

Beloit & Beyond Conference, November 8, 2022

Additional events

Monday, November 7

5:00-7:00 [Local to Global Networking Fair](#) in the Powerhouse

Tuesday, November 8

11:00-12:30 [Virtual Panel with Study-Abroad Partners](#) in Moore Lounge, Pearsons Hall

11:30-1:00 [Elevator Pitch: What, Where, When, & How](#) in Career Works, Pearsons Hall

2:00-4:00 [Global Experience and Channels Fair](#) in the Powerhouse Turbine Gallery

7:00 PM [Michael Woldemariam presents the Ivan Stone lecture](#), "US-Africa Relations: New Biden Administration Strategy for Africa" in the Powerhouse Weissberg Auditorium

Greenhouse, Science Center

Greenhouse Open House and Tours

Moderator: Deb Lynch, Campus Greenhouse

Drop in [Kristin Larson](#), Campus Greenhouse Open House and Tours
12:30-2:00 [Yessenia Cruz](#),
[Niana Rooney](#),
[Nora Leifheit](#)

CELEB MakerLab, Downtown Beloit

MakerLab Open House

Drop in 12:30-4:30	Nico Doret , Eric Schilling , Helena Harrison , Rafa Pavarini de Souza , Fatumata Kaba , Ahmasi Martin , Faiq Ahmad , Bella Acosta	Maker Lab Open House
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Richardson Auditorium, Morse-Ingersoll Hall

Growing through Study Abroad (I)

Moderator: Joseph Derosier, Modern Languages and Literatures

8:45-8:50	Joseph Derosier	Opening remarks
8:50-9:15	Jayitha Gagenapally	Cultural Differences and Return Cultural Shock after Studying Abroad Experience in Spain
9:15-9:40	Elinore Kosak	Finding Myself Abroad: Learning to Live in Montpellier
9:40-10:05	Rebeca Galindo, Paige Airaudi, Zoe Landolt, Blue Yeck, Eric Schilling	Discovering Spain: A Country of Citizenship, Migration, and Belonging

Growing through Study Abroad (II)

Moderator: Pablo Toral, Political Science

10:15-10:20	Pablo Toral	Opening remarks
10:20-10:45	Phidor Kong	Experiencing Finnish Education and Culture
10:45-11:10	Paige Airaudi	My Study Abroad Trip to Costa Rica
11:10-11:35	Garrison Ferone	Widening My World View by Studying Abroad and Conducting Research in the Galápagos Islands and the Amazon Rainforest of Ecuador

Doing Research Abroad

Moderator: Kristin Labby, Chemistry

1:00-1:05	Kristin Labby	Opening remarks
1:05-1:30	Vu Anh (Vincent) Le	Applying for a Global Research Experience: Reflection over Time in the University of Tokyo
1:30-1:55	Lexy Olson	Experiencing Healthcare through a Summer Abroad in Italy via the Doctors in Italy Fellowship Program
1:55-2:20	Jack Collier	A Student's Perspective on Archeological Field Schools

Room 150, Sanger Science Center

Research in Sociology

Moderator: Charles Westerberg, Sociology

8:45-8:50	Charles Westerberg	Opening remarks
8:50-9:15	Allan Hernandez Padron	Deviance in Sports: The Case of the Mexican 'Eh P****' Chant
9:15-9:40	Jada Daniel	Served School Time and Manufactured Criminals: The Socialization of Black Students in Chicago Public High Schools
9:40-10:05	Bella Callery	Outcomes and Oppressions: An Intersectional View of Adult Film Stars

Exploring Career Pathways

Moderator: Ron Watson, Political Science; Health and Society

10:15-10:20	Ron Watson	Opening remarks
10:20-10:45	Nichole Espineli	My Experience and Research at Johns Hopkins: Fatal and Non-Fatal Injuries in Shooting by Police, January - March 2021
10:45-11:10	Angelo Buff	Career Opportunities at Options Autism Clinic as an Autism Technician.
11:10-11:35	Eric Seo	Entrepreneurship from a Student Perspective

Roundtable: Internships in Economics

Moderator: Diep Phan, Economics and Business

1:00-2:00	Caden Anderson	Finance Accounting Internship at Aptar
S04	Irakli Maisuradze	Summer Internship Experience as a Quantitative Strategist
S05	Matthew O'Leary	My Experience as a Treasury Intern with StoneX Group
S06	Ariane Irafasha, Antonio Rodriguez	Belmark Associates Surveying

Room 249, Sanger Science Center

Career Opportunities in Health Care

Moderator: Taylor Arhar, Chemistry

8:45-8:50	Taylor Arhar	Opening remarks
8:50-9:15	Riley Conn	COVID-19, Medicaid, and Healthcare Job Opportunities
9:15-9:40	Rayven Ferber	EMS and COVID-19: My Experience as an EMT Student in 2020
9:40-10:05	Rose Loos-Austin	Working at a COVID-19 Testing Site: Learning to Talk with Difficult People

Summer Internships in Biology

Moderator: Rachel Bergstrom, Biology

10:15-10:20	Rachel Bergstrom	Opening remarks
10:20-10:45	Briana Arteaga	How My Internship at City of Hope Opened My Eyes
10:45-11:10	Niav Probst	Wildlife Rehabilitation: Providing a Future for Wildlife
11:10-11:35	Emmalynn May	Community Building and Growth with Montana Youth

Roundtable: Field Experiences in Environmental Science

Moderator: Tawnya Cary, Biology

1:00-2:00	Emmalynn May , Chloe Hain , Garrison Ferone , Mikaila Davis , Jane Rendleman	Field Experience in Environmental Science
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Room 349, Sanger Science Center

Learning through Site-Based Research

Moderator: Disha Shende, Economics and Business

8:45-8:50	Disha Shende	Opening remarks
8:50-9:15	Abhey Singh Guram	Agrarian Distress among Small and Marginal Farmers in Punjab, India
9:15-9:40	Raahima Talal	Psychosocial Impacts of Strabismus on Employment
9:40-10:05	Maxwell Robin	The Building Blocks of a Food Web: Studying the Lakes and Zooplankton within the Minnesota Boundary Waters

Research in STEM fields (I)

Moderator: Katherine Harris, Mathematics and Computer Science

10:15-10:20	Katherine Harris	Opening remarks
10:20-10:45	Nico Petroccione	An Introduction to Computational Algebraic Geometry
10:45-11:10	Cyrus Habas	Pannexin 1 Channel Silencing by DHHC Protein Acyltransferase
11:10-11:35	Bobby Lerch, Abigail Membrino	Expressing and Purifying CbpA for Studies into the Elucidation of Bacterial Hsp70 JDP Interaction

Research in STEM fields (II)

Moderator: Tom Stojsavljevic, Mathematics and Computer Science

1:00-1:05	Tom Stojsavljevic	Opening remarks
1:05-1:30	Nico Petroccione	Implementation of Adaptive Multi-Site Deep Brain Stimulation for Parkinson's Disease
1:30-1:55	Sadeen Alsabbagh	DATCP (Customer Service and Food Safety): Licensing Requests for Officers and Field Inspectors
1:55-2:20	Hasti Hairy	Research Internship on the Optimization of Hydrophone Pressure Mapping for Efficient Acoustic Safety Testing

Weeks Lounge, Pearsons Hall

Exploring Summer Internships

Moderator: Jessica Fox-Wilson, Career Works

8:25-8:30	Jessica Fox-Wilson	Opening remarks
8:30-8:50	My (Miley) Le	Product Management Internship: What, When, and How
8:50-9:15	Onix Roige Diez	PSEG Green Teams 22
9:40-10:05	Jane Rendleman	Forensic Intern Boot Camp

