Beloit & Beyond Conference, November 3, 2026

12:00-12:50 Beloit College Schools and Centers Fair in the Powerhouse with live musical performances.

Impact Beloit Classroom 109, Library

Global Experiences in Senegal

Moderator: Joseph Derosier, Modern Languages & Literatures		
8:45-8:50	Joseph Derosier	Opening remarks
8:50-9:15	Lyndall Breaux	Real Africa: Decolonization, Art, and Humanity in Dakar, Senegal
9:15-9:40	Nya Cotton	What's Missing From the Picture? Meaning, Worldviews, and the Power to Shape Reality
9:40-10:05	Damila Hurn	Learning Through Community: My Experience in Dakar, Senegal
10:05-10:30	Journey Beier	Spain, Senegal, and Serbia: Art, Language, Decolonization, and Social Change

Study Abroad in Ecuador, Chile, & Puerto Rico

Moderator: Sylvia Lopez, Modern Languages & Literatures		
10:40-10:45	Sylvia Lopez	Opening remarks
10:45-11:10	Cora Aitken	The Intersection of 3 Beloit Majors Abroad: Media Studies, Social Justice Psychology and Spanish Language & Culture in Capital City Quito, Ecuador
11:10-11:35	Sophia (Bailey) Singer	Studying Abroad in Chile
11:35-12:00	Vincent Lutz	Exploring *La Isla del Encanto* Like a *Boricua*: My Study Abroad Experience

Medical Spanish and CNA Training Locally and Abroad

Moderator: Rachel Bergstrom, Biology		
1:00-1:05	Rachel Bergstrom	Opening remarks
1:05-1:30	Sadie Mitchell	Learning Medical Spanish Through Clinical Experiences in Ecuador, Chile, and Argentina
1:30-1:55	Valeria Samaniego	Is Nursing for Me? Exploring Healthcare Through CNA Training

(Bio)Archaeology Abroad

2:05-2:10		Opening remarks
2:10-2:35	Colby Bern	Experiences from the Beloit College Bioarchaeology Abroad Program
2:35-3:00	Niko Torres Holloway	Bones and Bronze: My Archaeological Experience in Italy

Art, Decolonization, and Social Change in Senegal

Moderator: Christa Story, The Wright Museum of Art		
3:10-3:15	Christa Story	Opening remarks
3:15-4:15	Kate Mann, Olivia Fisler, Vivian Kopka, Ollie Idzikowski, Max King, Jamie Edwards	From Beloit to Dakar: Art, Decolonization, and Social Change in Senegal

LITS Classroom 203, Library

Summer Work Experiences

Moderator: Suzanne Goebel, Career Works		
8:45-8:50	Suzanne Goebel	Opening remarks
8:50-9:15	Shobhita Bharadwaj	Leadership, Service and Impact: A Summer in Local Government
9:15-9:40	Moukeya Dy	My Summer Internship Journey at UNOPS: Professional Experience and Personal Growth
9:40-10:05	Najeebah Junaid	More Than a Schedule: Leading People Before I Lead Patients

Moving into Museums

Moderator: Nicolette Meister, Logan Museum of Anthropology		
10:40-10:45	Nicolette Meister	Opening remarks
10:45-11:10	Charlie Gale	The Value and Potential of Community-Oriented Museums
11:10-11:35	Ary Hartman	TACLing the Curation Crisis: A Collections-Based Field School Experience
11:35-12:00	Jamie Edwards	Wood Type is My Type: Behind the Nonprofit Museum Scene as an Intern at Hamilton Wood Type and Printing Museum

Community Connections: Community Fellows in Nonprofits

Moderator: Charles Westerberg, Sociology		
1:00-1:05	Charles Westerberg	Opening remarks
1:05-1:35	Yaa Akosa, Trevor Cisneros, Lily Rogers	Funding Change: Community Fellowship Experiences Interning in Marketing, Development, and Outreach
1:35-2:05	Hanna Fassilis, Brandon Lopez, Joshua Martinez-Marte	In the Shadows: Interning Behind the Scenes
2:05-2:25	Ryan McGonagle, Kenza Motanga	Community Connections Data and Research in Practice within Illinois and the Beloit Community
2:25-3:05	Riva Choudry, Cole Miller, Bethany Yu	Green Knowledge: Environmental Education as a Tool for Community Empowerment in Beloit, WI

Community Connections: Interns in Businesses and Beyond

Moderator: Maria Scarpaci, Upward Bound		
3:10-3:15	Maria Scarpaci	Opening remarks
3:15-3:40	Laurel Zolper, Calahan Fox, Jesse Sage Epstein	Interning Beyond the Bubble: Representing Beloit College in Professional Community Spaces
3:40-4:15	Jared Torres, Anthony Carter, Tess Hunter, Lillie Aubin, Lily Hess	Skill-Building Through Community Engagement

Richardson Auditorium, Morse-Ingersoll Hall

Beloit Climate Action I

Moderator: Pablo Toral, Political Science		
8:45-8:50	Pablo Toral	Opening remarks
8:50-9:20	Sutton Bassett, Henry Amini, Romina Palomeque-Manners, Toka Mansour	Beloit Climate Action Begins with People: Education, Labor, and Socioeconomic Development in Beloit
9:20-9:50	Noor ul Ain, May Myint Mo Zaw, Will Lyng, Kyle Arnold	Beloit Climate Action: Implementing Greenspace and Ecosystems
9:50-10:20	Elliot Ave-Lallemant, Henry Mannelli, Jacopo Tamburini, Matthew Narh	Developing A Sustainable Energy Action for the City of Beloit
10:20-11:00	Diego Kenji Taira, Varvara Kuragina, Eduardo Larsen, Max Von Klinggraeff	Beloit Climate Action to Strengthen Local Businesses Through Climate Resilience

Executive Power & the Campaign Trail

11:10-11:15		Opening remarks
11:15-11:40	Joshua Lewis	The Unitary Executive Theory: From *Humphrey's Executor* to *Trump v. Slaughter*
11:40-12:05	Christian Moore	From the Campaign Trail to the Capitol: Lessons Learned Through Trial and Error

American Democracy, Theater, and Social Change

Moderator: Amy Sarno, Performing and Applied Arts		
1:00-1:05	Amy Sarno	Opening remarks
1:05-1:55	Journey Beier,	Serbia: A Window into American Democracy, Theater,

	Chyler Smith, Gene Abron, Kai Colbert	and Social Change

Beloit Climate Action II

Moderator: Pablo Toral, Political Science		
2:05-2:10	Pablo Toral	Opening remarks
2:10-2:35	Matthew Narh, Brinley Richards, Gabriel Fine	Beloit Climate Action: Water Sustainability
2:35-3:05	Jeremy Cunnigham du Rivage, Nya Cotton, Kaden sako	Beloit Climate Action: Navigating Sustainable Transportation and Land Use
3:05-3:30	Rowan Raymond, Hailie Gruener, Angela Karanja	Beloit Climate Action: Greenspaces and Ecosystems
3:30-3:55	Jackson Kompkoff, Benjamin Goecke, Owen Thomason	Beloit Climate Action: The Relationship between Greenhouse Gas Emissions and Food Insecurity

Interdisciplinary Health Science Careers

Moderator: Sonya Johnson, Critical Identity Studies		
4:00-4:05	Sonya Johnson	Opening remarks
4:05-5:00	Mateo Marek ’25, Asha Johnson, Dominique Christian, Array Provider	Sondercove Wellness — a Shelter, a Movement, a Soft Place to Land

Room 150, Sanger Science Center

Summer Internships with Common Grant Support

Moderator: Emily Sager, Career Works		
8:45-8:50	Emily Sager	Opening remarks
8:50-9:15	Willow Mashkuri	Vermont Green: It's Much Bigger than the Sport
9:15-9:40	Lily Rogers	Summer Storytime: My Experience Interning in Youth Services at the Hedberg Public Library
9:40-10:05	Kelsey Gerstler	A Summer Solving Hunger: My Internship at Feeding America Eastern Wisconsin
10:05-10:30	Kierra Rayne Hoover	A Summer with Breakthrough: The Impact of a Teaching Fellowship

