% less carbon dioxide than coal, the process of retrieving natural gas by hydraulic fracturing, on average, requires the use of about 17million liters of water per well. This can result in as high as 211 grams per liter of total dissolved solids (TDS), which is 400,000 times the EPA limit for drinking water. It is known that 2,6-pyridinedicarboxylic acid (DPA) is able to bind to group II metals. Past research has shown success in the binding of DPA to group II cations found in hydraulic fracturing wastewater. In this research, we look to expand the binding and solubility properties of DPA by increasing the size and polarity of the receptor. We are synthetically adding amino acids to DPA and will compare their binding and solubility to the original molecule.

**Reason for Participating:** CHM 300, Chemistry Research

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### **Nicholas Gerbino (#25)**

**Title:** Healthcare and Warfare: The Defining Relationship of Our Time

**Faculty Sponsor:** Professor Yamuna Sangarasivam, Sociology and Anthropology

**Abstract:** To research the relationship between healthcare and warfare is to visit a place of little humanity. It's discouraging, it's frustrating. As a soon-to-be healthcare professional, one interested in working in the humanitarian aid field, it's a frightening reminder of the void into which I will soon leap. To change the system, to make the humanitarian realm safe for those providing aid, we must fully confront the challenges afflicting it. When lives are at stake, it's just as important to know what works, as well as

what does not. Sometimes to go forward, you must go back. A simultaneous historical analysis of healthcare delivery and warfare shows without question the disastrous legacy they combine to create. The bombings of hospitals, a generation of children without access to measles vaccines, health care workers held hostage, Ebola burial teams being attacked in broad daylight-these are the troubles of the future unless healthcare is divorced from warfare. And it must be.

**Reason for Participating:** ANT 336, Anthropology of Terrorism

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### **Erin Hayes (#26)**

**Title:** We're here, we're queer, we're in Shakespeare: Non-binary gender representation in Shakespeare's Twelfth Night

**Faculty Sponsor:** Professor Rachel Bailey Jones, Women and Gender Studies

**Abstract:** How does the character Viola in Shakespeare's Twelfth Night represent non-binary identities (specifically genderfluidity and genderqueer identities)? I will use qualitative research methods and use experiential knowledge in this project as a means of gathering experiences from non-binary individuals, analyzing visual interpretations of Viola as a character, and analyzing her dialogue. The project is feminist in nature because of the literary analysis I will be performing through a lens of gender and queer theory. Approaching the concept of gender in Shakespeare through a feminist lens is not new, but I am adding a modern radical feminist perspective to past queer/gender/feminist arguments of literary critics as a means of giving Shakespeare's in-drag characters the identity they have since been denied. The methods I will use include literary analysis, film analysis, applied literary criticism, and past qualitative research conducted regarding non-binary individuals. I will use past research, documentaries, and auto-ethnography to obtain qualitative data regarding the day-to-day lived experience of non-binary individuals including their personal concepts of their gender, their gender expression, how they "interpret" themselves, etc. as a means of comparing living non-binary people to potential non-binary fictional characters (Shakespeare's Viola).

**Reason for Participating:** WGS440, Seminar in Women and Gender Studies

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### **Jocelyn Hellested (#27)**

**Title:** The Life and Work of David Alfaro Siqueiros

**Faculty Sponsor:** Professor Esperanza Roncero, Foreign Languages and Literature

**Abstract:** I completed this research project for my Spanish senior seminar class and examined the life and work of the famous Mexican muralist Siqueiros. I focused

primarily on his first mural "Burial of a Worker" painted in la Preparatoria and his second mural painted in Mexico and completed 15 years later, "Portrait of the Bourgeoisie". Throughout my presentation I plan to discuss how his life experiences influenced his work and led to distinct changes in the location, materials, and themes of these two pieces. I was motivated to write this paper because I am both an art history and Spanish major and I felt that this research topic was a beautiful way to combine both my love of Mexican culture and art history.

**Reason for Participating:** SPN 402, Spanish Senior Seminar

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**Shannon Holcombe, Shannon McCormick, Madeleine Quercia, Evan Rubenstein (#28G)**

**Title:** Understanding Poverty and Housing Instability

**Faculty Sponsor:** Professor Leanne Charlesworth, Social Work

**Abstract:** Based on a review of local and national data, this poster summarizes current information regarding poverty and housing instability in Rochester and the nation. The poster also includes a summary of themes identified during recent research and service experiences.

**Reason for Participating:** SWK 533, Social Work Research Methods

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**Cameron Johnson (#29)**

**Title:** Binding Study of Copper:DPA for Agricultural Implications

**Faculty Sponsor:** Professor Stephen Tajc, Chemistry and Biochemistry

**Abstract:** Copper (Cu) is an essential element for plant growth and while only a small quantity is needed for adequate nutritional value, a deficiency of this micronutrient is devastating to its ability to thrive. Fertilizers are used to supplement or fulfill the nutritional value required by certain plants that enable them to flourish. While there are soil tests available to predict the need of copper, there are limitations on the methods used by which copper can be put into solution. Diphenylamine (DPA) has been shown to bind to copper in solution and take it out effectively. The purpose of this research is to now determine an effective paradigm to put copper in to a solution. This study has shown that there is binding occurring, however, the question of focus has moved to what is the ratio of DPA binding to copper. Determining this ratio will allow for several novel strategies for application in fields of agriculture, medicine, and several others.

**Reason for Participating:** CHM 300, Independent Research

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### **Cameron Johnson and Ashley Penge (#30)**

**Title:** A Qualitative Method of Testing Type AB Blood's Binding Affinity and Codominance in vitro

**Faculty Sponsor:** Professor Matthew Schoell, Chemistry and Biochemistry

**Abstract:** Individuals who have the blood type A, B, or AB have antigens on the surface of their red blood cells and the antibody in their plasma for the antigens they do not have. The A and B antigens present on the surface of red blood cells of those who are type AB, therefore, no antibodies will be contained in their plasma. The A and B antigens express codominance when paired together and have nearly equal quantities of antigen sites for binding to antibodies or various substrates, and although the A antigen is expressed more, the B antigen has a higher affinity for binding to the H antigen substrate. The A antigen has approximately 600k binding sites, while the B antigen has approximately 720k binding sites. A qualitative method for observing this in vitro was developed by introducing anti-A and anti-B antibodies to red blood cells of type A, B, and AB, and then observed for agglutination in the test tubes. Type AB blood showed strongest agglutination in the presence of only anti-B when compared to reaction with only anti-A. This expedient qualitative method of analysis can be developed in the future for point of care treatment in emergency situations and will be explored for its possible application for future considerations.