Serving the Beloit Community and Beyond

Moderator: Carol Wickersham, Sociology

10:15-10:20	Carol Wickersham	Opening remarks
10:20-10:45	Moon West, Shruthi Chandrasekar	The Evolution of the Todd Reading Buddies Program: The Effects on Community-Based Learning
10:45-11:10	Qiongyi Feng	Kid-Theming the Blender Cafe: A Case Study in the Beloit Public Library
11:10-11:35	Shruthi Chandrasekar	The Ideal Beloit: How to Market the Beloit College Experience in the Field

Roundtable: Getting Involved in Student Government at Beloit

Moderator: Angi Olesen

1:00-2:00	Brandon Joly, Abhey Guram, Raahima Talal, Maij Sprenger-Otto, Jagvi Dey	Structuring Student Government at Beloit College
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Abstracts

Sponsor: Elisabeth Enomoto

Richardson Auditorium, Morse-Ingersoll Hall, 10:45-11:10

Paige Airaudi '23

West Bend, Wisconsin

Major: Spanish and Education

My Study Abroad Trip to Costa Rica

Studying abroad is often an experience that seems impossible. Between the cost, living on the other side of the world, and leaving your comfort place, it can seem that nothing would ever get you to that new and exciting place. I had all of these fears before going abroad to Costa Rica. The process certainly wasn't easy, but starting the process made what seemed to be the impossible turn into a possibility. The main goal of my presentation is to eliminate the illusion that studying abroad is not worth the time and money. Instead, I emphasize the importance of embarking on a study abroad journey and all of the endless possibilities of learning, such as independence, fluency in language, and becoming an effective and culturally responsive communicator.

Throughout this presentation I will explain my time abroad while in Costa Rica for 3 months. I will show how I overcame things such as homesickness, culture shock, and others. It took some time to overcome these challenges and immerse into a new culture, but I was able to make the best of it and learn from these challenges.

My main goal within this presentation is to help others learn about the possibility of studying abroad in Costa Rica. There is so much to learn and experience in this beautiful country and I want all students at Beloit to have an experience as meaningful as I did. I would like for students to understand that it may be a challenge to be far away from home and be uncomfortable living in a different place, but it is truly an experience that I will never forget, as it has cultivated a home away from home.

Sponsor: Tom Stojasavljevic

Room 349, Sanger Science Center, 1:30-1:55

Sadeen Alsabbagh '24

Amman, Jordan

Majors: Computer Science; Data Science

Minor: Physics

DATCP (Customer Service and Food Safety): Licensing Requests for Officers and Field Inspectors

Developing a system for advantageous business operations, health headquarters, licensing, and complaint entities was a bit of a challenge till we actually delved deep into the process. I worked on integrating an interface that could be used online and offline to track live data and edit it. Since the licensing and complaint team is mostly focused on meeting customer service and food safety guidelines, inspectors in the field need a platform to communicate through past data. Inspectors needed a platform that could help them see patterns and trends and seasonality based on the departments' functions. That was impossible before I worked on the special project with my supervisor, Matt Kachel. I made sure that the licensing team was comfortable with the platform, Jotforms, and the possibility of it being handled by a third party called Rosco to assure that data is secure online and offline.

In my presentation, I will be discussing the process of the development and advancement of the form based on the team's preferences. I will be also discussing the impact that it leaves, the piloting process, and my personal experience working with big data and processes to deliver a product that serves the purpose.

My internship position focused on determining the feasibility of utilizing current software to obtain data for program analysis, reviewing other software applications and survey software to identify alternative data collection methods, and analyzing data to make program recommendations based on the data analysis conclusions. Finally, I was responsible for documenting and updating policies and procedures to ensure the proper use of the software.

Sponsor: Diep Phan

Room 150, Sanger Science Center, 1:00-2:00

Caden Anderson 'XX

Westmont, Illinois

Majors: Economics; Sociology

Finance Accounting Internship at Aptar

I will talk about my experiences as a finance accounting intern for AptarGroup, a manufacturing company located in Crystal Lake, Illinois. I will talk about the daily tasks I did, such as processing invoices and conducting various weekly reports. I will also talk about my long term projects in which I utilized SAP and Business Intelligence (BI). I will also talk about the process I went through to find an internship and the skills of interviewing that I learned during that process.

Sponsor: Rachel Bergstrom

Room 249, Sanger Science Center, 10:20-10:45

Saro H. Armenian, D.O., M.P.H. and Kyuwan Lee, Ph.D (City of Hope)

Briana Arteaga '24

Covina, California

Majors: Biology; Psychology

How My Internship at City of Hope Opened My Eyes

This summer I had the opportunity to intern at The City of Hope in Los Angeles, one of the best cancer and diabetes centers in the country. To say this was a great opportunity is an understatement, this internship was eye-opening and life changing. I would've never considered going into research or oncology until my internship. I met an abundance of specialized doctors, geneticists, pharmacists, surgeons, researchers, nurses, and so many other people. All with different stories too, beautiful, unique stories. Even meeting oncology(cancer) patients and hearing their stories was such a humbling and astonishing experience.

I also learned a lot about myself at this internship. I learned how exhausting it is to work an 8-5, how important research is, how I don't want to be a radiologist anymore, and how much my parents do for our family. Aside from what I learned though, I've never felt more prepared to enter a high intensity environment such as City of Hope. Here at Beloit I've definitely been put through the wringer but it has only prepared me for this opportunity and more to come. The stress my professors put on me to be exact in my measurements and observations related to my internship as I observed and calculated the thigh muscles. The stress my professors put on finding even the smallest of details related in my internship as I looked through countless data of Oxygen consumption and differences in muscle masses. Some of these tools I took with me to my internship didn't just come from my STEM courses but non-STEM courses as well. I am so thankful and blessed to have interned at The City of Hope, and I am appreciative of the tools Beloit College has given me as I enter the next steps in my life.

Angelo Buff '23

Bartlett, Illinois

Majors: Psychology; Health and Society

Career Opportunities at Options Autism Clinic as an Autism Technician.

Over the summer, and through today, I became an Autism Technician at the Options Autism Clinic at the MercyCare building in Janesville. It was one of the most impactful decisions I could have made as a student. I learned about the inner workings of a hospital and the rigorous application process. I learned about managing my own money and living by myself. As an actual Technician, I went through 40 hours of lecturing, and then another month of training in the field.

Two topics I will cover:

1. Careers in Healthcare

The hospital is a difficult place to work and requires a lot of skills I did not have before. This includes knowing how to navigate the bureaucracy of the workplace, knowing what you are and are not allowed to do, knowing how to use the website *Epic* and how to write notes after sessions. There was also general healthcare worker training. I learned how to do CPR, how to keep the workplace hazard free, and how to manage HIPPA and our clients.

2. Autism Technician & Social Work

This was a lot harder than I expected it to be! As a psychology student, I was trained in Behavioral and Developmental psychology to a significant degree. Additionally, I learned the intricacies of Applied Behavioral Analysis (ABA) and the even more complex topic of Autism. Furthermore, I learned the general skill of being able to treat *people* in a way that is caring, in-depth, impactful, and professional. There is a significant teamwork aspect to ABA treatment as well, since we work in teams on specific clients, and there is no one person taking on all sessions for the client.

Bella Callery '23

Northfield, Minnesota

Majors: Biochemistry; Sociology

Outcomes and Oppressions: An Intersectional View of Adult Film Stars

Today pornography has moved away from sex shops and moved toward the internet. In this new modern era of sex work, how has the emotional labor of being a porn star changed? How are people discriminated against? And how does intersectionality play a role? I conducted 10 interviews with people in the adult film industry and coded them to show that modern day sex work has unique advantages and disadvantages. With the rise of Onlyfans and clip sites it has become impossible to hide as a sex worker. On the other hand, it gives actors more power to choose who they collaborate with and creative control over the material they produce. Many of these outcomes reflect a view of intersectionality - where race, gender, and sexuality all have tangible effects on people's lives.