Risky Business and Market Research

Moderator: Laura Grube, Economics & Business		
10:40-10:45	Laura Grube	Opening remarks
10:45-11:10	Madhav Singh	Anomaly Based Detection of Short-Term Crash Risk in Individual Stocks
11:10-11:35	Landon Adams	Risk Management at Hendricks Commercial Properties
11:35-12:00	Selin Tufte	Bridging Early Learning Gaps with Discovery PLAYce

Marketing, Entrepreneurship, and Finance

Moderator: Benjamin Adams, Economics & Business		
1:00-1:05	Benjamin Adams	Opening remarks
1:05-1:30	Helmi Kawsar	Connecting Biochemistry and Marketing, My Summer as a Product Management Intern
1:30-1:55	Eduardo Larsen	Launch of the National Chamber of the Youth of Bolivia
1:55-2:20	Richard McGregory, Harnoor Singh	Modelling Investor Irrationality
2:20-2:45	Eduardo Larsen	Making Formality Worth It in Bolivia

Environmental Data & Food Justice

Moderator:		
2:45-2:55		Opening remarks
2:55-3:20	Noor ul Ain	What the Map Leaves Out: Questioning the Neutrality of Scientific Data
3:20-3:45	Giovanna Lima	Growing Food Justice: Lessons from Urban Gardens in Chicago and Brazil's Sisteminha

Room 249, Sanger Science Center

Community Connections: Psychological Perspectives

Moderator: Suzanne Cox, Psychology		
8:45-8:50	Suzanne Cox	Opening remarks
8:50-9:15	Hanna Fassilis, Ana Tolentino	Constructing a Resilience Assessment for Family Services
9:15-9:40	Lauren Parada	Effects of Para-professionals in Beloit Classrooms
9:40-10:05	Allie Gustafson	Understanding Student Self-Efficacy, Motivation, and Self-Advocacy Within High School Educational Systems: Insights From a Psychology Practicum
10:05-10:30	Avary Briggs, Elisa Turner	More than Misbehaviors: Social Interactions in the Kindergarten Classroom in Two Wisconsin School Districts

Explorations in Chemistry and Biology

Moderator: Kristin Labby, Chemistry		
10:40-10:45	Kristin Labby	Opening remarks
10:45-11:10	Marta Zholnerchyk	Investigating Smooth Muscle Cell Changes in Abdominal Aortic Aneurysms
11:10-11:35	Malaika Parpart	Finding New Species and Finding My Passion: What Studying the Genetics of Tiny Crustaceans Taught Me

Environmental Law and Justice in the Boundary Waters

1:00-1:05		Opening remarks
1:05-1:30	Brooke Lowe	Incorporating Indigenous Perspectives in Environmental Law and Justice
1:30-1:55	May Myint Mo Zaw	How Economic Theory Can Protect the Boundary Waters
1:55-2:20	Meghan Koning	Teamwork and Social Science Field Research in Unfamiliar Settings

Mathematical Modeling & Plane Loops

Moderator: Tom Stojsavljevic, Mathematics & Computer Science		
2:30-2:35	Tom Stojsavljevic	Opening remarks
2:35-3:05	Ellie Repinski	Mathematical Modelling of Human African Trypanosomiasis
3:05-3:30	Araf Israk	Untangling Curves in Real Time: An Interactive Engine for Reidemeister Simplification of Plane Loops

Room 349, Sanger Science Center

Studies in Ecology and Geology

Moderator: James Rougvie, Geology		
8:45-8:50	James Rougvie	Opening remarks
8:50-9:15	Indrayudh Sinha	Economy and Ecology in the Bengal Delta
9:15-9:40	Lia Dirks	The Beane Crinoid Collection at Beloit College: Exceptionally Preserved Specimens of Broad Scientific Value
9:40-10:05	Angela Chacon Aguilar	Characterizing Soils to Aid Oak Savannah Restoration

Generational Trauma & Restorative Justice

Moderator: George Dalbo, Education & Youth Studies		
10:15-10:20	George Dalbo	Opening remarks
10:20-10:45	Maggie Atkinson	The Impact of Gender on Generational Trauma: A Namibian Case Study
10:45-11:10	Madeline Wilhelm	Restorative Justice & Beloit: What It Is, Where We Are, and Where We Are Going?

Machine Learning & Computational Studies

1:00-1:05		Opening remarks
1:05-1:30	Madhav Singh	Machine-Learning Screening for Cardiovascular-Kidney-Metabolic Disease Without Diagnostic Labs
1:30-1:55	Jeremy Mueller, Blake Nelson	Predicting Atmospheric Circulation Patterns that Promote Extreme Precipitation Using Machine Learning
1:55-2:20	Araf Israk, Abdullah Yousafi, Stuart Bernath	Tracing the Shape of a Story Across Translation: A Computational Study of Yu Jiao Li

Wild Urban Spaces & Wilderness Wild Fires

Moderator: Chris Fink, English		
2:30-2:35	Chris Fink	Opening remarks
2:35-3:00	Sydney (Kipper Bromia) Fitzgerald	The Sociology Of Beloit College's Wild Spaces
3:00-4:00	Armita Aghamiri, William Lyng,	Wilderness Adventures: A Boundary Waters Experience Gone Wrong

John Grey
(Jean Gris),
Toha Abedin,
Gabriel Boivin,
Carly Carpenter

Room 402, Sanger Science Center

Experiences Abroad in Europe & East Asia

8:45-8:50		Opening remarks
8:50-9:15	Bethany Yu	Biking Over Cobblestones: Applying a Liberal Arts Perspective in the Netherlands
9:15-9:40	Helmi Kawsar	Beloit to York: My Semester Abroad in the United Kingdom
9:40-10:05	Dariya Kylyshpay	Studying Abroad in South Korea: Cultural Learning, Adaptation, and Exploring East Asia
10:05-10:30	Anna J Autumn King	Tokyo to Rishiri: Solo Traveling Across Japan Documented through Photography

Student-Athletes Abroad

Moderator: Kathy Landon, Global Experience Office

10:40-10:45	Kathy Landon	Opening remarks
10:45-11:10	Kyana Aguilera	Studying Abroad at Sussex University as a Student-Athlete
11:10-11:35	J.D. Shoniker	A Taste of Studying Abroad as a Student-Athlete: the Global Experience Seminar in Kyushu, Japan

Global Experiences in Kyushu, Japan

Moderator: James Rougvie, Geology

1:00-1:05	James Rougvie	Opening remarks
1:05-1:30	Ivy Salmi-Perry, Ava Tedesco	Hidden Christianity Through the Lens of Cultural Landscapes
1:30-1:55	Owen Kutz, Jarif Fijaan	Community Resilience and Coexistence Around the Volcanoes of Kyushu
1:55-2:20	Lily Hess, Lillianne McCully, JD Shoniker	Natural Heritage, Cultural Heritage, and Sustainability Through Tourism in Kyushu, Japan

Magnetized Soft Polymers & Rare Earth Elements

2:30-2:35		Opening remarks
2:35-3:00	Toka EmadEldin Mansour	Material Studies of Magnetized Soft Polymers in Aerospace Design
3:00-3:25	Chloe Osborne	Recovering Rare Earth Elements from Waste LED Lightbulbs with Acid Leaching

Open House: Greenhouse, Science Center

Drop in 12:30-2:00	Kylie Wolff, Riva Choudry, Lela Faye Pagles	Beloit College Greenhouse Tours and General Information

Poster Session: Second floor bridge, Science Center

Drop in 1:00-2:00	Gabriela Carranza-Torres	Analysis of Pharmaceutical Contaminants in Water in Quintana Roo, Mexico

Powerhouse

Live Performances

Moderator: Cullyn Murphy, Performing and Applied Art		
Lunch	Jasmine Kingsbury, Oliver Idzikowski, Katelyn Schroeder, Breanna Patten, Gabriella Willis, Lily Niesen	Gutter Trash: A Rock Band
Lunch	Sophia Corley, J.D. Shoniker	Sophia & J.D.: An Acoustic Guitar Duo
Lunch	Annabelle Sherman	Annabelle Sherman: Multi-instrumentalist Folk Songwriter

Abstracts

Sponsor: Laura Grube

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

Landon Adams '29

Brooklyn Park, Minnesota

Major: Quantitative Economics
Affiliation: School of Business

Risk Management at Hendricks Commercial Properties

I present my experience as a Risk Management Intern at Hendricks Commercial Properties (HCP), a Beloit-based company that manages a real estate portfolio across ten different states spanning from Florida to California. HCP focuses on revitalizing historic properties, targeting smaller communities in which to invest. In collaboration with Geronimo Hospitality Group, HCP manages residential apartments, award-winning hotels and restaurants, modern shopping centers, and industrial sites.