**Reason for Participating:** Contribute to the advancement in the field of immunohematology and blood banking.

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### **Laura Keech, Morgan Sommers, Emily Thompson, Tea Papke, Lindsay Sherling (#31G)**

**Title:** Service Learning: An Interprofessional Approach to Deaf Education and Empowerment in Ethiopia

**Faculty Sponsor:** Professor Paula Brown, Communication Sciences and Disorders

**Abstract:** During Nazareth's second trip to Ethiopia, an interprofessional team of graduate and undergraduate students from varying disciplines, as well as a Speech-Language Pathology professor and an Audiologist traveled to Ethiopia with Visions Global Empowerment, a Non-Profit Organization. Two interpreters from Ethiopia joined our team to facilitate learning in the classrooms with deaf students, despite our language barriers. The group worked alongside local Deaf leaders, staff, and teachers in schools and at the Kal Center for Special Needs in Bahir Dar, Ethiopia. At the Kal Center, the group spent a day facilitating leadership workshops and educational opportunities for students from the University of Bahir Dar. The group visited Yekatit 23

School and Tsehay Gibot School. The group planned lessons and revised them daily as the group determined what was effective and what needed adaptations. We came together to process our experiences, what we learned, and our successes. Our goal was to supplement the educational opportunities for students and teachers who are Deaf, bring them hands-on learning, enrich their language, social skills, and encourage their self-expression and critical thinking. In addition, the group experienced Ethiopian culture and Deaf culture, while witnessing the issues that affect Ethiopian people who are deaf.

**Reason for Participating:** To encourage participation in future trips, educate others about Deaf culture in Ethiopia, and to showcase the accomplishments of the trip.

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### **Lindsey Kelly (#32)**

**Title:** How to Date in Ten Decades: Examining the Role of Dating Scripts in Romantic Comedies.

**Faculty Sponsor:** Professor Kimberly McGann, Sociology and Anthropology

**Abstract:** Movies play an important role in shaping and reflecting culture. This includes the cultural scripts that people follow to find romantic partners. This research examines how romantic comedies have shaped and reflected American culture scripts for dating romance. Using existing data I examined the top grossing romantic comedies for each decade from 1950-2016 to find the cultural scripts in each movie. Kathleen Bogle's "From Dating to Hooking up" and Francesca Cancian's "The Feminization of Love" both serve as important starting points for analysis.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Lindsey Kelly, Tricia Defiore, Ashley Micglire (#33)**

**Title:** Terrorism, Culture and War

**Faculty Sponsor:** Professor Yamuna Sangarasivam, Sociology and Anthropology

**Abstract:** Using an ethnographic and anthropological approach to the study of terrorism and war, we will be evaluating what the definition of terrorism is and how it relates to our practices of patriotism and nationalism. The role that terrorism plays in our acceptance as a country involved in a "war on terror" will be evaluated along with how terrorism is defined individually and collectively. Identifying how terrorism informs our cultural attitudes about the places and people who live around us in our communities and transnationally will be a topic of discourse in our poster. Now that it is easier for

information to spread across the world through media, travel and internet our assumptions about cultures travel just as easy. Through global communications, patriarchal viewpoints about the “other” regarding to “terrorism” and “Islamophobia” are transferred throughout the world. Is the media helping in the "war on terror," or is it only making matters worse?

**Reason for Participating:** ANT 336, Anthropology of Terrorism

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### **Olivia R. Kelly and Jessica L. Nielsen (#34 G)**

**Title:** The Presence of Mentorship within Undergraduate Student Internships

**Faculty Sponsor:** Professor Stephen Hill, Psychology

**Abstract:** This study examined the prevalence of mentorship within the context of undergraduate college internships. Specifically career certainty, student and mentor gender, type of mentorship (e.g., formal, informal) and gender dyad relating to career development and mentorship. Participants were 36 currently or previously enrolled students in the college internship experience program at Nazareth College. Results suggest that mentorship relationships occur within the context of the Nazareth College student internship experience. However, mentorship relationships did not predict higher levels of career certainty and the type of mentorship did not significantly affect career certainty. Exploratory findings and the implications of the results for future mentor—protégé relationships within the context of college internships are discussed.

**Reason for Participating:** HESAA 610, Independent Study Organizational Research

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### **Melissa Kline (#35)**

**Title:** Make It Work; Gender Bias in the Workplace Leadership

**Faculty Sponsor:** Professor Rachel Bailey Jones, Women and Gender Studies

**Abstract:** My research will explore the questions “What are the implications of different adjectives used to describe men and women leaders? What are the implications of differences in how men and women leaders are supposed to dress?” I will focus on both men and women in leadership positions regarding the professional workplace (managers, supervisors, CEO’s, etc.). The purpose is to bring to light the discrepancies that are often presented when a female is the leader as opposed to a male. I will gather sources such as news articles, titles of papers, advice columns, reports, etc. to examine the textual messages within the works themselves pertaining to the adjectives used to describe leaders. For physical appearance I will use Google image search to illustrate female and male leaders. I will then examine what each is wearing and how they are presented. In acknowledging that there are stark differences in the way in which men

and women are perceived in similar roles and relationships, I am assisting to make a difference and impact on how these terms and adjectives are used in everyday life by helping to eliminate the use of gender bias.

**Reason for Participating:** WGS440, Seminar in Women and Gender Studies

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**Shawn LaClair (#36)**

**Title:** A Study of Introversion and Extroversion in Romantic Relationships

**Faculty Sponsor:** Professor Kimberly McGann, Sociology and Anthropology

**Abstract:** Introversion and extroversion are personality traits noted by Carl Jung to explain different orientations toward socializing and preferences for different types of activities. This research is a content analysis of relationship advice blogs for introverts and extroverts. I analyzed the blogs for implicit and explicit assumptions about how introverts and extroverts can best negotiate a relationship together. It draws on the symbolic interactionist tradition to explain how the concepts of introversion and extroversion are given meaning through interaction.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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**Paul Lippert (#37)**

**Title:** Quien Nos Representa: Problems of Representation in Puerto Rican & Nuyorican Children's Literature

**Faculty Sponsor:** Professor Esperanza Roncero, Foreign Languages and Literature

**Abstract:** I did research with Puerto Rican children living in Rochester, asking them to write their own children's books about the Puerto Rican experience in the United States, and researched to see if the canon of Puerto Rican and Nuyorican children's literature represents that experience. This research was done to give an identity to a community that often faces problems of identity.