Shruthi Chandrasekar '23

Chennai, India

Major: Psychology

Minor: Literary Studies

The Ideal Beloit: How to Market the Beloit College Experience in the Field

As Beloit College seniors start navigating the job market, we find ourselves interviewing with various employers looking for the best candidates for the establishments. Throughout the hiring process, candidates market their achievements and why they deserve to be a part of their team.

Over the last few months, I've worked with Gypsum Consulting Inc., where I recruited new candidates and scouted talent to hit the company's target. In addition, my responsibilities also included conducting marketing presentations with the management team. I underwent a 2-week training program to learn many essential marketing elements and how to hook the candidate into learning more about the company. One technique that was utilized included the four impulse factors: fear of loss, urgency, greed, and indifference. The Jones Effect, which is a method to make people feel that they could be left behind or out of touch with what is trending in mainstream media, was another technique that was incorporated into the everyday training process.

This presentation will discuss various ways to use the four impulse factors and the Jones effect throughout the recruitment process. These tips and tricks will help Beloit College students seem more engaged, approachable, and in-demand as they look for suitable careers.

Sponsor: Leslie Williams

Richardson Auditorium, Morse-Ingersoll Hall, 1:55-2:20

Jack Collier '24

Verona, Wisconsin

Major: Geology

Minor: Anthropology

A Student's Perspective on Archeological Field Schools

Over the summer preceding my junior year of college, I participated in an archeological field school. I traveled to the Republic of North Macedonia and worked on two sites dating back to the Middle Paleolithic. This period of prehistory lasted from 300,000 years ago to approximately 40,000 years ago. During this time period, Europe was primarily inhabited by Neanderthals, who were a group of archaic humans that ceased to exist around the end of this period.

Archeological field schools are offered by various organizations. They offer a chance for students studying archeology or related topics, as well as anyone else with an interest in archeology, to get some hands-on experience. Generally speaking, field schools take place over the summer. They are held all over the world, offering students the chance to choose a certain region and time period to study. They typically last about a month, although they can be shorter or longer. Tuition costs vary, and scholarships are available for students who can't fully afford it.

It was a very educational and fun experience. In this presentation, I hope to share my experience and provide some information on how these field schools work. For a college student with no direct experience, signing up for and attending a field school can be a very daunting task, so my goal is to use what I have learned to inform other students who might be interested in doing something similar.

Sponsor: Rongal Watson

Room 249, Sanger Science Center, 8:50-9:15

Riley Conn '23

Sedro-Woolley, Washington

Majors: Health and Society; Sociology

COVID-19, Medicaid, and Healthcare Job Opportunities

The current status of our health care system has been brought to light as COVID-19 traveled through the world. Working in a healthcare setting, you see how Medicaid recipients are treated differently in our medical world. Throughout my time working in the Medicare/Medicaid world, I have seen a transition in the way insurance relates to status. COVID took over the healthcare industry, and I watched priorities change and the quality of care decline for certain people. Healthcare became the most money-hungry I had ever seen it, and the Medicaid world sets it up for failure. COVID has provided an increase in health-related job opportunities and helped speed up the process for some nursing programs; while it has changed the way the healthcare system operates, it has opened up so many opportunities.

Sponsors: Elisabeth Enomoto and Charles Westerberg
Dr. Mary Pattillo (Northwestern University)

Room 150, Sanger Science Center, 9:15-9:40

Jada Daniel '23

Chicago, Illinois

Majors: Political Science; Sociology; Critical Identity Studies

Served School Time and Manufactured Criminals: The Socialization of Black Students in Chicago Public High Schools

Black students comprise 37% of Chicago Public schools but account for 61% of school suspensions. The hypervisibility of Black students in school discipline and the juvenile justice system promotes an early introduction to poor academic trajectories and the school-to-prison pipeline. Using an interactions conceptual frame and Labeling theory, I find that Black students have differential exposure to punitive discipline. Black students in Chicago Public high schools become self-fulfilled prophecies and begin to perform labels ascribed to them through interactions with educational landscapes that condition them to develop negative self-images and oppositional sub-cultures.

To understand the relationship between excessive punitive discipline and the academic performance of Black students in traditional CPS high schools, I conducted a quantitative analysis of the relationship between disciplinary and academic data from 2017-2019. I computed a bivariate regression model using descriptive statistics and metric effects such as frequency and variation. Results demonstrated a moderately strong relationship between exposure to punitive discipline and graduation rates of Black students. This project will provide foundations for educational advocacy and juvenile justice scholarship on relationships between racial gaps in school discipline and the academic outcomes of Black students in Chicago Public high schools.

Sponsor: Kristin Labby

Weeks Lounge, Pearsons Hall, 8:50-9:15

Onix Roige Diez '23

Solsona, Catalonia, Spain

Majors: Environmental Chemistry; Engineering

Minors: Mathematics; Physics

PSEG Green Teams 22

Last summer I had the privilege to participate in the PSEG Green Teams Internship Program serving AvalonBay Communities. This is a trans-disciplinary internship program targeted to upper level undergraduates coming from any discipline who are interested in sustainability. My team consisted of four other students majoring in architecture, sustainability science, environmental science, and psychology.

Our work consisted of finding solutions to help AvalonBay achieve its sustainability goals. After receiving training on core sustainability subjects and using each member's academic expertise, our team was able to provide AvalonBay with a direct competitor analysis; water risk assessment; multiple water consumption reduction opportunities; environmental report gap analysis; and a user interface that allows residents to purchase green energy directly. We then presented our results in the 2022 PSEG Green Teams Final Presentation.

Sponsor: Brian Morello

CELEB MakerLab, Downtown Beloit, Drop in 12:30-4:30

Nico Doret '24

Glencoe, Illinois

Majors: Media Studies; Spanish

Eric Schilling '23

Petaluma, California

Major: Physics

Helena Harrison '25

Chapel Hill, North Carolina

Major: Biochemistry

Rafa Pavarini de Souza '25

São Paulo, Brazil

Majors: International Relations; Business Economics

Fatumata Kaba '24

Monrovia, Liberia

Majors: Data Science; Physics

Ahmasi Martin '23

Chicago, Illinois

Major: Creative Writing

Faiq Ahmad '26

Lahore, Pakistan

Majors: Economics; Engineering in Physics

Bella Acosta '24

Sacramento, California

Majors: Psychology; Political Science

Maker Lab Open House

The Maker Lab is a student-run organization at Beloit College. We promote curiosity, skill-sharing, and collaboration between students through the provision of a high-tech studio and the tools to bring their visions to life.

Our Executive Board hires students to serve in work-study positions. Students in these positions are known as Lab Supervisors and are tasked with assisting Beloit College students, clubs/organizations, departments, and others with work on personal, group, or entrepreneurial projects.

During the Maker Lab Open House, Lab Supervisors will be available to discuss their work in the Lab, give tours of the space, and supervise any student, club/organization, or department that would like to make use of the equipment. We will also discuss how any student, regardless of their major, year, or background, can navigate and thrive in the Maker Lab.