Being a part of the Risk Management team allowed me to see the precautions businesses take to protect themselves, their employees, and their assets. I discuss the guardrails HCP puts in place to protect the business and how they function on a day-to-day basis. This includes the importance of vendor and tenant insurance requirements, preventative action following incident reports and claims, and proper OSHA documentation.

Over the course of the summer, my internship role expanded, and I was given responsibility over handling Certificates of Insurance, managing insurance claims, and implementing employee safety and compliance measures. As Risk Management has a presence throughout the business, I also collaborated and learned from other departments in the business such as finance, accounting, legal, development, and human resources.

Whether you have an interest in commercial real estate or simply want to learn more about how businesses manage their daily operations, this presentation will be beneficial for you.

Sponsors: Christopher Fink and Tawyna Cary

Room 349, Sanger Science Center, 3:00-4:00

Armita Aghamiri '28

Tehran, Iran

Major: Biochemistry
Affiliation: School of Environment and Sustainability

William Lyng '28

Helena, Montana

Majors: Geology; Biology
Affiliation: School of Environment and Sustainability

John Grey (Jean Gris) '28

Beloit, Wisconsin

Majors: English; Philosophy
Affiliation: School of Environment and Sustainability

Toha Abedin '29

Dhaka, Bangladesh

Major: Mathematics
Affiliation: School of Environment and Sustainability

Gabriel Boivin '27

Geneva, Illinois

Major: Environmental Biology
Minor: History
Affiliation: School of Environment and Sustainability

Carly Carpenter '28

Sycamore, Illinois

Major: Biochemistry
Affiliation: School of Environment and Sustainability

Wilderness Adventures: A Boundary Waters Experience Gone Wrong

The Boundary Waters Canoe Area Wilderness (BWCAW), a federally designated wilderness of over one million acres, is a temperate lake-land wilderness in the Superior National Forest of Northeastern Minnesota. Two years prior to its establishment in 1964, the Associated Colleges of the Midwest, including Beloit College, began taking groups of students into the wilderness to take part in selected classes. These journeys had all been successful...until this past summer, where our group was evacuated after an ever-burning wildfire started just three miles away from our field station. Participants on this panel share personal narratives and photos of their harrowing emergency evacuation.

Sponsors: Klara Fredriksson and Kathy Landon

Room 402, Sanger Science Center, 10:45-11:10

Kyana Aguilera '27

Milwaukee, Wisconsin

Majors: Psychology; Political Science
Affiliation: Global Experience Office

Studying Abroad at Sussex University as a Student-Athlete

This presentation discusses my experience studying abroad as a student-athlete. Around 30% of students at Beloit College study abroad during their time here but only 10% of student-athletes do, partly due to lack of information, resources, and initiative. I am here as a part of the Global Student-Athlete group to spread awareness to studying abroad, what it can actually look like, and the benefits students receive.

There are many different ways to study abroad and many different places to go. My experience does not look like everyone else's and vice versa. This is why it is important to discuss the variety of options students have. A key takeaway from this presentation is the new culture, activities, people, and places students get to experience when studying abroad, especially as a student-athlete.

Sponsor: Sylvia Lopez

Impact Beloit Classroom 109, Library, 10:45-11:10

Cora Aitken '27

Northfield, Minnesota

Majors: Psychology; Media Studies; Spanish Language and Culture
Affiliations: Global Experience Office; School of Health Sciences; School of Media and the Arts

The Intersection of 3 Beloit Majors Abroad: Media Studies, Social Justice Psychology and Spanish Language & Culture in Capital City Quito, Ecuador

My semester abroad shaped my interests in language learning, travel, Ecuadorian art and culture, and psychology as a tool for social justice. While enrolled at La Universidad San Francisco de Quito, I had the opportunity to take unique classes that enhanced my Beloit majors, such as Ecuadorian Stories, Poetry, and Ceramics. I also completed my first film photography series there, which unexpectedly became the intersection of my three majors.

I now have new treasured memories and lifelong friends from my time abroad, as well as a diversified skill set across all my focused domains and improved conversational Spanish. Six months after my return, gratitude and reflection on this experience are still part of my everyday life. Taking this opportunity to live in a big city and experience life outside of the U.S. for the first time was transformative, and an experience I will keep with me for the rest of my life.

Sponsors: Sylvia Lopez and Suzanne Goebel and Charles Westerberg

LITS Classroom 203, Library, 1:05-1:35

Yaa Akosa '27

Accra, Ghana

Majors: Data Analytics; Marketing
Affiliations: Community Connections; School of Business

Trevor Cisneros '28

Boca Raton, Florida

Majors: Media Studies; Marketing
Minor: PART
Affiliations: Community Connections; School of Media and the Arts

Lily Rogers '28

Woodbury, Minnesota

Majors: Critical Identity Studies; Literary Studies
Affiliation: Community Connections

Funding Change: Community Fellowship Experiences Interning in Marketing, Development, and Outreach

We are Impact Beloit Community Fellows, collaborating in the classroom setting to individually complete a year-long internship with a community partner in the Beloit area. Our internships share a common theme: working within the marketing and outreach team of our respective organizations.

Yaa: I began my Marketing Internship with Rock County Restorations in Fall 2026, traveling to Janesville every Monday and Wednesday for a total of eight hours per week. Throughout the internship, I am gaining hands-on experience in marketing, SMS messaging, and integrating various digital platforms, including Canva and Google Workspace. I have also assisted with grant writing and researched potential grant opportunities to support the organization's work. In addition, I have provided technical and administrative support with Microsoft accounts and Google Workspace.

Trevor: I have a marketing internship with Community Action, located in Beloit Wisconsin. I manage the organization's social media, as well as assist with outreach efforts to promote Community Action's various programs. I have gained insight on teamwork, problem solving, and communication with upper management. In my presentation, I discuss my experiences and skills I am building in this internship.

Lily: I discuss my development and outreach internship on site at the YWCA Rock County in Janesville, Wisconsin. I also share my experiences connecting with the Janesville and Rock County communities through outreach, fundraising event coordination, including gathering donations and resources, and creating marketing materials to spread awareness of fundraising events.

Sponsor: George Dalbo

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

Maggie Atkinson '28

Buffalo Grove, Illinois

Major: Critical Identity Studies
Minor: Self-designed Genocide Studies
Affiliations: School of Global & Public Service; Center for Integrative Learning

The Impact of Gender on Generational Trauma: A Namibian Case Study

Between 1904 and 1908, German military forces conducted a genocide against the Ovaherero and Nama people of Namibia.

Today, Ovaherero and Nama communities use oral histories to educate younger generations, sustain their cultures and collective memories, and seek reparative justice in the aftermath of violence. In addition to differences among and within tribal groups, gender impacts both the content and how oral histories are shared.