**Reason for Participating:** SPN 402, Senior Seminar in Spanish

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**Melissa Lochner and Tom Sippie (#38)**

**Title:** Left or Right? An Analysis of Tinder Profiles Among College-Aged Students

**Faculty Sponsor:** Professor Kim McGann, Sociology and Anthropology

**Abstract:** Tinder is a dating service application that allows users to find potential partners within their geographical location by looking through their limited profile information. Tinder has become increasingly popular among college-aged students. This research examines how people present themselves to potential partners by analyzing Tinder profiles in the Rochester region. This research will utilize the concepts found in Cancian's, *Feminization of Love in the Nineteenth Century* and Goffman's theory on presentation of self.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Alexandria Lovejoy (#39)**

**Title:** Prevalence of Anterior Cruciate Ligament (ACL) in Females

**Faculty Sponsor:** Professor Mary Dahl Maher, Public Health Programs

**Abstract:** This research that I would like to present to CARS is the first step of a larger, research study that I am planning on completing throughout my four years at Nazareth, under the direction of Dr. Mary Dahl Maher. My poster presentation is a literature review on the prevalence of ACL injuries in females and the analysis of a survey that students took across campus during the fall 2015 semester. This topic is something that I am extremely interested in because I have suffered from an ACL injury. After high school I was originally going to be a professional dancer, but my ACL injury caused me to put that dream to rest. I now want to research and understand why ACL injuries occur, if they occur more frequently in males or females, and if there are ways to prevent ACL injuries. The literature review has given me useful background information needed to further my research in the future. The survey has also given me beneficial information about the prevalence of ACL tears on the Nazareth College campus that I will use in designing my larger research study.

**Reason for Participating:** Interest in prevention intervention for female athletes

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**Daryn M. Loy, Thomas K. Caraher, Faith E. Downes, MaryLynn Eddington, Daniel J. Tofil, Antoine Audet, Meghan E. Denny, Chelsea L. Diekvoss, Martin M. Glazer, Annalissa M. MacPherson, Eileen E. Pelkey, and Max W. Randolph (#40)**

**Title:** Diverse water quality and nutrient profile in geologically variant surface water and wetlands at Mendon Ponds Park

**Faculty Sponsor:** Professor Padmini Das, Biology

**Abstract:** This study investigates various water quality parameters in surface water and wetlands in a geologically diverse area in Mendon Ponds Park, Rochester, NY. It also determines the trophic profile of these water bodies in terms of nitrate and phosphate to understand their eutrophication potential. The unique water signatures of these water bodies lie in their geological origin through glacial melting since the last ice age. Different patterns of aquatic and wetland flora and fauna indicate variance in water quality and nutrient profiles. Two water bodies, a pond (Deep Pond) and a kettle pond (Devil's Bath tub) that are separated by an esker; and two wetlands, a vernal pool and a bog (Kennedy's Bog) were selected. All samples were analyzed for pH, electrical conductivity (EC), dissolved oxygen (DO), nitrate, and total phosphorus (TP) as a measure of phosphate. The GPS coordinates of each sample location are recorded to maintain uniformity of repeated sampling at different seasons. The data generated in this preliminary study are encouraging and help to achieve our long-term goal of studying the water quality and trophic profile of these geologically diverse surface waters and wetlands in Mendon Ponds Park, as functions of seasonality and occurrence of big storm events.

**Reason for Participating:** BIO 330L, Ecology Lab

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**Ethan Luta (#41)**

**Title:** Bioremediation of water soluble aluminum with dipicolinic acid

**Faculty Sponsor:** Professor Stephen Tajc, Chemistry and Biochemistry

**Abstract:** 2,6 pyridine dicarboxylic acid (DPA) is a small molecule that is produced by gram-positive spore forming bacteria. DPA was first discovered as a key component of bacterial endospores, which was found that DPA composes 10% of the spore's dry weight. The accumulation of DPA in the spore is believed to facilitate diffusion of  $\text{Ca}^{2+}$ , which in turn chelates to DPA to form a small molecule DPA: $\text{Ca}^{2+}$  complex. In our research we tested DPA's affinity for water soluble aluminum, and the bioremediation of a DPA:aluminum complex by soil bacteria. Our results suggest that DPA effectively

binds to aluminum and that bacteria has the ability to grow in presence of the DPA:aluminum complex.

**Reason for Participating:** Research

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### **Kathleen Marzano (#42)**

**Title:** The Relationship Between Video Games and Terrorism

**Faculty Sponsor:** Professor Yamuna Sangarasivam, Sociology and Anthropology

**Abstract:** What is the relationship between video games and terrorism? I will explore this question by analyzing a collection of ethnographic accounts that illustrate the relationship between video games, terrorism, and war. I am drawn to this question because of my work with children in the field of education. Children are exposed to cultural influences such as media and entertainment, including video games, just as much as adults are, but these influences introduced during formative years inform the rest of their lives in significant ways. The prevalence of video games about war and terrorism and the fact that children are being exposed to these first person shooter games at younger ages than ever led me to question what the relationship between videos games and terrorism is and if it has a negative impact on children and our society.

**Reason for Participating:** ANT 336, Anthropology of Terrorism

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### **Blair Meeson (#43)**

**Title:** From Love Me Tender to We Found Love: Generational Differences in Definitions of Romantic Love

**Faculty Sponsor:** Professor Kim McGann, Sociology and Anthropology

**Abstract:** Ideas about romantic love have been created and transformed over decades. Is there any part of romantic love that has remained constant over time? This research explores beliefs about what romantic love "is" across multiple generations using survey data from a wide range of age groups. Similarities and differences by generation are noted. Swidler's idea of repertoires and accepting and rejecting culture, and McGann's study of romantic feeling rules are used to explain the results.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Jacqueline Meli (#44)**

**Title:** Participation in Homeless Connect

**Faculty Sponsor:** Professor Leanne Charlesworth, Social Work

**Abstract:** I volunteered at homeless connect by interacting with people and helping them connect with the vendors there that may be of help to them. I also helped serve lunch. This was an activity that was done for a class for service hours.

**Reason for Participating:** SWK 352, Social Work Research Methods

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### **Jacob Murphy and Alyssa Merrill (#45)**

**Title:** Phytoremediation potential of Blue Bush Lake Beans (*Phaseolus vulgaris*), a native plant, to clean-up of Bisphenol-A (BPA) contaminated aquatic systems

**Faculty Sponsor:** Professor Padmini Das, Biology

**Abstract:** Bisphenol-A (BPA), a common industrial polymer, is an endocrine disrupting compound, which mimics estrogen by binding to the organism's estrogen receptors, possibly leading to tumor development, reproductive dysfunction, and obesity. Several plant species have shown potential to take up BPA from both soil and aqueous media; suggesting phytoremediation could be a promising ecologically-safe and cost-effective alternative to eliminate BPA, as compared to traditional ex-situ processes. Our goal is to investigate the phytoremediation potential of a native plant, Blue Bush Lake Beans (*Phaseolus vulgaris*), for its effectiveness in removing BPA from aquatic media. Two experimental approaches: a short-term (48h) study to investigate if the Blue Bush Lake Bean plant has the ability to remove BPA from aquatic media, and the effect of BPA on germination are currently underway. Preliminary results are promising; 31% of initial BPA concentrations are removed within 48h by the plants, whereas BPA in the no-plant control remained statistically unaltered ( $p>0.05$ ). Currently our laboratory is investigating the effect on germination of several BPA concentrations, from 50 $\mu$ g/L-1 to 20mg/L-1. Analysis of BPA is being conducted using High Performance Liquid Chromatography (HPLC) and JMP version. The data so far is highly encouraging; once completed further research objectives can be determined.