Our equipment and tools will be ready and available for use during the Open House. For a full list of our utilities, please visit our webpage at this link: <https://www.beloit.edu/celeb/maker-lab/> OR join our Discord: <https://discord.gg/959XkcU9Fg>

Sponsor: Rongal Watson

Room 150, Sanger Science Center, 10:20-10:45

Nichole Espineli '23

Chicago, Illinois

Majors: Anthropology; HEAL

My Experience and Research at Johns Hopkins: Fatal and Non-Fatal Injuries in Shooting by Police, January - March 2021

I will showcase my summer internship at the Johns Hopkins Bloomberg School of Public Health. I was in the Diversity Summer Internship Program (DSIP) program. In this program, 23 other college students from across the country and I were placed with mentors from various public health departments at the school. I was placed in the Health Policy and Management department. Through that, I was an intern at the Gun Violence Solution Center, gathering data on fatal and nonfatal shootings by the police. My mentor, Dr. Cassandra Crifasi, and my PI, Julie Ward, guided me through an independent research project on analyzing nonfatal and fatal shooting data in 2019. I will discuss some of the findings from that research and offer other details experienced by my cohort and me throughout this extraordinary internship opportunity.

Sponsor: Donna Oliver

Weeks Lounge, Pearsons Hall, 10:45-11:10

Qiongyi Feng '23

Chongqing, China

Major: Literary Studies

Minor: Philosophy

Kid-Theming the Blender Cafe: A Case Study in the Beloit Public Library

This summer, sponsored by the Duffy Partnerships, I worked with the Beloit Public Library (BPL) on exploring novel approaches to better connect with its young patrons and engage with families and communities. We focused on kid-theming the Blender Cafe, its on-site restaurant. We wanted to integrate it more purposefully with families' and children's visits to the library and position it to embrace more elements of children's museums. My presentation will include my research on the diversification of the space of public libraries and the significance of incorporating play into learning; a concept proposal of how to improve the Blender; and some experiences of my personal growth in this internship.

Sponsor: Taylor Arhar

Room 249, Sanger Science Center, 9:15-9:40

Rayven Ferber '23

Berkeley, California

Major: Biology

EMS and COVID-19: My Experience as an EMT Student in 2020

2020 was a big year for everyone. But while the pandemic put things on hold for most people, it gave me a chance to really begin my journey in medicine. During the summer of 2020, I attended and completed an emergency medical technician (EMT) program in Santa Cruz and Berkeley, California. Unfortunately, the course had to be altered to accommodate the fact that we could not interact with real patients due to COVID.

After I had completed the program and gained national certification, I still didn't feel my education was complete without rendering care to a real person. When I returned to Beloit for sophomore year, I was directed to the South Beloit Fire Department, as they have trained and employed Beloit students in the past. I began by attending weekly training and later was able to ride along on 911 calls.

In this presentation, I want to share my experiences of EMS education during COVID, from sitting at the dining room table in a Zoom classroom to working in the back of an ambulance with Beloit and South Beloit's first responders.

Sponsor: Tawnya Cary
(Universidad San Francisco de Quito)

Richardson Auditorium, Morse-Ingersoll Hall, 11:10-11:35

Garrison Ferone '23

Shorewood, Wisconsin

Majors: Biology; Spanish

Widening My World View by Studying Abroad and Conducting Research in the Galápagos Islands and the Amazon Rainforest of Ecuador

In the Fall Semester of 2021, I studied abroad at the Universidad San Francisco de Quito, Ecuador. I conducted several research projects in the Galápagos Islands and Amazon Rainforest throughout my trip. I will share these experiences, which include a sea turtle mark and recapture study, a behavioral experiment on Damselfish, and other monitoring studies we performed while scuba diving around the Islands. For each project, I will include a brief overview and interesting notes about the challenges I faced when presenting my findings to Spanish-speaking audiences.

The later sections of this presentation will focus on my research project in the Amazon, how the Arapaima migrate, feed, and breathe on the surface of the river. These incredible fish reach up to 3 meters long! I will share with you the specifics of my study, the overcoming of challenges associated with time, danger, and resources, and how I introduced native indigenous communities of Quichua people to my findings. Additionally, I will share an overview of my time abroad, my connections with fellow students and locals, and how my social groups opened doors for further research and science. This presentation will cater to those interested in studying abroad, who would like to learn about a fellow Beloit student who made it happen.

Sponsor: Joshua Moore

Richardson Auditorium, Morse-Ingersoll Hall, 8:50-9:15

Jayitha Gaggenapally '23

Hyderabad, Telangana, India

Majors: Business Economics; Psychology
Minor: -

Cultural Differences and Return Cultural Shock after Studying Abroad Experience in Spain

Coming from an urban city called Hyderabad in South India, I hardly noticed a change in the culture from India to the United States when I first came to study at Beloit College. The diversity and the orientation experience on campus did not make me feel out of place, nor did it make me aware of the cultural differences between India and the United States.

However, I got the opportunity to study abroad in my junior year in Sevilla, Andalusia, Spain, for a semester. I got enrolled in Universidad de Sevilla. Sevilla is a city in the south of Spain. Despite the small size of the city, I learned that Andalusian province has a different culture than the northern provinces.

I chose the program called ISEP, which offered little guidance from the organization and offered courses in English and Spanish at the university of Sevilla with other locals and study abroad students from various parts of the European countries.

Living in India and studying abroad in the United States and restudying abroad in Sevilla gave me an opportunity to identify the differences between the culture and the education system at Beloit College and Universidad de Sevilla. By the 5th month of staying in Sevilla, I was able to reach a skilled stage of

understanding people and culture. However, I was surprised by the fact that I am now experiencing a return culture shock coming back to the United States after studying in Spain. Therefore, I would like to use this opportunity to share the importance of immersing and adjusting myself to the culture in Spain to gain knowledge and understand the cultural and educational differences between the United States and Spain.

Sponsors: Gabriela Cerghedean and Amy Tibbitts

Richardson Auditorium, Morse-Ingersoll Hall, 9:40-10:05

Rebeca Galindo '25

South Beloit, Illinois

Majors: Political Science; Critical Identity Studies

Paige Airaudi '23

West Bend, Wisconsin

Majors: Spanish; EDYS

Zoe Landolt '23

Evanston, Illinois

Majors: Anthropology; Spanish

Blue Yeck '23

Rancho Palos Verdes, California

Majors: Spanish; Health and Society

Minors: Russian; Biology

Eric Schilling '23

Petaluma, California

Major: Physics

Minor: Environmental Studies

Discovering Spain: A Country of Citizenship, Migration, and Belonging

Spain is a country enriched with a great history of migration from people all around the world. On this study abroad opportunity – the Beloit Summer Global Experience Seminar - we learned the main components of how people throughout history (from medieval to modern days) have found a sense of belonging, and we also reflected on our own perspectives and tactics of making our surroundings our temporary home while staying there.

In this presentation, we will thoroughly describe our study abroad experience in Granada, Spain, while taking the class “Citizenship, Migration, and Belonging.” Throughout this course, we actively learned about Spanish history, culture, people, and much more. We will highlight our daily lives in Spain, the class itself, how we dealt with culture shock, and what we learned about the various cultural influences within Spain.

The fundamental goal of our presentation is to encourage students to explore the option of studying abroad, give out information on what to expect when abroad, and share some real-life history lessons we learned in Spain.

Sponsor: Disha Shende

Room 349, Sanger Science Center, 8:50-9:15

Abhey Singh Guram '24

Punjab, India

Majors: International Relations; Business Economics

Agrarian Distress among Small and Marginal Farmers in Punjab, India

Farmer distress is a widely recognized problem in India and is a result of a variety of factors ranging from climate variability to price volatility and low risk-bearing ability of farmers. This study examines socio-demographic and financial profiles, agricultural activities, and social networks of generational farmers who own less than 5 acres of land in Punjab. A total of 686 farmers were interviewed from 6 districts across the

state of Punjab, India, and a variety of different psychological tests were used to assess their self-reported psychological distress, drug use, and alcohol use.