Using a queer theory lens, I analyzed four oral histories from both Ovaherero and Nama men and women to notice similarities and differences in the stories that are told, the way they are told, and the body language used during the storytelling.

Findings reveal that in these communities, the stories of men are held in higher public regard than the stories of women. Interestingly, however, the stories shared by women are the ones that get passed down generationally. Although male-voiced stories are more valued in social settings, the stories shared by a man were almost always told to him by a woman.

The ways in which men and women share stories differently are also called into question, as Ovaherero and Nama men exclusively shared interview-style oral histories, while women also engaged in traditional song and dance. This allowed me to wonder what forms of storytelling are deemed "valid" in both traditional spaces and academic ones.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 9:50-10:20

Elliot Ave-Lallemant '27

Chennai, India

Major: Political Science
Minor: Philosophy
Affiliation: School of Environment and Sustainability

Henry Mannelli '27

Lake Geneva, Wisconsin

Major: Political Science
Minor: Finance
Affiliation: School of Environment and Sustainability

Jacopo Tamburini '27

Bologna, Italy

Major: Physics
Minors: Finance; Computer Science; Environmental Studies
Affiliation: School of Environment and Sustainability

Matthew Narh '28

Willow Springs, Illinois

Major: Sociology
Affiliation: School of Environment and Sustainability

Developing A Sustainable Energy Action for the City of Beloit

Buildings and energy use are major components of the City of Beloit's Climate Action Plan. In 2023, Beloit produced 329,013 metric tons of greenhouse gas emissions, consumed approximately 483.8 million kWh of electricity and 17.7 million therms of natural gas. The Plan established goals of reducing overall emissions by 36%, electricity consumption by 5%, and on-site fossil-fuel combustion by 30% by 2033.

Achieving these goals will require changes to city ordinances and education campaigns. First, we offer a review of changes to city ordinances that require no additional cost to the city government but result in significant savings to the community via lower energy use. We support our recommendations with examples from communities that have already implemented these changes. We provide a tentative strategy for the City of Beloit and for the Council.

Secondly, we offer a low-cost, data-driven approach combining energy-use data, peer-comparison feedback, and a "Last Person Out" campaign. Energy-use data would establish building-level baselines, identify buildings with higher energy consumption, and measure changes over time. Peer-comparison feedback would provide occupants with information about their energy use and how it compares with similar buildings. Evidence from field experiments involving the Sacramento Municipal Utility District (SMUD) and Puget Sound Energy (PSE) found that peer-comparison feedback reduced residential energy consumption by 1.2% to 2.1%, with larger reductions among the highest energy users and effects lasting seven to twelve months.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 8:50-9:20

Sutton Bassett '28

Carlsbad, California

Major: Economics
Minor: Sports Management
Affiliation: School of Environment and Sustainability

Henry Amini '27

Pewaukee, Wisconsin

Major: Economics
Minor: Sports Management
Affiliation: School of Environment and Sustainability

Romina Palomeque-Manners '29

Gurnee, Illinois

Majors: Political Science; Literary Studies
Minors: Journalism; History
Affiliation: School of Environment and Sustainability

Toka Mansour '29

Alexandria, Egypt

Majors: Engineering; International Relations
Minors: Environmental Studies; Physics
Affiliation: School of Environment and Sustainability

Beloit Climate Action Begins with People: Education, Labor, and Socioeconomic Development in Beloit

Taking a course called "International Politics of Climate Change" at Beloit College allowed us to dive headfirst into the legal, political, economic, social, cultural, and environmental processes of climate change and the multifaceted issues that come with it. The course opened up the possibility of working with the City of Beloit by giving us a chance to spell out a strategy to strengthen our community resilience to a changing climate and ecosystems.

Our group focused on the socioeconomic, educational, and labor impacts of the action plan as it relates to each of our future fields beyond Beloit College. We provide reasons why the Climate Action Plan is a wise investment towards the protection of Beloit's ecosystems and a positive for Beloit's educational, labor, and economic development.

Our implementation strategies include:

- Connecting local institutions such as educational institutions, non-profits, and community centers to collaborate on community-based initiatives that align with the city's 2040 carbon neutrality goal.
- Promoting equitable engagement to ensure that low-income communities, youth, and vulnerable populations have access to climate-friendly resources.
- Supporting workforce development by identifying emerging climate-change risks and recommending sustainability-focused training and employment opportunities.
- Enhancing education and outreach by developing accessible materials for schools and community centers.

We compared Beloit to similar communities that have implemented successful climate initiatives. Our final report identified best practices that can be replicated in Beloit. We drafted our own implementation plan and assessed the possible impacts it will have on the community.

Sponsors: Joseph Derosier and Christa Story

Impact Beloit Classroom 109, Library, 10:05-10:30

Journey Beier '28

Groveland, Florida

Major: PART
Minors: Spanish; CRIS
Affiliations: School of Media and the Arts; Global Experience Office; School of Global & Public Service; Artists for Change

Spain, Senegal, and Serbia: Art, Language, Decolonization, and Social Change

In the summer of 2026, I attended two Beloit College affiliated trips. Firstly, in May 2026, I attended the Global Experience Seminar in Dakar, Senegal. We visited museums, attended lectures, and met some amazing people including many amazing artists. During this first trip we had a layover in Spain and got to explore Barajas, a suburb of Madrid. On the second of my two trips I was in Belgrade, Serbia taking part in a theatre residency with Dah Teatar. With three other students and our professor Amy Sarno, we saw shows, learned theater techniques, traveled to two other cities, and developed a performance about American democracy.

In this presentation, I discuss my experiences, funny stories, and the connections between both of these trips. I explore decolonization, language, and art curation in an increasingly globalized world in the wake of global capital and neo-colonialization. I examine the parallels between neo-imperialism in Serbia and Senegal through cultural and artistic capital, performance, and curation.

Sponsor: Amy Sarno

Richardson Auditorium, Morse-Ingersoll Hall, 1:05-1:55

Journey Beier '28

Groveland, Florida

Major: PART
Minors: Spanish; CRIS
Affiliations: School of Media and the Arts; Global and Public Service

Chyler Smith '28

Sun Prairie, Wisconsin

Major: User Experience, Insight, and Engagement
Minor: PART
Affiliations: School of Business; School of Media and the Arts; Global and Public Service; CELEB

Gene Abron '28

Cincinnati, Ohio

Majors: Biology; Environmental Geology
Affiliations: School of Health Sciences; School of Environment and Sustainability

Kai Colbert '27

Henderson, Nevada

Majors: Media Studies; PART
Affiliation: School of Media and the Arts

Serbia: A Window into American Democracy, Theater, and Social Change

June 2026, we traveled with Professor Amy Sarno to Belgrade, Serbia for an artistic residency at Dah Teatar to create a theatrical piece about American democracy. While there, we worked closely with Dah Teatar and other artists, traveled to nearby cities (Niš and Subotica) to learn about different forms of theater, and connected with the people and the culture through exploration.

Through the creation of our residency piece, we connected with Serbian locals to understand the

stresses put on their democracy and how it connects to our own perceptions of American democracy. Additionally, we got to explore the outside perspectives of how our democracy is viewed from the Serbian lens.

In our presentation, we touch on these topics, as well as perform a section of our residency piece.

Sponsor: Leslie Williams

Impact Beloit Classroom 109, Library, 2:10-2:35

Colby Bern '27

Yorkville, Illinois

Majors: Anthropology; History

Experiences from the Beloit College Bioarchaeology Abroad Program

This presentation provides an overview of the osteological analysis and lab work I did in Germany during the summer of 2026. I, along with a group of six other students, spent a month at the Munich State Collections for Anthropology, working with skeletal remains from the Großes Gräberfeld site in Regensburg, Germany. I worked with each group analyzing the individuals to record skeletal pathologies, estimate demographic information, and compile the information we gathered into a database created for the site.