**Reason for Participating:** BIO 452, Biology Research

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**Jacob D Murray, Jacob H Murray, Erin Stryker, Kyle Bronson (#46)**

**Title:** Two-step Synthesis of Benzo[2,7]naphthyridines: A Turnkey Approach for the Preparation of Anti-tumor Compound Library

**Faculty Sponsor:** Professor Alex Martin, Chemistry and Biochemistry

**Abstract:** The purpose of our research is to find a more efficient method for the preparation of benzo[2,7]naphthyridine. Benzonaphthyridines are a major structural component of the class of biologically active compounds called pyridoacridine alkaloids. Derived from marine species, pyridoacridine alkaloids have been shown to be cytotoxic to tumor cells by inserting themselves into the cell's DNA. Currently, these natural products are formed over long, linear processes involving many protecting groups. This methodology is not cost or time effective. Our new approach involves forming benzo[2,7]naphthyridine over two transformations using simple, readily available reagents. Our approach utilizes a palladium-catalyzed Suzuki reaction between 2-nitrophenylboronic acid and 4-bromonicotinaldehyde. The product of this reaction can then undergo a reductive cyclization forming the aromatic benzo[2,7]naphthyridine. After the proof of concept is completed this approach can be further functionalized and expanded to the vast library of pyridoacridine alkaloids.

**Reason for Participating:** CHM 300, Independent Research

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**Melissa J. Nunes-Harwitt (#47G)**

**Title:** Do SSRIs improve the lives of people diagnosed with depression? A review of the literature.

**Faculty Sponsor:** Professor Leanne Charlesworth, Social Work

**Abstract:** I intend to report on the literature assessing overall outcomes of SSRI use to treat clinical depression. The poster will address questions of efficacy, iatrogenic conditions, and the impact of the consequences dismissively labeled "side effects." My interest in this topic came from reading Robert Whitaker's *Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*.

**Reason for Participating:** SWK 352, Social Work Research Methods

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**Sabrina Nussbaumer (#48)**

**Title:** Terrorism and the Shaping of American Law

**Faculty Sponsor:** Professor Yamuna Sangarasivam, Sociology and Anthropology

**Abstract:** Since September 11, 2001 Americans have been bombarded with terms like terrorism, terrorist, and war on terror. This marked what I call the great separation, when anxieties flared as American citizens strove to identify who the terrorists were and in turn opened the door for a new kind of racism and paranoia. I would like to propose a poster which highlights the use of the term Terrorism as a way to shape and reshape laws here in America and consequently shapes and reshapes social structure in America. I will be looking at metaphorical methodologies as well that help to shape words like terrorism and pull new meaning to such terms which can have negative repercussions. My reason for presenting this topic is to open the floor for discussion about current events and the infringement of the U.S government and its law on its citizens. Are laws like the USA Patriot Act really benefitting it's people or perhaps harming its people? Are gun laws that restrict the American people stopping homegrown terrorism, or is it fueling it? Questions like these need to be addressed if we are really to understand why they are being passed and put into practice.

**Reason for Participating:** ANT 336, Anthropology of Terrorism

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### **Andrea Nye (#49G)**

**Title:** The Knowledge and Use of Complementary and Alternative Medicine among Occupational and Physical Therapists

**Faculty Sponsor:** Professor Kathy Stoklosa, Occupational Therapy

**Abstract:** This study examines the knowledge and use of complementary and alternative medicine (CAM) practices by occupational therapists and physical therapists. CAM is a growing practice area in the health care field, and it is important as a part of an interdisciplinary health care team to understand the views of other professionals on this topic. A survey was created by the writer and sent to occupational and physical therapists throughout New York State. This poster presents the results and implications of this study.

**Reason for Participating:** I am participating in CARS to share my research with the Nazareth College and greater Rochester community.

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### **Gbassey Oteme (#50)**

**Title:** Bioremediation of Neonicotinoid Pesticides: Determination of Negative Control Bacterial in Degradation of Thiamethoxam

**Faculty Sponsor:** Professor Stephanie Zamule, Biology

**Abstract:** Our research focuses on the biodegradation of neonicotinoid pesticides that have been linked to the disappearance of honeybees, a phenomenon known as Colony Collapse Disorder (CCD). Because all of the bacterial species we have evaluated thus far are capable of taking up the neonicotinoid, thiamethoxam, in this experiment we sought to identify a species that was incapable of thiamethoxam uptake, and thus could serve as a negative control. To this end, we assessed the ability of *Escherichia coli* to take up thiamethoxam at concentrations as high as 60 mg/L, the relevant environmental concentration as determined by environmental agencies. *E. coli* was able to take up 71% of the thiamethoxam present in the media by the end of the 22 day incubation period. Although unexpected, these findings suggest that *E. coli* is capable of thiamethoxam uptake, and suggest a possible mechanism for thiamethoxam degradation in the mammalian gut, where this bacterium resides. The results from this investigation have led us to look at other microorganisms not commonly found in the soil, such as *Streptococcus lactis*, as potential negative control microorganisms. These studies are currently underway.

**Reason for Participating:** During this past summer I was able to participate in an undergraduate research program at Nazareth College which was partly sponsored by a CARS grant with my sponsor.

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**Kayla Page, Christopher Redmond, Dylan Eichas, Andrew Cross, Bailey Groth, Aricca Senkow, Racheal Pacella (#51)**

**Title:** Purification of recombinant intimin and translocated intimin receptor proteins involved in infection by enteropathogenic and enterohemorrhagic *E. coli*

**Faculty Sponsor:** Professor Lynn O'Brien, Chemistry and Biochemistry

**Abstract:** Two proteins, intimin and the translocated intimin receptor (Tir) play an essential role in attachment to the intestinal epithelial cells by enteropathogenic and enterohemorrhagic *E. coli* (EPEC and EHEC). Once expressed, Tir is translocated to the host cell by a type-III secretion mechanism, becoming immobilized in the intestinal epithelium with its intimin binding domain exposed on intestinal cell surface. Lesion formation results upon intimin binding to Tir, attaching the *E. coli* cell to the intestinal epithelium. *E. coli* infection takes up to 24 hours to diagnose and there has yet to be a small molecule developed to speed up the diagnostic process, prevent further infection, and allow sooner initiation of treatment. This research will discuss the method of expressing and purifying intimin and Tir proteins, as well as the development of a binding assay to study protein molecular interactions.