The learning goals for this primary survey were to gain a deeper understanding of the research process, such as developing a research hypothesis and testing that hypothesis. The overall research objective was to study the socio-economic situation of small and marginal farmers in rural Punjab and observe if economic burden is leading to agrarian distress and rise in unwanted social practices. This project helped me delve deeper into my area of interest and integrate classroom learning with real world experiences.

Sponsor: Taylor Arhar

Room 349, Sanger Science Center, 10:45-11:10

Cyrus Habas '23

Hulmeville, Pennsylvania

Majors: Biochemistry; Philosophy

Minor: Political Science

Pannexin 1 Channel Silencing by DHHC Protein Acyltransferase

Pannexin 1 (Panx1) is an ATP release channel that has important roles in inflammation, cellular migration, pain, and epilepsy. While posttranslational modifications (PTMs) of Panx1 have emerged as an important step in the channel's activation mechanism, the underlying mechanisms are poorly understood. We recently discovered using mass spectrometry and western blot that palmitoylation occurs at cysteines C40 and C347 through DHHC7, a member of the major class of acyltransferase enzymes known as the DHHCs. Evaluation of Panx1 point mutants C40S and C347S, which prevent depalmitoylation, indicates that palmitoylation acts to close the channel. We therefore hypothesize that DHHC7 can act on Panx1 to silence the channel through palmitoylation at cysteines C40 and C347. To test this hypothesis we co-expressed DHHC with Panx1 to determine if the channel is silenced as assessed by a cell-based optical readout of channel activity. We also tested the ability of DHHC to silence voltage-activated Panx1 currents using whole-cell voltage clamp. We found a DHHC7-dependent suppression of Panx1 activity in both experiments. These results suggest that DHHC palmitoylation is a novel pathway by which Panx1 activation is modulated.

Researchers: Cyrus Habas, Erik Henze, and Toshi Kawate

Department of Molecular Medicine, College of Veterinary Medicine, Cornell University, Ithaca NY.

Sponsor: Britt Scharringhausen
Marcus Ingram (KU Leuven)

Room 349, Sanger Science Center, 1:55-2:20

Hasti Hairy '24

San Jose, California & Brussels, Belgium

Major: Physics and Engineering

Research Internship on the Optimization of Hydrophone Pressure Mapping for Efficient Acoustic Safety Testing

While doing an unconventional internship with the Medical Imaging Group of the Department of Cardiovascular Sciences at KU Leuven in Belgium, I independently undertook multiple experimental activities relating to the mapping of the pressure transmitted from clinical ultrasound arrays and recorded using hydrophones.

I did in-depth research on the software and hardware engineering behind motion stage machines and how to optimally pair them with clinical ultrasounds machines. Then, I successfully debugged the software and optimized the hardware setup by designing 3D printed molds. This eliminated a maximum of the sources of human error in the procedure.

Finally, using LaTeX, I created an in-depth manual to guide future users on how to use the setup and how to edit it to their needs.

Sponsor: Diep Phan

Room 150, Sanger Science Center, 1:00-2:00

Ariane Irafasha '23

Kigali, Rwanda

Majors: Quantitative Economics; Health and Society
Minor: French

Antonio Rodriguez '23

Milwaukee, Wisconsin

Major: Economics

Belmark Associates Surveying

This past summer, we, as members of Belmark Associates, worked for clients ACTs Housing to collect information about the residents of the Hackett and Merrill neighborhoods and complete the second iteration of the 2019 ACTs Housing Project. We completed hundreds of surveys over the course of 7 weeks, starting in early June and finishing in late July. Then we analyzed the data and compared the results from the 2019 iteration and the 2022 iteration to see changes in three categories: perception about the neighborhood, neighborhood cohesiveness, and demographics.

Sponsor: Angi Olesen

Weeks Lounge, Pearsons Hall, 1:00-2:00

Brandon Joly '23

Seymour, Wisconsin

Majors: Mathematics; Education and Youth Studies; Spanish Language and Culture

Abhey Guram '24

Punjab, India

Majors: International Relations; Business Economics

Raahima Talal '24

Lahore, Pakistan

Major: Biochemistry

Maij Sprenger-Otto '24

Minneapolis, Minnesota

Majors: History; Anthropology
Minor: Political Science

Jagvi Dey '24

Kolkata, India

Majors: International Relations; Economics
Minor: Law and Justice

Structuring Student Government at Beloit College

Beloit Student Government (BSG) underwent a major change when the BSG Bylaws and Student Statement of Culture were revised by the Social Working Group this summer. On September 5th, BSG hosted a first of its kind Ratification Day celebration, which included food trucks, club, organization, Greek Life representation, and the creation of a Ratification Day Banner where students expressed their reasons for supporting the Bylaws and Statement of Culture. The BSG Bylaws and Student Statement of Culture were enthusiastically approved by the student body on Ratification Day. During this semester, each BSG Exec member has been working diligently to improve student life on campus, while celebrating student joy and success across campus. BSG is looking forward to sharing our progress and answering student questions during this panel period.

Phidor Kong '23

Kampot, Cambodia

Majors: Political Science; Environmental Justice and Citizenship

Experiencing Finnish Education and Culture

In autumn 2021, I studied abroad in one of the best education systems in the world and the one thousand lake country known as Finland. Studying abroad at the University of Eastern Finland, in Joensuu, Finland, was not only a new academic experience, but also a new personal and social life. In addition to the academic learning that I was expecting to do, I developed new personal and social skills. I am more confident, independent, socially engaged, and I am happier.

Although I have been an international student and lived my life abroad in the U.S., going to Finland offered me a different approach to international education and learning. I spent less time studying in classrooms and more time conducting independent studies. I commuted to the school, cooked for myself, and engaged in nature like a Finnish student. Besides, I always enjoyed hunting the northern lights with other international students coming from all over Europe.

Understanding Finnish culture and society allowed me to see how policy and the environment play a role in the daily lives of the Finns. I experienced a high level of freedom and independence, justice, security, and the warm and welcoming attitude of the Finnish people, as well as their environmentally-friendly way of living.

My presentation will be divided into five sections: 1) why study abroad and why Finland, 2) study abroad preparation, 3) experiencing Finnish education, 4) daily life in Finnish society and culture, and 5) my takeaways from the study abroad in Finland.

Elinore Kosak '23

Brunswick, Maine

Majors: History; French Language & Culture

Finding Myself Abroad: Learning to Live in Montpellier

This presentation will go over my study abroad experience in Montpellier, France, a large city in the south of France. I will explore different aspects of my time there, such as exploring Montpellier, the tensions between speaking English and French, and things that I found intimidating or difficult. I will also discuss what it was like to take classes in another language, as well as how I built my confidence and grew to find my place in the city.

Kristin Larson '24

Beloit, Wisconsin

Major: Studio Art & Education

Yessenia Cruz '23

Richmond, California

Major: Biology

Niana Rooney '25

Brooksville, Maine

Majors: Psychology; Creative writing

Minor: studio art

Nora Leifheit '25

Saint Paul, Minnesota

Major: Undeclared

Campus Greenhouse Open House and Tours

The Beloit College greenhouse offers student workers hands-on learning through the caretaking of over seventy individual plants belonging to thirty-five families. Plants in the greenhouse collection are divided between 1600 square feet of growing zones, including a tropical area with a working pond, succulent/cacti area, temperate area, small lab, and head house. Students find more than a place to learn and collaborate at the greenhouse; it also provides a calming atmosphere on a busy campus. The Greenhouse Tour includes the greenhouse itself, the chance to ask questions, and hands-on activities with seeds, plants, and potting, all in a warm, tranquil atmosphere.