I also had the opportunity to work with the Transition Analysis 3 software (TA3) to provide more accurate age estimations for the individuals. This research culminated in writing osteobiographies for a few selected individuals to be included in the database. These texts provide important context to the site and highlight the lived experiences of these individuals, allowing them to be represented as people over simply data points.

This experience was incredibly valuable to my future in the field, as it gave me real-world experience using skills I developed in a classroom setting and showed me what the career I am pursuing will be like on a daily basis.

Sponsor: Pablo Toral

LITS Classroom 203, Library, 8:50-9:15

Shobhita Bharadwaj '27

Indore, Madhya Pradesh, India

Majors: International Relations; Japanese
Affiliation: School of Global and Public Service

Leadership, Service and Impact: A Summer in Local Government

At the end of the spring semester, I applied for one of the summer internships with local Wisconsin governments made possible via the partnership between Beloit College and the Wisconsin City/County Management Association (WCMA). After a process of interviews and consultation between the WCMA, participating governments, and my academic advisor, I received an invitation to serve as a summer intern at the Village of Waunakee, just north of Madison.

I approached my internship with a lot of curiosity, because I wanted to learn what local government entailed and whether I wanted to pursue a professional career of public service at this level. I received very valuable advice from my hosts that helped me debunk some myths I had built about what government entailed. For example, one of my supervisors at my internship called local government a "bunch of side quests." I came to understand this comment as I immersed myself in the daily activities of municipal work.

Over the course of the internship, I worked across multiple departments: conducting policy research of Wisconsin levy limits, assisting the Department of Human Resources with employee surveys and benefit comparisons, supporting the Finance Department with capital budget planning, and observing the Sustainability Committee. Working across all of these "side quests" taught me that effective government is less about grand, life-altering decisions and more about the quiet, consistent work that keeps a community running.

This presentation explores all the lessons I learned during my time at the Village of Waunakee: what I observed about local government in action, how the experience shaped my understanding of public service, and what students wanting to pursue careers in city management or public administration should consider.

Sponsors: Joseph Derosier and Christa Story

Impact Beloit Classroom 109, Library, 8:50-9:15

Lyndall Breaux '27

La Crosse, Wisconsin

Majors: Political Science; Critical Identity Studies
Affiliations: Global Experience Office; School of Media and the Arts

Real Africa: Decolonization, Art, and Humanity in Dakar, Senegal

This presentation explores ideas of what is “really African” and how these ideas relate to decolonial practice. Starting by looking at three different definitions of decolonization, then building on Olúfẹ́mi Táíwo’s theories on decolonization and agency, this presentation analyzes the stated and inferred goals of decolonization.

The original project was undertaken during the 2026 Dakar, Senegal Global experience seminar. Using art museums curation, public art, and personal experience from my time in Dakar, I ask what is wanted out of decolonization? Findings being inconclusive to this question, this presentation asks deeper questions about bias, agency, and social change.

Sponsor: Suzanne Cox

Room 249, Sanger Science Center, 10:05-10:30

Avary Briggs '27

Albany, Wisconsin

Majors: Psychology; Education and Youth Studies
Minor: Environmental Studies
Affiliation: School of Global & Public Service

Elisa Turner '27

Cary, Illinois

Major: Psychology
Affiliation: School of Global & Public Service

More than Misbehaviors: Social Interactions in the Kindergarten Classroom in Two Wisconsin School Districts

During observations in the kindergarten classrooms at Albany Elementary School and Todd Elementary School, we examine how technology and the classroom environment relate to students’ attention, behavior and social interaction. In Albany Elementary, students are more engaged and often appear quieter when using iPads, while some students are more talkative, distracted and seek further attention when the iPads are removed. In Todd Elementary, children vary their attention to YouTube educational videos, classroom presentation/discussion, and independent activities, and this variation seems related to their demonstrated comprehension displayed by comprehension check

assignments, quality of questions, and innovativeness of play.

Observations like these raise questions regarding whether students' inattentive behavior is considered misbehavior, or if it says more about their needs when it comes to the environments they are learning in. Classroom setting also is related to student engagement, as some students appear to be less engaged in their regular classroom and more enthusiastic during activities such as art, music and physical education. These observations lead us to consider how classroom structure, teacher expectations, and technology may influence kindergarteners' participation and engagement in learning. Environment, structure and attention influence engagement, comprehension, and social interaction. Gender is another factor that might influence children's attention to classroom instruction and social relationships.

Sponsor: Chris Fink

Room 349, Sanger Science Center, 2:35-3:00

Sydney (Kipper Bromia) Fitzgerald '27

Beloit, Wisconsin

Major: Sociology

The Sociology Of Beloit College's Wild Spaces

For the first half of my summer, I worked in Beloit College's Sustainability Summer Scholars Program. As someone majoring in sociology, my goal was to gather information for why Beloit College's urban wild spaces are so important from a social perspective, as well as how and why people attempt to maintain them. My research consisted of interviewing various staff members and students around campus, reading, and visiting Macalester College to understand their motivations for having their campus be so dedicated to conservation efforts.

In my presentation, I discuss the social importance of urban wild spaces and how they can bring people together. I also discuss why culture and pride are important for making sure the natural spaces we share stay alive, and how Beloit College could use pride to its advantage.

Sponsor: Kristin Labby
Kevin Tucker

Poster Session: Second floor bridge, Science Center, Drop in 1:00-2:00

Gabriela Carranza-Torres '27

South Beloit, Illinois

Majors: Chemistry; Spanish
Affiliation: School of Health Sciences

Analysis of Pharmaceutical Contaminants in Water in Quintana Roo, Mexico

The Yucatán Peninsula contains an extensive karst aquifer that serves as an important source of freshwater for communities and ecosystems in southeastern Mexico. However, increasing tourism, wastewater discharge, septic systems, and urban development may contribute pharmaceutical contaminants to groundwater and freshwater systems.

This study evaluated pharmaceutical concentrations in potable and non-potable water sites in Quintana Roo, Mexico, focusing on azithromycin and caffeine as indicators of pharmaceutical and anthropogenic contamination. Water samples were collected from multiple sites and concentrated by solid-phase extraction (SPE) before analysis by liquid chromatography-tandem mass spectrometry (LC-MS/MS). Preliminary results demonstrated detectable concentrations of azithromycin and caffeine across several sampling locations, with concentrations varying among sites and between potable and non-potable water sources. Caffeine showed particularly elevated concentrations at

some non-potable sites. These results demonstrate the presence of pharmaceutical-related contaminants in freshwater resources in Quintana Roo and provide preliminary data for evaluating potential differences between potable and non-potable water sources. Future work will focus on comparing contamination patterns across sites.

Sponsor: Jim Rougvie

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

Angela Chacon Aguilar '28

Parramos Chimaltenango Guatemala

Major: Biochemistry
Minor: Environmental Studies

Characterizing Soils to Aid Oak Savannah Restoration

This project is part of a collaborative prairie and oak savanna restoration effort involving Rock County Conservationists, the City of Beloit, and the Welty Environmental Center (WEC) at Big Hill Park in Beloit, Wisconsin. Big Hill Park grew in 1993 with the addition of a parcel formerly used as agricultural land for much of the 20th century. Because long-term agricultural use can have lasting effects on soil properties, understanding current soil conditions is important for evaluating restoration processes and supporting the recovery of oak savanna habitat.

We studied soil conditions across Big Hill Park and provided baseline information for ongoing oak savanna restoration. Oak savannas depend on management practices such as prescribed fire, removal of woody vegetation, and establishment of native plants. However, soil conditions are also important because properties such as pH, organic matter, texture, and nutrient availability can influence which plants are able to establish and grow successfully.

Throughout the summer, we collected soil samples from forest, pine, and prairie habitats, along with several additional locations across the park. We analyzed soil pH, organic matter, texture, nutrients, and elemental composition using laboratory methods and portable X-ray fluorescence (pXRF). Our results showed that soil conditions varied across the park, even within a small area. Pine soils were generally more acidic than forest soils, while organic matter tended to decrease with increasing soil depth. We also observed differences in organic matter concentrations.