**Reason for Participating:** CHM 300, Independent Research

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## Emily Patton (#52G)

**Title:** Visual Aids: the gaps between establish creative process visuals and emotional relevance in Studio Art students.

**Faculty Sponsor:** Professor Smanatha Nolte-Yupari, Art Education

**Abstract:** Anyone surveillancing an art room should be able to quickly assess what project the students are working on. It is a fundamental belief that good teaching practices use visual aids in a classroom to explain a concept, procedure, or material. These visuals are used as references for students throughout the lesson, for foreshadowing, or for inspiration. When looking at these aids they usually provide brief straightforward text that are accompanied by images supporting the text. What most of these visuals lack is the emotional relevance students feel when going through the experience of a project. The visual aids can be compared to a road map. Step one is your starting point, and as the project continues you make different stops on your way to your destination or the final product. But what visuals are there that help students validate their feelings through the experience of creating artwork on this journey? In my qualitative study of studio art students, I look at questions students ask throughout the creation of a project and my interactions with them, to determine what they are feeling as they work. I theorize that there are gaps in Art classroom visual aids between the linear sequence to produce art (already established creative process visuals), and the emotional experience of studio art students.

**Reason for Participating:** I am participating in CARS to help future teacher be able to understand what a student is emotionally going through as they work through an assignment. I am also hoping to express student's emotional experience while creating work, by showing disconnect between establish linear process visuals and what they feel. By creating a visual that reflects student emotion in the creation process it will validate student's experiences in the art classroom.

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## Hannah Pipes (#53G)

**Title:** Awareness of Occupational Therapy's Role in the Treatment of Mild Traumatic Brain Injury

**Faculty Sponsor:** Professor Kathleen Stoklosa, Occupational Therapy

**Abstract:** The purpose of this study was to explore other health professionals' knowledge and awareness of the role occupational therapy has in the treatment of mild traumatic brain injury (mTBI). Occupational therapy plays a vital role in the treatment of a mTBI primarily by addressing the numerous cognitive and visual deficits that may occur as a result of this condition. In the absence of an occupational therapist, many of the issues may not be treated in a holistic, client-centered way. A quantitative survey

was used to collect data for this study. Various members of the rehabilitation team completed this survey online.

**Reason for Participating:** Occupational therapy is not frequently associated with the treatment of mTBIs due to a lack of awareness of their scope of practice. I hope that, through this poster presentation, I can educate others and improve awareness on the role occupational therapy has in the treatment of mTBI.

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### **Juliana Posato (#54)**

**Title:** The Pleasure Deficit

**Faculty Sponsor:** Professor Rachel Bailey Jones, Women and Gender Studies

**Abstract:** For my project, I will be discussing the question of the pleasure deficit. The pleasure deficit is the discrepancy in the frequency of orgasms between cis-men and cis-women, where cis-men experience significantly more orgasms than cis-women in relationships. By addressing and researching the questions of the pleasure deficit, I will provide the potential reasons as to how and why the pleasure deficit exists. I believe the question of the pleasure deficit is crucial to discuss for several reasons. Due to its patriarchal nature, American society functions in a way where cis-men are often favored in most given settings compared to cis-women. Because of this, inequality between cis-men and cis-women exists in every aspect of people's lives. Among these aspects of inequality is sexual activity, and this specific issue needs to be highlighted because it is not being discussed enough in today's society. For this project I will analyze the pleasure deficit through the method of discourse analysis. I will analyze information concerning this topic through two social media platforms: Tumblr and Twitter. With these, I will be able to draw conclusions about the pleasure deficit, who is talking about orgasms, and in what contexts they are being discussed.

**Reason for Participating:** WGS440, Seminar in Women and Gender Studies

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### **Kathryn Proe and Sophia Qureshi (#55)**

**Title:** Optimization of growth of *Shewanella* MR-1 with CdSe quantum dots as the electron acceptor

**Faculty Sponsor:** Professor Sanela Lampa-Pastrik, Chemistry and Biochemistry

**Abstract:** With a growing need for sustainable energy, molecular Hydrogen has become a popular choice as a clean burning fuel. Hydrogen is artificially produced by mimicking the reductive half- reaction of photosynthesis in a system that contains semiconducting nanocrystals as photo synthesizers and an appropriate sacrificial electron donor. One such system used CdSe quantum dots and ascorbic acid and

achieved high yields of hydrogen while maintaining stability over long period of time (Han et al, 2012). To make this system more self-sustainable one can introduce an appropriate microorganism as a sacrificial electron donor. Shewanella MR-1 is a facultative anaerobe that has perfected a method of external electron transport required for its survival by utilizing large number of charge transfer species such as cytochromes and flavins. The critical step in integrating Shewanella MR-1 into a hydrogen production system is the ability of bacteria to transfer electrons to quantum dots. We are growing Shewanella MR-1 anaerobically, replacing its natural terminal electron acceptor with CdSe quantum dots. The response of the bacteria to the varying concentrations of CdSe quantum dots can be studied by correlation of bacterial growth with expression of charge transfer species. With this information we can optimize the initial electron transfer step involved in the hydrogen production process.

Abstract:

**Reason for Participating:** CHM 300, Independent Research

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### **Max Randolph (#56)**

**Title:** Comparison of Diff-Quik and Wright stained whole blood smears in the Asian elephant (*Elephas maximus*)

**Faculty Sponsor:** Professor Brian Witz, Biology

**Abstract:** 6 Asian elephants (2 pregnant females, 3 non-pregnant females, 1 male) housed at the Rosamond Gifford Zoo in Syracuse NY will have blood drawn weekly to monthly as part of their routine health care supervised by veterinarians from the College of Veterinary Medicine at Cornell University during the summer of 2015. Max Randolph, a pre-veterinary college student working as a veterinary assistant at the zoo during that time, will make 4 smears on each of the blood samples collected into EDTA-anticoagulated tubes. Two blood smears will be transported to the Clinical Pathology Laboratory of the New York State Animal Health Diagnostic Center for Wright staining and evaluation as part of the standard routine hemogram. The remaining two blood smears will be stained with Diff-Quik at the zoo veterinary clinic. After training in proper identification of the different white blood cells (neutrophils, lymphocytes, eosinophils, basophils) of elephants by Clinical Pathology Laboratory technicians, Max will evaluate the Diff-Quik stained smears. Percentages of different types of white blood cells will be based on counting 100 total white blood cells from the smear. Percentages will be statistically compared to those generated for the Wright stained smears.