Reflections on working in the Greenhouse:

Kristin:

Over the last year, I've had the opportunity to work in the campus greenhouse as a Greenhouse Assistant. My duties have been mainly focused on cleaning, weeding, and pruning plants in need of special care. There is satisfaction in being a part of guiding the plants back to health if they are not well. I came to the greenhouse with some plant care knowledge but continue to learn new things every day. I've learned how to spot and treat different types of pest infestation and diseases on the plants in an organic way. I've also been able to slowly learn the scientific names of the plants. I look forward to learning more over the upcoming year.

Perhaps one of my favorite parts of the greenhouse is being able to practice mindfulness by using my body and physical space to stay present, expand learning, and get creative. I find after my work hours are finished, I am refreshed, fulfilled, and my creative energy flows into my classwork for the rest of the day.

Yessenia:

As the lead greenhouse assistant, every other day I work at the greenhouse taking care of the plants and making sure the fish in the pond are doing okay. This is my second year working in the greenhouse, and it has been a wonderful experience, especially now that we have a full team to work on the space. I remember as a sophomore I came into the space afraid that I would mess something up. But now that I have all this experience, I am more confident in my ability to effectively water plants, scout for pests, control weeds without any chemicals, and repot plants. I use all that I have learned, and implement it on the plants I have back at home.

Every day that I work in the greenhouse, I see that there is still much work to do. When we finish one project, another project is added to our list. Even though the projects never end, I am very excited to continue working on this space until I graduate.

Niana:

I started midway through the fall semester of 2021, and I continue to work in the greenhouse to this day. I first found out about the greenhouse at the Beloit and Beyond Conference in 2021; enthralled by the space, I asked about taking up a job. I have been gardening over the summers since 2019 and had a decent amount of experience taking care of plants—what a perfect job! Though I did have experience with caring for plants, I had never really done much in a greenhouse, so I have been learning a lot about common pests on indoor plants and how to wash and care for them. I have learned and continue to learn every time I enter the wonderful space that is the greenhouse.

My favorite part of this job is the fish pond. Caring for the fish is a fun task and just taking the time to watch them swim is relaxing. It's a lovely place just to sit and think or do homework when I'm not on the clock. Overall, it's been a beneficial and amazing experience, and I am so grateful for the opportunity. I hope to continue working and learning as my time here continues.

Nora:

I joined the Greenhouse team as an assistant halfway through my freshman year at Beloit. Since then, I have learned more about each individual plant, different natural pest control methods, and how to care for a public space on campus. The greenhouse is an amazing place to take a deep breath and relax. If you're like me, you may also take the time to look for cool bugs while you're there.

Getting to share my enthusiasm with other people is one of my favorite parts about working in the greenhouse. Often prospective students will wander into the greenhouse during a campus tour, and I'm more than happy to tell them all about the history and care of our wonderful plants. Young children are my absolute favorite visitors because they ask so many questions and are always excited to learn new things.

Sponsor: Kristin Labby

Richardson Auditorium, Morse-Ingersoll Hall, 1:05-1:30

Vu Anh (Vincent) Le '25

Hanoi, Vietnam

Major: Physiological, Computational, and Cognitive Neuroscience

Applying for a Global Research Experience: Reflection over Time in the University of Tokyo

The desire for cultural experiences and the competitiveness of undergrad research experiences has inspired students at US colleges to search for research experiences abroad. As schools and businesses reopen after the COVID-19 pandemic, reputable institutions around the globe have welcomed a new flow of highly motivated students to participate in their laboratories and contribute to the ongoing research progress. As a participant in the 2022 University of Tokyo Summer Internship Program, I am excited to offer a personal perspective about the research program abroad as well as organizational tips for internship applications using the Notion app. The other part of the presentation is distributed for reporting on my ongoing research in computational genomics. One of my important research interests includes the characterization of genome arrangements in disease by identifying the rearranged orthologous regions in a statistically rigorous fashion.

Sponsor: Suzanne Goebel

Weeks Lounge, Pearsons Hall, 8:30-8:50

My (Miley) Le '25

Dong Nai, Vietnam

Major: Quantitative Economics

Product Management Internship: What, When, and How

The past summer marked a milestone not only in my first year at Beloit but also in the mindset of my career path. I spent my summer working as a product management intern at Galaxy Education JSC – an

educational technology company, located in Ho Chi Minh City, Vietnam. I immersed myself in the field that I have always been passionate about, EdTech.

I partook in a project called AI Tutor – an adaptive learning platform that enables students to have their tailored learning experience by collecting students' data and providing the most suitable programs based on their preferred input. My 4-month internship tasks consisted mainly of producing market research, composing technical specs documents, and conducting User Ability Testing in collaboration with the QC team, thus maximizing the user experience towards the product before the soft launch.

This position pushed me to enhance a variety of different soft skills including communication, collaboration, time management, etc., and hard skills such as research skills, data analysis, and data visualization. I appreciate this opportunity to experience and expand myself in a professional real-world environment, thus preparing myself for another jumpstart in the future. I was enlightened by the fact that: "As product owners, we always keep in mind that our products are humancentric."

As a freshman at Beloit, I received numerous support from not only professors but also the staff here. CareerWorks contributed to the completion of my resume and cover letter, guided me through interviews, and encouraged me to make the most out of myself. In this presentation, I will talk about how to apply for an internship, reflect on my own experiences and introduce opportunities for students who are interested in the Product Management field.

Sponsor: Taylor Arhar

Room 349, Sanger Science Center, 11:10-11:35

Bobby Lerch '23

Downers Grove, Illinois

Major: Biochemistry

Minor: Physics

Abigail Membrino '24

Darien, Wisconsin

Major: Biochemistry

Expressing and Purifying CbpA for Studies into the Elucidation of Bacterial Hsp70 JDP Interaction

Hsp70s are a class of molecular chaperones that, among various other functions, prevent and repair protein misfolding and aggregation. While Hsp70s are a difficult drug target for various reasons, sites of allosteric action could possibly alleviate these problems. Hsp70s interact with a multitude of co-chaperones, such as J-domain proteins (JDPs). One Hsp70 site of interest is the sequence found at the C-terminus of eukaryotic Hsp70s that consists of an EEVD motif. The EEVD motif is exclusive to eukaryotic Hsp70s, so the workings of the interaction between JDPs and the C-terminus of bacterial Hsp70s, which have similar functionality to eukaryotes despite a differing sequence, must be further studied for proper drug targeting of bacterial infections. In this project, we seek to express and purify the E. coli JDP, CbpA, so that the nature of its binding to the C-terminus of the bacterial Hsp70 DnaK can be studied. This is in the hopes that one day a site on DnaK or an interacting JDP can be used as a drug target to circumvent antibiotic resistance, which depends on Hsp70s. This was accomplished by using BL21 E. coli to express large amounts of CbpA, and CbpA was affinity purified using Ni-NTA resin.

Sponsor: Taylor Arhar

Room 249, Sanger Science Center, 9:40-10:05

Rose Loos-Austin '23

Madison, Wisconsin

Major: Biochemistry

Working at a COVID-19 Testing Site: Learning to Talk with Difficult People

For the duration of the pandemic, starting in the winter of 2020, I worked at various COVID-19 testing sites in the Dane County area. The locations ranged from Madison to smaller towns like Stoughton. Some days I would test only a couple people while at other times I would test almost two hundred people. By interacting with the public on such a large scale at different points in the pandemic I learned how to interact and communicate with people who hold different beliefs. I also learned when it is time to push back and when it is important to step back.

In my presentation I plan to go over what it was like working at a COVID-19 testing site. First the timeline of how I got involved and how it was adjusting to working long hours in outdoor spaces interacting with the public. Later I plan to explore what I learned about talking with people and helping people who are in emotional situations and do not necessarily want to be there.