Overall, our findings demonstrate that Big Hill Park does not have uniform soil conditions. These differences suggest that restoration strategies may be more successful when they consider the specific conditions of each area rather than applying the same approach throughout the park. This research provides WEC and its partners with baseline information to support native plant selection, restoration management, and long-term monitoring as the oak savanna continues to recover.

Sponsors: Sylvia Lopez and Charles Westerberg and Suzanne Goebel

LITS Classroom 203, Library, 2:25-3:05

Riva Choudry '28

Evanston, Illinois

Major: Biochemistry
Minor: Health and Society
Affiliations: Community Connections; School of Health Sciences; School of Environment and Sustainability

Cole Miller '27

Salem, Oregon

Majors: International Relations; Environmental Studies
Affiliations: Community Connections; School of Environment and Sustainability

Bethany Yu '27

Maple Grove, Minnesota

Major: Political Science
Minor: Media Studies
Affiliations: Community Connections; School of Global & Public Service; School of Media and the Arts; School of Environment and Sustainability

Green Knowledge: Environmental Education as a Tool for Community Empowerment in Beloit, WI

As Impact Beloit Community Fellows, students participate in 112 hours of work with a community organization in Beloit, WI. Our organizations support Beloit residents from all walks of life to grow their ecological knowledge, experience nature, and engage with the local environment. We discuss our experience with community-centered environmental education.

Riva Choudry: I am interning at Nature at the Confluence, a nature center in Beloit that works to build connections through community events. As a student intern, I assist with administrative tasks, social media, event planning, and creating land maps. I also organize and help with volunteer workdays and research ways to improve the ecosystem. In my presentation, I reflect on how this unique experience has helped me grow and what I have learned so far.

Cole Miller: I am partnered with Welty Environmental Center, located in Big Hill Park. During the academic year, I join Welty staff in leading environmental-focused field trips for 2nd-5th grade students from the School District of Beloit and neighboring areas. We discuss topics related to conservation, ecology, geology, and wildlife behavior. I share my experience with field trips and other components of my work at Welty to encourage other students to seek out meaningful work in the community.

Bethany Yu: The Merrill Community Garden is a program of Community Action Inc, Rock and Walworth Counties, which strives to create “Pathways Out of Poverty”. This mission is fulfilled at the garden through empowering citizens with knowledge and resources to grow their own food. As an intern at the garden, I strive to keep the space thriving, accessible, and welcoming, through grounds upkeep, support of food distribution programs, and community outreach. Beyond my daily responsibilities, I am learning deeply about food security, nonprofit operations, and the needs of the community the garden serves.

Sponsor: Cullyn Murphy

Powerhouse, Lunch

Sophia Corley '29

New Albany, Indiana

Major: undeclared
Affiliation: School of Media and the Arts

J.D. Shoniker '29

Burlington, ON, Canada

Major: Quantitative Economics
Minor: Finance
Affiliation: School of Media and the Arts

Sophia & J.D.: An Acoustic Guitar Duo

We are an acoustic guitar duo. We perform a mix of covers and original songs, primarily coming from the indie, folk, rock, and singer-songwriter genres. We began playing together after a chance meeting early in our freshman years, and have since performed at several events on Beloit College campus, such as at Spring Day and PEETFest. We are also student-athletes: Sophia plays on the women's basketball team; J.D. on the men's ice hockey team.

Sponsors: Joseph Derosier and Christa Story

Impact Beloit Classroom 109, Library, 9:15-9:40

Nya Cotton '28

Chicago, Illinois

Majors: Economics; International Relations
Minor: Spanish
Affiliation: Global Experience Office

What's Missing From the Picture? Meaning, Worldviews, and the Power to Shape Reality

This project explores how belief systems shape consciousness by defining identity, knowledge, authority, morality, and reality. Drawing on symbolic interactionism, I examine how meaning is created through social interaction, reinforced through institutions and cultural practices, and stabilized until particular worldviews feel natural or inevitable. Because meaning determines what people recognize as real, its production is also a form of power.

Senegal provides the case study. I begin with Henri Sagna's "Witnesses to Our Times," where Islam and Christianity are represented while Indigenous traditions are absent. This absence raises the question of how some worldviews become dominant while others fade from visibility. I trace this through Indigenous cosmologies, the spread of Islam, and French colonialism, showing how each system constructs distinct relationships to land, nature, ancestry, knowledge, and authority.

I then examine Cheikh Ahmadou Bamba, who reinterpreted Islam to cultivate dignity, discipline, community, and autonomy under colonial rule. His teachings illustrate how reshaping the meanings attached to work, learning, and authority can generate alternative forms of consciousness and social organization.

Finally, I consider how Black cultural expression is often interpreted primarily as resistance. This pattern reveals more about the worldview doing the interpreting than about the intentions behind the practices themselves. When ordinary acts of living are legible only as opposition, it exposes the limits of the dominant framework.

Together, these examples show that power operates not only through institutions but through the worldviews that define what counts as meaning and reality. These frameworks can be stabilized, but they can also be contested, reinterpreted, and transformed.

Sponsor: James Zambito

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

Lia Dirks '27

Grayslake, Illinois

Major: Environmental Geology
Minor: Museum Studies
Affiliations: Beloit Paleo Lab; School of Environment and Sustainability

The Beane Crinoid Collection at Beloit College: Exceptionally Preserved Specimens of Broad Scientific Value

Exceptionally preserved, articulated crinoids from the Maynes Creek Formation of Le Grand, Iowa, have provided key insights into crinoid taphonomy, arm regeneration from predatory attacks, taxon-specific organic molecules related to original pigmentation, and ecological tiering. Crinoids were first collected for scientific study from the Le Grand area in 1858. In 1874, a lenticular deposit of articulated crinoids formed the basis of initial taxonomic descriptions. Additional lenticular deposits were discovered in the early 1930's; hundreds of slabs of articulated crinoids were excavated and prepared by amateur paleontologist B.H. Beane for his private collection. Beane subsequently sold the majority of his collection, with a portion purchased by Beloit College Trustee R.H. Solem who donated it to the college in the 1960's. The Beane Crinoid Collection at Beloit College consists of over 500 slabs of various sizes ranging from dimensions over 1 m to 10 cm and containing 1000's of articulated crinoids in total preserved in obrution deposits. Since its acquisition by the college the collection has been housed in various buildings and displays, half the collection has been inaccessible for nearly twenty years, and slabs have undergone disparate levels of study, curation, and additional preparation.

The B.H. Beane Crinoid Collection at Beloit College is currently undergoing a renewed curation effort with the overarching goal of improving accessibility for teaching, research, and outreach. Slabs are being reassembled from multiple storage locations, and those that had been inadequately stored are being cleaned and assessed for damage using historical photographs. Future guidelines and recommendations on how to care for the specimens, storage suggestions that aid in the collection's longevity and accessibility, and ensuring the specimens in this collection are properly represented in our college fossil collection database are included in this effort.

Sponsor: Suzanne Goebel

LITS Classroom 203, Library, 9:15-9:40

Moukeya Dy '28

Phnom Penh, Cambodia

Major: Biochemistry
Affiliations: School of Health Sciences; School of Global & Public Service

My Summer Internship Journey at UNOPS: Professional Experience and Personal Growth

This summer, I had the opportunity to work as a Project Management Intern at the United Nations Office for Project Services (UNOPS) in New York City. My internship introduced me to the work of an international organization and gave me practical experience in research, presentation development, project coordination, and organizational communication. Working alongside colleagues in a multicultural environment also allowed me to observe how collaboration and institutional support

contribute to international development. Outside the office, I experienced the challenges and excitement of living in a fast-paced city, from commuting and managing daily responsibilities to exploring New York's diverse neighborhoods and culture.