**Reason for Participating:** BIO 452, Biology Research

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**Corey Reazor (#57)**

**Title:** Isolation of Cellulase Producing Organisms from Compost

**Faculty Sponsor:** Professor Lynn O'Brien, Chemistry and Biochemistry

**Abstract:** Cellulose is the major component of biomass in plants and cannot be digested by humans nor can yeast ferment it as is, leading to large amounts of cellulosic waste material. This unused cellulose could be repurposed by breaking it down into a more usable form by the enzyme cellulase. These cellulase enzymes work by breaking the beta acetal linkages between glucose molecules that make up the cellulose polymer. The resulting glucose molecules can further be treated with yeast to allow for fermentation to occur, yielding ethanol, a viable source of fuel. The compost pile at the greenhouse at Nazareth College provided a source of cellulase producing organisms which were screened for the presence and efficiency of the enzyme. The goal of this research was to isolate those organisms that produce efficient cellulase enzymes capable of breaking down cellulose to glucose.

**Reason for Participating:** CHM 160, Investigation in Chemistry

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**Crystal A. Rightmyer (#58G)**

**Title:** The Relationship and Bi-directionality of Color and Emotion Associations

**Faculty Sponsor:** Professor Renee van der Vennet, Creative Arts Therapy

**Abstract:** This thesis describes the following research on color and emotion associations. Forty-five college students participated in two experimental tasks. Test A consisted of viewing nine color stimuli (red, orange, yellow, green, blue, purple, white, grey and black) and answered questions about emotional associations as well as a person, object, place, or event. Test B consisted of viewing sixteen emotive word stimuli (passionate, frightened, indecisive, grief, vulnerable, optimistic, free, curious, bored, miserable, aggressive, secure, afflicted, glad, spirited, and calm) and answered questions about color associations as well as a person, object, place, or event. Test A found that orange, yellow, green, blue, and purple were predominately associated with positive emotions and red, white, grey and black were predominately associated with negative emotions. Test B concluded that positive emotions were predominately associated with the colors yellow, blue, red, and purple, negative emotions were predominately associated with the colors red, grey, black, white, and orange and yellow and grey were associated with neutral emotions. The results suggest that color-emotion associations could be predicted and may be bi-directional. It also suggests that there may be a sub-cultural impact on color-emotion associations.

**Reason for Participating:** Experience

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## **Hadassah Rivera (#59)**

**Title:** A Forgotten Life: How Alzheimer's & Dementia Can Change the Lives of Those We Love

**Faculty Sponsor:** Professor Esperanza Roncero, Foreign Languages and Literature

**Abstract:** For my Spanish Senior Seminar course, I was given the opportunity to research a topic that brings both of my disciplines together. As a Communication Sciences and Disorders and Spanish dual major, I am interested in the presence of bilingual speech therapists in comparison to the amount of Spanish speakers in the United States. I wrote two different papers. The first was a research paper addressing the diseases of Alzheimer's and Dementia, as well as the impact of these illnesses on Hispanic populations and the implications for speech therapists. The second paper was a personal story, which told of the experiences I have had with my maternal grandparents, both of whom have endured years of suffering as a result of these illnesses. I decided to pursue this topic because of the personal connection that I have with the diseases as well as my future career goals. In order to complete the research paper, I look at a myriad of journal articles about the diseases, speech therapy, and bilingualism. On the other hand, for my personal story, I spoke with my parents who remember explicit details of these diseases manifested themselves in the lives of my grandparents.

**Reason for Participating:** SPN 402, Spanish Senior Seminar

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## **Morgan Ross (#60)**

**Title:** Glyphosate Toxicity on Aquatic Invertebrates

**Faculty Sponsor:** Professor William Hallahan, Biology

**Abstract:** The success of an ecosystem can contribute to the community of organisms living within it and interacting with the physical environment. This success, however, can be diminished by human stressors, such as herbicides and insecticides. One of the major pesticides that is currently in circulation and widely used around the globe is Roundup®, which contains the chemically active compound glyphosate. In this study, we demonstrate that glyphosate has the ability to cause a toxic response within aquatic invertebrates, which are non-targets of the chemical. More specifically, we analyzed the effects of increasing glyphosate on the survivorship of aquatic shrimp, mayflies and sowbugs. Over the course of this thirty-eight day experiment, we were able to determine that glyphosate does cause a toxic response within some organisms, although further experimentation and replication is needed to better support the possibility of a dose-dependent relationship, such as that found through slope analysis of the aquatic shrimp population.

**Reason for Participating:** Biology Senior Research

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**Marta Salinas (#61)**

**Title:** Study Abroad Experience: Impact on Student Autonomy Development

**Faculty Sponsor:** Professor MaryAnn Bush, Psychology

**Abstract:** The purpose of this research was to investigate the potential growth benefits of study abroad experiences. We investigated developmental tasks associated with personal autonomy as a result of study abroad experiences and the impact of psychological factors potentially mediating such gains. There were three groups of students surveyed; those returning from study abroad, preparing to study abroad and those having no plan to study abroad. An online survey included items from the Developing Autonomy Subtask of the Student Developmental Task and Lifestyle Assessment (SDTLA), the Multicultural Personality Questionnaire (MPQ-91) and the Mindful Attention Awareness Scale (MAAS). A 2- factor ANOVA was conducted that examined the effect of Multicultural Personality and study abroad status on Autonomy as measured by the SDTLA. Results indicated significant main effects for both MPQ,  $F(1,20) = 12.29, p < .002$  and Study Abroad Status,  $F(2,20) = 5.14, p < .01$ . No significant interaction was found. Post hoc analysis using Tukey's HSD indicated that students returning from study abroad had higher autonomy scores than those planning to go abroad ( $M=16, p=.019$ ) as well as those not intending to study abroad ( $M=25, p=.003$ ). A multiple linear regression analysis showed that MPQ scores were significant in predicting Autonomy ( $\beta = .81, t(23) = 7.01, p < .001$ ).