Sponsor: Diep Phan

Room 150, Sanger Science Center, 1:00-2:00

Irakli Maisuradze '23

Tbilisi, Georgia

Majors: Business Economics; Data Analytics

Summer Internship Experience as a Quantitative Strategist

In the economically chaotic summer of 2022 I had an opportunity to be an intern at CUNA Mutual Group. I got assigned to the team that manages ~5 billion USD for thousands of people through pension plans. Performing in the turmoil is a difficult job. It gets worse when you have billions of dollars under management and the future of thousands of people depending on you. In my presentation I will share my experience as an intern, as a Quantitative Strategist, and as an employee of CUNA Mutual Group.

Sponsor: Yaffa Grossman

Room 249, Sanger Science Center, 11:10-11:35

Emmalynn May '23

Frederick, Maryland

Majors: Geology; Environmental Biology
Minor: Studio Art

Community Building and Growth with Montana Youth

Over the summer, I joined the Montana Conservation Corps as a Youth Expedition Leader. This Americorps partner paired me with another leader to take 4-6 Montana youth into the field for 11-day hitches. We spent this time camping, cooking, and doing conservation projects across the state. We created space for the youth to grow into their own and gain a sense of self and community. During this experience I gained my own sense of self and direction in life getting to work with project partners like the Forest Service, the Bureau of Land Management, and the National Parks Service. Working with youth and in conservation are now sureties in my future. The impact this experience had on me has grown my perspective and has provided me with skills to succeed post Beloit.

Sponsor: Tawnya Cary

Room 249, Sanger Science Center, 1:00-2:00

Emmalynn May '23

Frederick, Maryland

Majors: Geology; Environmental Biology
Minor: Studio Art

Chloe Hain '22

Evanston, Illinois

Majors: Anthropology; Biology

Garrison Ferone '22

Shorewood, Wisconsin

Majors: Biology; Spanish

Mikaila Davis '23

Gig Harbor, Washington

Majors: Biology; Environmental Geology

Jane Rendleman '23

Carbondale, Illinois

Major: Biology

Field Experience in Environmental Science

If you are interested in pursuing a career in environmental science and want to learn how you can gain hands-on experience this is the panel for you! Five Beloit Environmental Biology students will share their experiences in summer fieldwork positions. How did they find their internship or job? What resources or steps did they take to get their position? What role has their time at Beloit College played in the process? All of these questions and more will be answered and you can even bring a few questions of your own.

Sponsors: Kristin Labby and Rongal Watson

Richardson Auditorium, Morse-Ingersoll Hall, 1:30-1:55

Lexy Olson '22

Beloit, Wisconsin

Majors: Biochemistry; Health and Society

Experiencing Healthcare through a Summer Abroad in Italy via the Doctors in Italy Fellowship Program

The Doctors in Italy Fellowship program's summer abroad itinerary and specifics will be provided during this presentation. I'll demonstrate the disparities between the Italian and American healthcare systems as well as the opportunity I have every day to provide direct and indirect patient care. I traveled to Italy for a month this summer as part of the Doctors in Italy Fellowship Program, which mostly caters to pre-med students. My major goal while traveling was to choose the best healthcare option for me. Working and witnessing patient care while learning how to interact with patients who spoke little to no English took up much of my time. I discovered when I was there that patient care in Italy is pretty comparable to ours. I was able to increase my understanding of healthcare through this opportunity and gain study-abroad experience at the same time.

*Disclaimer: This conference presentation will feature some graphic imaging from my time spent working in a hospital and may include images of blood, wounds, or incisions.

Sponsor: Diep Phan

Room 150, Sanger Science Center, 1:00-2:00

Matthew O'Leary '23

Clarendon Hills, Illinois

Major: Economics

My Experience as a Treasury Intern with StoneX Group

Over the course of my internship, I was able to engage with coworkers, executives, and clients every day. The lessons I learned from interacting with them will benefit me immensely as I prepare for life after Beloit. I hope this presentation provides a snippet of what it is like working in the corporate world of downtown Chicago for a Fortune 500 company.

This internship allowed me to gain hard skills in the office space as well as learn a few soft skills along the way. Along with these skills, my boss and other members of the company provided many valuable life lessons I will never forget.

I am grateful for this internship as it has provided me with a crucial step in my career and given me skills and lessons I could not have learned anywhere else. I hope you will take away something of value from this presentation in at least one aspect of your life and show you the benefits of completing an internship.

Sponsor: Charles Westerberg

Room 150, Sanger Science Center, 8:50-9:15

Allan Hernandez Padron '24

Vista, California

Majors: Business Economics; Sociology

Minor: Law and Justice

Deviance in Sports: The Case of the Mexican 'Eh P*' Chant**

We live among acts of deviance almost every day. A common reaction to seeing deviance is believing that the violation of norms should be punished, which is what defines an abnormal act as deviant. Sociologists define deviance as any act that is sanctioned by agents of social control (Erikson 1966). However, questions arise about the aims of sanctions and the types of sanctions that are most appropriate in reaction to certain kinds of deviance. These questions are on clear display when examining the case of the homophobic chant frequently heard at Mexican Domestic Soccer League and National Team matches. Current sanctions rely on the ideas of general deterrence and incapacitation. To this point those sanctions have not succeeded in ending the chant. My project synthesizes theories of deviance and punishment and critically analyzes the sanctions used and the reactions of fans participating in the chant in hopes of identifying the most effective and sociologically informed strategy for ending the chant.

Sponsor: Tom Stojasavljevic

Room 349, Sanger Science Center, 1:05-1:30

Nico Petroccione '22

Santa Maria dell'Arzilla, Italy

Majors: Mathematics; Quantitative Economics

Minor: French

Implementation of Adaptive Multi-Site Deep Brain Stimulation for Parkinson's Disease

In the past two decades, deep brain stimulation (DBS) - through a surgically implanted electrode to the subthalamic nucleus (STN) - has become a widely used therapeutic option for the treatment of Parkinson's disease and other neurological disorders. The current form of DBS is the conventional high frequency stimulation (HF) that has several drawbacks. To overcome the limitations of HF, researchers have been developing closed-loop and demand controlled, adaptive stimulation protocols wherein the amount of current that is delivered can be turned on and off in real time in accordance with a biophysical

signal. Computational modeling of DBS in neural network models is an increasingly important tool in the development of new protocols that aid researchers in animal and clinical studies. In this computational study we seek to implement a novel technique of DBS where we jointly stimulate the subthalamic nucleus (STN) and globus pallidus external (GPe) in an adaptive fashion. We use the inter-spike firing of the neurons as a biomarker to control external stimulation. Our results show that our protocol induces breaks in the synchronized bursting neuronal activity of the STN and GPe, which is hypothesized to cause failure of thalamocortical neurons to respond properly to excitatory cortical inputs.

Sponsor: Katherine Harris

Room 349, Sanger Science Center, 10:20-10:45

Nico Petroccione '22

Santa Maria dell'Arzilla, Italy

Majors: Mathematics; Quantitative Economics

Minor: French

An Introduction to Computational Algebraic Geometry

The powerfulness of computational algebraic geometry is in the ability to link together algebra, geometry, and computer science. This linkage is created out of the necessity to better understand the behavior of systems of non-linear polynomial equations. Using solidified, well-known methods and properties from algebra to solve these polynomials can be very insightful to understand the dimension, finiteness, consistency and other characteristics of non-linear polynomials. Translating these methods into step-by-step algorithms that a computer is able to solve can readily speed up our process of learning more about these non-linear systems. Some relevant examples that we will analyze are the twisted and Bézier cubic, which are useful to develop fundamental notions of algebraic geometry such as varieties and ideals. The latter example has important applications in Computer Aided Geometric Design (CAGD), which, along with robotics, will show us how this field of mathematics not only brings together different areas of mathematics, but also has various applications. We will lastly take a look at the Euclidean Algorithm, which will further our study of these systems of equations.