In this presentation, I share how my professional and personal experiences came together to make my summer an important period of learning, independence, and growth.

Sponsor: Emily Sager

LITS Classroom 203, Library, 11:35-12:00

Jamie Edwards '28

Green Lake, Wisconsin

Majors: Studio Art; Creative Writing

Wood Type is My Type: Behind the Nonprofit Museum Scene as an Intern at Hamilton Wood Type and Printing Museum

As an art student interested in museum work, the opportunity to intern at the Hamilton Wood Type and Printing Museum from June through August 2026 was invaluable. My museum studies coursework was reinforced through practical application in an artistic and community-oriented space.

The Hamilton museum explores the rich history of wood type manufacturing and its use for printing in Two Rivers, Wisconsin, and the surrounding area. Its extensive collection of antique and vintage type and machinery is actively used for museum programs such as printmaking classes and pantograph demonstrations, activities made possible primarily because of museum volunteers.

This presentation details the Hamilton Wood Type and Printing Museum's persistence as a pillar of local history and illustrates the importance, and the challenges, of nonprofit museum work. I discuss the relevant skills I learned while doing extensive archival research to upgrade the museum's permanent installations, curating the fall 2026 exhibit, and promoting community involvement through museum events.

The next time you visit your local museum, you'll have a new appreciation for the work done behind the scenes to make it all happen.

Sponsor: Pablo Toral

Room 402, Sanger Science Center, 2:35-3:00

Toka EmadEldin Mansour '29

Alexandria, Egypt

Majors: 3-2 Engineering program; International Relations
Minors: Environmental Studies; Physics
Affiliation: School of Environment and Sustainability

Material Studies of Magnetized Soft Polymers in Aerospace Design

During a summer research study at Zhejiang University's Laboratory of Silicon and Advanced Semiconductor Materials, I supported daily experimental operations while conducting independent research on sustainable development goals (SDGs 9, 12, and 13) in next-generation design materials. My work focused on how soft, magnetized polymers and advanced silicon-based materials can contribute to more efficient, adaptable, and environmentally responsible aerospace designing systems. I examined magnetically responsive soft polymers and hydrogels as candidates for shape-morphing components, designing hydrogel stamp structures for laser-driven thermal programming where controlled swelling and polymer memory effects enable precise folding and structural deformation.

Personally, it transformed my approach from isolated problem-solving to a wide systems-level approach, strengthening my commitment to engineering pathways that merge sustainability and resilient long-term solutions.

A central part of this project has taught me to apply the multidisciplinary thinking that I have learned at Beloit College from courses in my two majors of Engineering and International Relations. Evaluating real-world sustainability policy to integrate SDG-aligned materials into aviation inspired me to work closely with industry to analyze future critical challenges such as fabrication scalability and durability under extreme conditions.

Sponsor: Suzanne Cox

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

Hanna Fassilis '27

Bridgewater, New Jersey

Majors: Psychology; Cognitive Science
Minor: Philosophy
Affiliations: School of Health Sciences; Family Services of Southern Wisconsin; Outdoor Environmental Club; Cognitive Science Club; Department of Psychology

Ana Tolentino '27

Campo Grande, Brazil

Majors: Psychology; Cognitive Science
Affiliations: School of Health Sciences; Family Services of Southern Wisconsin; SEAL; Cognitive Science Club; Run Club; Department of Psychology

Constructing a Resilience Assessment for Family Services

Family Services of Southern Wisconsin and Northern Illinois, located in Beloit, Wisconsin, defines resilience as a dynamic process: “At its core, resilience is the ability to accept a bad or overwhelming situation while still identifying what is in your control, acting on it, and doing what you can to mitigate the harm from what is not in your control”. In this presentation, we discuss our process of constructing a resilience assessment for this social service agency. Background information such as a literature review of relevant literature, staff needs for assessment refinement, and the process of drafting, editing, and implementing a new assessment all are featured in our presentation.

Sponsors: Sylvia Lopez and Suzanne Goebel and Charles Westerberg

LITS Classroom 203, Library, 1:35-2:05

Hanna Fassilis '27

Bridgewater, New Jersey

Majors: Psychology; Cognitive Science
Minor: Philosophy
Affiliations: Community Connections; School of Health Sciences; Outdoor Environmental Club; Cognitive Science Club; Department of Psychology

Brandon Lopez '28

Wheeling, Illinois

Major: Media Studies
Affiliations: Community Connections; Schools of Media and the Arts

Joshua Martinez-Marte '27

Beloit, Wisconsin

Major: Business Management
Minor: Sports Management
Affiliations: Community Connections; SEL Student, McNair Scholar, Football and Track and Field Athlete

In the Shadows: Interning Behind the Scenes

Joshua: During this school year, I have been an intern at Stateline Literacy Council as a Community Fellow. I took on a mentorship role, guiding my tutees to become better at speaking English. I am in charge of gathering data to increase our enrollment of students. In this presentation, I discuss the work that I have been doing to help the Stateline Literacy Council.

Hanna: My Community Fellowship is about administration for a Beloit social service non-profit called Family Services of Southern Wisconsin. I discuss the tasks I learned, such as correspondence maintenance, software management, records, reporting, and what it is like to work in social services.

Brandon: My Community Fellowship is about TV production for the Beloit TV Station at CELEB (Beloit, WI). In addition to discussing my work and tasks, such as camera recording, audio checking, editing, and live streaming, I elaborate on how to work behind the scenes to produce television programming.

Sponsors: Pablo Toral and Nicolette Meister
Alyssa Thiede (Hennepin History Museum)

LITS Classroom 203, Library, 10:45-11:10

Charlie Gale '27

Tampa, Florida

Majors: Environmental Communication & Arts; Critical Identity Studies
Minor: Museum Studies

The Value and Potential of Community-Oriented Museums

This summer, I worked as a collections intern at Minneapolis's Hennepin History Museum, a small institution dedicated to the history of Hennepin County in Minnesota. This internship fulfilled a graduation requirement for my museum studies minor and offered me a first-hand experience in a professional environment where I received trust from my mentors. As a result, I completed many tasks, solidified my education, and gained new professional insights.

My most valuable lessons came from my experience working with collections through cataloging, photographing, and doing online data entry. I also got to work alongside the curator who takes care

of many of the day-to-day operations of the museum, giving me insight into the workflow of an institution with an extremely limited staff.

In addition to honing my technical skills in collections work, my internship gave me the chance to see how exhibits can be designed in service of the local community. I was able to immerse myself in the history of Hennepin County and learn about the community whose very history I was holding in my hands. I also expanded my justice-oriented perspective on museums by appreciating the potential for museums to advance justice issues in their communities. I had previously only had the opportunity to write about these matters in the research that I conducted in the context of my courses. The practical experience allowed me to appreciate more aspects of curation that will be instrumental in informing my understanding of museums and my research in the future.

Sponsor: Emily Sager

Room 150, Sanger Science Center, 9:40-10:05

Kelsey Gerstler '28

Schenectady, New York

Majors: Health and Society; Data Science
Minor: French
Affiliations: School of Global & Public Service; School of Health Sciences

A Summer Solving Hunger: My Internship at Feeding America Eastern Wisconsin

This summer, I had the opportunity to be the Partnerships Intern at Feeding America Eastern Wisconsin. This organization focuses on addressing food insecurity and provides resources for individuals and agencies to aid the community.

During this experience, I analyzed and updated data, engaged with the community, and kept in constant contact with their partners. Feeding America Eastern Wisconsin now uses the updated databases to gather statistics for their national organization, aiding in receiving grants and strategic planning. I learned about the role non-profits and governmental programs play in addressing food as well as medical and housing insecurities. Overall, I expanded my public health and data science knowledge while being able to give back to my community.