**Reason for Participating:** Independent Research

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**Jordan Scott (#62)**

**Title:** Analyzing the health Honeoye Creek Using Macroinvertebrates

**Faculty Sponsor:** Professor William Hallahan, Biology

**Abstract:** The Genesee River watch has developed a method of analyzing the health of watersheds in the Upstate New-York region. In order to effectively display and analyze information about watershed health the Genesee River watch has devised a "Genesee River Basin Report Card" that displays Pollutants, Protections that are in place in regards to limiting the effects of agriculture, development, waste management, and conservation, and any restoration actions. While the Genesee River Watch already conducted a study on the Genesee River watershed, my research focused on the lower, Honeoye Creek portion of the watershed. The main purpose of this research project was to analyze the effects of the Honeoye Falls Sewage Treatment Plant (Referenced

as STP). We analyzed both effects on the river itself, with and without influence of the sewage treatment plant before it discharges into the Genesee River. My mentor, Dr. William Hallahan, my research partner, MaryLynn Eddington, and I analyzed concentration and load of suspended solids and phosphates in the water as well as of Macroinvertebrate Communities, based on standard indices. While all three of us went out into the field together to collect data Dr. Hallahan analyzed Phosphates, MaryLynn focused on total suspended solids, and I focused on Macroinvertebrates. Once the data was collected and analyzed we would convene and assess the stream health all taking into consideration all of our results.

**Reason for Participating:** Capstone Senior Research

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### **Rebecca Silliman (#63)**

**Title:** She'll Always Be My Daddy: Transgender Parenting, Roles and Family Dynamics

**Faculty Sponsor:** Professor Kim McGann, Sociology and Anthropology

**Abstract:** There is an abundance of interdisciplinary research on family dynamics, parenting, and gender roles within the nuclear family, but little work on the way these dynamics play out in the presence of a transgender or gender transitioning parent. How do transgender people fulfill the role of parent? This research explores the implications of a transgender parent on family life, including parent-child dynamics and gendered division of household labor. The content of documentaries, reality television, essays, and blog posts written by transgender parents or their children were analyzed in search of broad themes related to gender role occupation, family interaction, and naming practices used by children of transgender parents. The conceptual frameworks of identities, the role of family in the construction of reality, and normative gender roles are relevant to the research.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Emma Simsek and Brittany Smith (#64)**

**Title:** 2014 Formative Assessment of the 4th Annual Global Citizenship Conference

**Faculty Sponsor:** Professor Muhammed Shafiq, Interfaith Studies and Dialogue

**Abstract:** We conducted a research using the completed surveys from the conference. We compared the outcomes of the event to the vision of college in order to measure the success of the event.

**Reason for Participating:** We both work at the Hickey Center for Interfaith Studies and Dialogue, and this was a part of our job this semester.

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**Claire Sobraske and Andre' Richardson (#65)**

**Title:** Using small molecule pyridine-based compounds to extract Ca<sup>2+</sup> and Sr<sup>2+</sup> from aqueous solutions then to be used as a nutrient source for soil bacteria

**Faculty Sponsor:** Professor Stephen Tajc, Chemistry and Biochemistry

**Abstract:** Hydraulic fracturing is an efficient way to recover natural gas from rock formations beneath the surface of the ground. However, it involves the injection of highly pressurized water into the ground, producing millions of gallons of hazardous wastewater. This wastewater contains chemicals including heavy metal (II) cations and therefore cannot be reused. It has been suggested that pyridine-2,6-dicarboxylic acid, also known as dipicolinic acid (DPA), is able to chelate to the metal (II) cations that are present in the hydrofracking wastewater. The purpose of this research is to explore the removal of metal (II) cations from aqueous solution by introducing DPA derivatives. Currently, the focus is on strontium and calcium due to the abundance of each contained within the wastewater. This work also examines the possibility of soil bacteria utilizing the strontium as a nutrient source, therefore effectively working towards the bioremediation of the wastewater from hydraulic fracturing.

**Reason for Participating:** To demonstrate our knowledge of our research.

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**Dean Squires Jr. (#66)**

**Title:** Oh What A Night! A Lyrical Analysis of Virginitiy Throughout Different Musical Genres

**Faculty Sponsor:** Professor Kim McGann, Sociology and Anthropology

**Abstract:** Musical genres can be very different from each other, both in terms of subjects and styles. But what happens when artists in vastly different genres sing about a similar topic? This research is a content analysis of songs about virginitiy (both keeping and losing it) across five genres: pop, hip-hop/rap, rhythm and blues, Christian, and rock/alternative. Wayne Brekhus's theory of social construction of sexual identity, particularly the concept of markedness, is used a basis for the analysis.

**Reason for Participating:** Reason for Participating: SOC 444, Sociology Senior Seminar

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## **Sabrina Squires and Brittany Smith (#67)**

**Title:** Witnessing for Peace

**Faculty Sponsor:** Professor Susan Nowak, Religious Studies

**Abstract:** We would like to showcase the work we completed for our Holocaust by Bullets class in the fall semester. For this class, we worked collaboratively with Fr. Patrick Desbois and his team at Yahad-In Unum, based in France. We worked with four community members, creating a website with various short films and other art collections, to tell their stories in a meaningful way. We accomplished this task by working closely with Fr. Desbois' Holocaust by Bullets book, applying a basic methodological approach provided through workshops by Fr. Desbois and two of his team members. In this approach we interview the community representatives asking questions such as, what and where, to get the community representatives to build a relationship both to the past and ourselves. We did (and continue to do) this work because we believe in the profound power of the story as a means to better understand the trauma of the world, and to work to prevent mass genocide and systemic injustice.

**Reason for Participating:** We are participating because we feel it is important to share and educate others on the systemic injustices that individuals have experienced both in the past and in the present day-in-age to further prevent mass violence and genocides. The power of individual stories becomes profound in the fight between injustice and our society's understanding today.

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## **Alison Stedman and Jack Whalen (#68)**

**Title:** The Crossing Number of Complete Graphs

**Faculty Sponsor:** Professor Matt Koetz, Mathematics

**Abstract:** 1) We researched the planarity of complete graphs and how their crossing numbers relate to their vertices. 2) We drew many graphs in an attempt to find an optimal way to minimize crossings, 3) The relationship between the number of vertices in complete graphs and their crossings is unknown in larger graphs, so it would be enlightening to find a way to calculate or find them

**Reason for Participating:** Interest in presenting completed research

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## **Julie Steinmetz, Sara Barton, Chad McDonald (#69)**

**Title:** Reflecting on the homeless population within the Greater Rochester community

**Faculty Sponsor:** Professor Leanne Charlesworth, Social Work

**Abstract:** For our project we partook in the Point In Time (PIT) homeless count conducted on January 26th of 2016, as part of a requirement for our Social Work research methods class. The count is a collaborative effort to systematically count all of the homeless individuals living in the Greater Rochester area. The count is comprised of three shifts of volunteers who go out into the community with both survey, and observation tools. These tools allow for the surveyor to gather information either from speaking with, or directly observing an individual who appears to be homeless, in an effort to account for all of the homeless individuals within the Rochester area. Our class specifically surveyed individuals seeking a free breakfast at the Asbury Dining Care Center on this particular day. Attempting to gain information through a count of the number of homeless individuals within the Rochester community (in compliance with HUD's definition of homeless), serves the purpose of hopefully securing more funding to help better serve homeless individuals within our community. Given the prevalence of homelessness within the Rochester area it remains imperative that we attempt to better understand and moreover, aid in fighting this epidemic.