Sponsor: Rachel Bergstrom

Room 249, Sanger Science Center, 10:45-11:10

Niav Probst '23

Iowa City, Iowa

Major: Biology

Minors: Physics; Philosophy

Wildlife Rehabilitation: Providing a Future for Wildlife

Over the summer, I worked as an intern at the Northwoods Wildlife Center, a wildlife hospital and rehabilitation center in Minocqua, Wisconsin. I experienced rescuing, rehabilitating, and releasing injured, orphaned, or kidnapped wild animals while educating the public on wildlife. I worked hands-on with over 200 animals of over 50 different species, all native to the midwest. Every day was completely different, from raising baby squirrels to glove training with raptors.

I had no idea that this was the experience I was going to have over the summer, especially starting out 2022 in the physics field rather than biology. This presentation will explore how I ended up in this job and how you can get involved, as well as what I learned about wildlife. I'll also be discussing common misconceptions about wild animals, what it's like to be part of the rehabilitation process, and why this work is so important in conservation.

Jane Rendleman '23

Carbondale, Illinois

Major: Biology

Forensic Intern Boot Camp

I worked at a forensic lab in Chicago with the Illinois State Police and so for the Beloit and Beyond conference, I would like to turn my experience with discovering and applying for this internship into a presentation. I will teach the lessons I've learned from this process and things I wish I knew earlier. In the first part of my presentation, I will discuss the details of applying, such as providing a resume, letter of interest, filling out their application and getting a background check. Since this is an internship in which you are working with the government, there are some interesting proceedings you have to go through, like going to a police academy to get fingerprinted and ethics training. Finally, I will wrap up with my takeaways from the application and how this experience could possibly help in the future.

Sponsor: Pablo Toral
Professor Carrie Kissman (St. Norbert College)

Room 349, Sanger Science Center, 9:40-10:05

Maxwell Robin '23

Waukegan Illinois

Majors: Environmental Biology; Political Science
Minor: GLAM

The Building Blocks of a Food Web: Studying the Lakes and Zooplankton within the Minnesota Boundary Waters

This presentation will focus on the field research that I conducted over the summer at the Coe College Wilderness Field Station in the Boundary Waters. I took a course on Aquatic Ecology, which is the science and studies of lakes. I paddled through a chain of 14 lakes that have been studied by previous students in the same course over a series of around 9 years, allowing me and my classmates to sample the lakes and collect our own data, and then compare our data to nearly a decade of previous information. Through this comparison, we can see how the lakes' ecosystems are changing over the years.

One of the variables we measured was the relative abundance and diversity of zooplankton within the lakes. Zooplankton are tiny animals; most are microscopic, and some of the larger can be seen with the naked eye, but all of them are vital for a healthy lake. They are a key building block in the lake food web. Zooplankton eat algae and phytoplankton, the grass of a lake, and in turn are eaten by small fish, which go on to feed the big fish. So, if you like fishing, which the Boundary Waters is an amazing site for, a healthy lake with good amounts of zooplankton is very important.

My presentation will highlight our findings and the important role that field research has played in my education. It will also showcase the beauty of the Boundary Waters, an area of real wilderness, where human influence is mostly limited to a campsite with fire grate and a few canoes.

Sponsor: Brian Morello

Room 150, Sanger Science Center, 11:10-11:35

Eric Seo '25

Woodridge, Illinois

Major: Mathematics
Minor: Physics

Entrepreneurship from a Student Perspective

Entrepreneurship is often thought of as a secretive, difficult art form only available to people who have access to hidden knowledge. In fact, it is approachable and accessible to almost everyone, regardless of interest or knowledge of the craft.

I used a passion for fine dining to cultivate skills in pastry work and chocolatiering, enabling me to create entrepreneurial experiences. Using work experiences with a highly skilled mentor and pastry chef, I started a venture selling handcrafted bonbons as specialty gifts. Although not everyone's interest is in chocolate, the steps I took can be mapped onto any entrepreneurial venture, especially from a student's perspective.

Sponsor: Laura Parmentier
Dr. Mohammad Ali Ayaz Sadiq (Mayo Hospital/King Edward Medical University)

Room 349, Sanger Science Center, 9:15-9:40

Raahima Talal '24

Lahore, Pakistan

Major: Biochemistry

Psychosocial Impacts of Strabismus on Employment

In several cases, health insurances do not cover strabismus (squint) surgeries and classify them as cosmetic. However, strabismus can have psychosocial impacts that affect employment because of an underlying bias against people who have strabismus. This presentation summarizes the first phase of the research process of interviewing employers across 3 different industries in Lahore, Pakistan, to determine the underlying bias in hiring against people with strabismus. This includes designing research questions, designing research surveys, and adhering to biomedical ethics for research participants. This presentation also covers what it looks like working as a shadow to a doctor where one observes surgeries, helps in diagnosis, and works as a scribe.

Sponsor: Donna Oliver

Weeks Lounge, Pearsons Hall, 10:20-10:45

Moon West '23

Nashville, Tennessee

Majors: Psychology; Education
Minor: English

Shruthi Chandrasekar '23

Chennai, India

Major: Psychology
Minor: Literary Studies

The Evolution of the Todd Reading Buddies Program: The Effects on Community-Based Learning

This presentation will discuss the evolution of the Todd Reading Buddies program through the COVID-19 pandemic and its influence on the broader Beloit community. The Reading Buddies program works to improve reading comprehension and language development for local elementary school students. In addition, the program provides mentorship and support for these students. Beloit College volunteers gain the opportunity to collaborate with the Beloit community in an impactful way outside the classroom.

Our conversation will include a comprehensive overview of how we've run the program for the past 2 years, touching on topics such as marketing tactics, recruitment and training. The Reading Buddies program has been a long-standing community-based learning service at Beloit College. This relationship provides a rich opportunity for community-based learning and partnership.

As we embark on our third year of co-leadership in this program, we have learned the importance of

consistent and effective communication as well as the importance of compassion and commitment within community-based learning experiences. When we look to the future of our lives outside of Beloit College, we will take with us the knowledge and lessons learned through our time in the Reading Buddies Program.

Sponsor: Career Works

Career Works, Pearsons Hall, 11:30-1:00

Open House

Elevator Pitch: What, Where, When, & How

If you happen to bump into someone you've been wanting to meet in an elevator, how will you introduce yourself, get your point across, and ask to stay connected all before that person gets off the elevator?

Answer: You need an elevator pitch!

Come talk with Career Works staff to create and practice your elevator speech.

*This event is an open house, so please stop by when you can!

Sponsor: Global Experience and Channels

Turbine Gallery, Powerhouse, 2:00-4:00

Open House

Global Experience and Channels Fair

Drop by this lively fair, where you will have a chance to speak with representatives from Career Channels and Global Experiences. Mix and mingle and enjoy refreshments!

Sponsor: Global Experience

Moore Lounge, Pearsons Hall, 11:00-12:30

Open House

Virtual Panel with Study-Abroad Partners

This Virtual Partner Presentation will feature staff from Washington Semester Program, University of York, University of Sussex, Queen's University Belfast, IESAbroad, SIT and ISEP. You will learn more about what their site/s offer for future study away opportunities.

OUR SINCERE THANKS

Thank you to all those who advanced the work of our students through their time and educational expertise, and by funding through a variety of opportunities designated for research support.



Link to the online program