**Reason for Participating:** SWK 352, Social Work Research Methods

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### **Daniel Tofil and Melissa Wilkinson (#70)**

**Title:** Macroinvertebrates in Relation to Phosphate Concentrations in Springbrook

**Faculty Sponsor:** Professor William Hallahan, Biology

**Abstract:** This project involved collecting and analyzing macroinvertebrate samples which were collected from Springbrook, within the Genesee River Watershed. This was done by going out to the stream and capturing macroinvertebrates with nets. They were brought back to the lab, counted, and entering into an excel spreadsheet to calculate the Biotic index, EPT Index, and the Percent Model Affinity. This research was done because the Genesee Water Basin supplies water to Lake Ontario. There was concern regarding whether a sewage treatment plant in Lima was impacting the levels of phosphates in our local water sources.

**Reason for Participating:** Recommended by faculty and it looks good on a resume.

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### **Bradley Tome (#71)**

**Title:** What's Gender Got to Do with It? Masculine and Feminine Styles of Love in Popular Song Lyrics

**Faculty Sponsor:** Professor Kimberly McGann, Sociology and Anthropology

**Abstract:** Romantic love seems like the ultimate universal and innate emotion, one that all humans experience and express in similar ways. Love songs are one way that cultural expressions of love are captured and reinforced. However scholars such as Francesca Cancian have argued that in American culture, we have a decidedly narrow and feminine definition of romantic love that excludes styles of love that men prefer. This research is a content analysis of the Billboard top 50 love songs of all time to see if the gender of the performer or the gender of the intended recipient reflect masculine, feminine, or androgynous styles of love.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Amanda Torpey (#72G)**

**Title:** The First Year: What is success?

**Faculty Sponsor:** Professor Rebecca Fahy, Psychology/Higher Education and Student Affairs Administration

**Abstract:** This project will reflect data collected in the fall of 2015 from the freshman class at Nazareth College. Students were asked to take a pre and post survey during their Academic and College Success course determining their personal growth, which is defined as one's desire to have new experiences and challenges that change the way one looks at the world. These data, paired with information given by the Office of Academic Affairs will help to identify links between the ACS class and each student's personal growth. Other relevant variables were also explored. The purpose of the investigation is to identify what factors may contribute to first year student development. This information would be useful for future planning and programming for first year students.

**Reason for Participating:** To continue presenting research that was gathered during an Independent Study.

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### **Elizabeth Ver Steeg (#73)**

**Title:** The Family Guy? How Political Candidates Use Family in their Election Strategy

**Faculty Sponsor:** Professor Kimberly McGann, Sociology and Anthropology

**Abstract:** The United States has only elected two unmarried presidents and currently 90% of U.S. senators and governors are married. In the current political cycle, how is a candidate's family, or lack thereof, utilized or downplayed in their election campaign? This research explored how family is used by political candidates when describing themselves to the voting public by examining the content of campaign websites of 20

senators and five presidential candidates in the 2016 election. Electability is shaped, in part, by public perceptions of a candidate's personality.

**Reason for Participating:** SOC 444, Sociology Senior Seminar

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### **Madeleine Waring (#74)**

**Title:** Music Media and the Hyper/sexualized Female: The Body Project in 2015

**Faculty Sponsor:** Professor Timothy Kneeland, History and Political Science

**Abstract:** This project is about the level of sexualization that occurs when women are represented in music videos and magazine covers, as well as how often women are represented as compared to men. An analysis of the music videos from the top 50 songs of Billboard's top 100 song list from 2014 was used to determine the level of sexualization of the videos, based upon clothing, dance moves, body language, lyrics, and the overall appearance of the videos. An analysis of Rolling Stone magazine covers from 2013 was used to show how often women were featured and how often they were sexualized in those pictures, again determined based on body language and clothing, but also facial expressions as well. This project was inspired by Joan Jacob Bruberg's book, *The Body Project*, which studies the history of beauty standards in the U.S. since the 1890's. She concluded women are becoming more objectified and that young women internalize this to mean they must be physically and sexually attractive. This relates to the studies of the music videos and magazine covers due to the abundance of celebrities represented and how they reinforce these beauty standards, which affects young girls' self-esteem and self-worth.

**Reason for Participating:** HIS 320, American Women's History

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### **Melissa Wilkinson (#75)**

**Title:** Algal Growth In Relation to Phosphate Concentration in Springbrook

**Faculty Sponsor:** Professor William Hallahan, Biology

**Abstract:** I looked at the algal growth in comparison to phosphate concentrations in Springbrook. I took water samples above and below the Lima sewage treatment plant to see if the phosphates released from the sewage treatment plant was contributing to the phosphate problems in the Genessee River. I tested for phosphates in the water and grew and counted the algae. I found that they did correlate and the levels decrease before they contribute to the next river in the river system

**Reason for Participating:** Interested in sharing my results

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## **Anna Wilson (#76)**

**Title:** Hearing Screenings in Peru

**Faculty Sponsor:** Professor Esperanza Roncero, Foreign Languages and Literature

**Abstract:** 1) I helped conduct hearing screenings in Peru. 2) We used a handheld portable audiometer. 3) We did it as part of a service learning project. The project that I will showcase will discuss the results of the screenings and possible recommendations regarding hearing loss.

**Reason for Participating:** SPN 402, Spanish Senior Seminar

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## **Rachel Zeni, Alison Tepas, Katie Lohrman, Ryan Foley, Melissa Scorse (#77G)**

**Title:** The Effect of Two K3 Prosthetic Feet on Spatio-Temporal Gait Characteristics and Prosthesis-Related Quality of Life Status Post Transtibial Amputation

**Faculty Sponsor:** Professor Linda Riek and Professor Mike Huson, Physical Therapy

**Abstract:** As PT students, we are interested in the concept of functional movement and how various devices affect movement and function. Working with a community prosthetist, we gathered research participants who have underwent a below the knee amputation to one of their legs. We then worked with prosthetic device manufactures to obtain donated prosthetic feet. Over the course of 6 weeks, we changed the prosthetic foot of the participant twice and took measurements on how they functioned. We measured their walking characteristics with an electronic spatio-temporal mat as well as functional measures including transfers and their ability to move around. Each participant also completed a subjective questionnaire. At the end of data collection, we analyzed all the data to determine the differences between objective and subjective information for each prosthetic foot.

**Reason for Participating:** PTR 761, Research in Physical Therapy

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