Sponsor: Suzanne Cox

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

Allie Gustafson '27

Beloit, Wisconsin

Major: Psychology
Minor: Education and Youth Studies
Affiliation: School of Global & Public Service

Understanding Student Self-Efficacy, Motivation, and Self-Advocacy Within High School Educational Systems: Insights From a Psychology Practicum

My psychology practicum at Beloit Memorial High School has allowed me to apply concepts from social justice and community psychology to a real-world school setting. By shadowing a freshman counselor, I have observed students, school professionals, families, and the larger school community while considering how individual experiences are shaped by the systems and resources surrounding them.

My observations have focused on students' self-efficacy, motivation, self-advocacy, and perceptions of their education and future careers. I have observed 504 and IEP meetings, student scheduling, scholarship interviews, behavioral concerns, family communication, and conversations surrounding graduation, employment, and future education. These experiences have provided opportunities to consider how students' relationships with parents or guardians, school professionals, and other support systems may influence how they navigate their education and make decisions about their futures.

My practicum has encouraged me to consider the broader challenges affecting students and the school community, including available resources and the need for changes beyond the individual student. Through these observations, I am connecting psychological concepts to the realities of a high school environment while critically reflecting on how my own experiences and perspectives influence the way I understand students and their communities.

This experience has helped me develop a more informed understanding of psychology in practice and of the role I hope to have as a future school psychologist.

Sponsor: Nicolette Meister

LITS Classroom 203, Library, 11:10-11:35

Ary Hartman '26

Northbrook, Illinois

Major: Anthropology
Minor: Museum Studies
Affiliation: Beloit Cross-Disability Coalition

TACLing the Curation Crisis: A Collections-Based Field School Experience

Many anthropology field schools focus on archaeology and excavation. However, the 2026 *Towards Achieving Curation Literacy* (TACL) curatorial field school program offers a different approach: working with archaeological collections after excavation. Through this collections-based field school with the Arkansas Archeological Survey, I experienced how archaeologists, museums, and collections repositories manage, document, and care for artifacts and records that may have been in storage for decades.

During the program, I worked directly with archaeological material and gained practical experience in artifact inventory, collections databases, record digitization, object photography, and 3D imaging. I also learned about the larger challenges repositories face when caring for archaeological collections, including incomplete provenience records, catalog backlogs, and limited resources, while still working to make collections accessible for research.

TACL also deepened my understanding of the ethical aspects of collections management. Responsible stewardship involves more than simply preserving physical objects--it also requires understanding of the Native American Graves Protection and Repatriation Act (NAGPRA), Tribal perspectives, data sovereignty, and culturally informed care. Ethical collections work also necessitates considering who has the right to access, interpret, and make decisions about cultural materials.

This experience expanded my understanding of archaeology, anthropology, and collections work, and has given me a clearer sense of the skills and career possibilities in collections management. In this presentation, I will share my experience in Fayetteville, what I learned from working with archaeological collections, and why collections-based field schools can provide valuable experience for students interested in archaeology, museums, and cultural heritage studies.

Sponsors: James Rougvie and Susan Furukawa and Ron Watson

Room 402, Sanger Science Center, 1:55-2:20

Lily Hess '28

Beloit, Wisconsin

Major: Marketing
Minor: Visual Studies
Affiliation: School of Environment and Sustainability

Lillianne McCully '28

Clinton, Wisconsin

Major: Environmental Geology
Minor: Biology
Affiliation: School of Environment and Sustainability

JD Shoniker '29

Burlington, ON, Canada

Major: Quantitative Economics
Minor: Finance
Affiliation: School of Environment and Sustainability

Natural Heritage, Cultural Heritage, and Sustainability Through Tourism in Kyushu, Japan

During the summer Japan GES, we explored heritage and dark tourism, cultural and natural landscapes, and community resilience and sustainability. Organizations in Kyushu, Japan, use cultural and natural heritage tourism to support community resilience in a time of depopulation.

Recurring themes throughout the course were depopulation and the desire to bring in more tourists to Kyushu while preserving cultural heritage. Heritage tourism can be used to help maintain landscapes and culture long term. Besides economic benefits, institutions in the region preserve history and pass down knowledge to future generations. Regional geoparks help give locals a sense of pride, along with museums like the Kioku Earthquake Memorial Museum, whose mission is to educate the younger generation on how to prepare for earthquakes. However, tourist sites must consider the locals' sentiment for preservation and the emotional implications of their exhibits.

Many of the sites we visited were places of past tragedy used to educate the public. Dark tourism is tourism involving places historically associated with death and tragedy. It is a profound opportunity to memorialize the past and demonstrate a community's resilience. Dark tourism has caused discourse about when memorialization becomes sensationalization. Throughout our course, we explored whether dark tourism, while bringing visitors awareness, may also lead to desensitization.

Additionally, the Aso region, like many other rural areas of Kyushu, has been facing significant economic issues. Declining birth rates, rising average age, and urban migration have left the region with fewer individuals capable of maintaining the region's abundant grasslands, a culturally significant landscape. To combat this decline, the region is leaning heavily into its tourism capacity: creating jobs for those who would typically be too old to work and utilizing the beauty and history of the region to attract tourists and create revenue streams to fund preservation.

Sponsor: Emily Sager

Room 150, Sanger Science Center, 10:05-10:30

Kierra Rayne Hoover '27

Albuquerque, New Mexico

Majors: Education and Youth Studies; Performing and Applied Arts

A Summer with Breakthrough: The Impact of a Teaching Fellowship

In this presentation, I describe Breakthrough's background and mission, and its dual purpose: supporting systematically excluded middle and high school students on their journey to college while also offering similarly situated prospective teachers support and teaching experience. I share my day-to-day teaching and curriculum experience, including core instruction, electives, co-curriculars, and daily operations within a Breakthrough school day.

Sponsors: Joseph Derosier and Christa Story

Impact Beloit Classroom 109, Library, 9:40-10:05

Damila Hurn '28

St. Louis, Missouri

Major: Sociology and Data Science
Minor: Religious Studies
Affiliations: School of Media and the Arts; School of Business; Black Students United; Global Experience Office

Learning Through Community: My Experience in Dakar, Senegal

The Global Experience Seminar, Senegal: Art, Decolonization, and Social Change in Africa, fostered a three-week study abroad experience with the focus on allowing students the opportunity to learn the ways in which various forms of art and creative expressions serve as a means for encouraging collective thought, a diversification of activism efforts, and social change. I was one of the students who participated in the Global Experience Seminar. Students worked with faculty co-instructors Joseph Derosier and Christa Story, along with staff instructor Josh Moore.

This presentation focuses on the essential learning that is accomplished through community connection. With topics surrounding hospitality and food, spirituality, the effects of social structures, and the significance of community, this presentation uplifts the understanding of self-identity through the medium of shared learning experiences. Incorporating the learning goals of this course, this presentation will cover the complexities delinking from Western thought frames, influencing how we approach what counts as legitimate art, and further, legitimate knowledge. This presentation also covers how this thinking can be applied to spaces of further learning and prospective careers.

Sponsor: Ben Stucky

Room 249, Sanger Science Center, 3:05-3:30

Araf Israk '29

Dhaka, Bangladesh

Majors: Mathematics; Computer Science

Untangling Curves in Real Time: An Interactive Engine for Reidemeister Simplification of Plane Loops

Draw a closed loop on paper without lifting your pen, letting it cross over itself a few times. A century-old branch of mathematics studies how to simplify such a drawing—removing crossings until it is as untangled as possible, using just three simple local moves, called Reidemeister moves. A remarkable theorem guarantees that any such loop can be reduced to its simplest form by these moves alone, and, unlike knots in three dimensions, without ever having to make the drawing more complicated first.

We built interactive software that lets anyone carry out this simplification by hand and watch the mathematics unfold on screen. Existing programs for manipulating these diagrams either do not allow the moves at all or must erase and redraw the whole picture after each step, producing jarring jumps; the standard methods for drawing the diagrams also tend to collapse, shrinking regions until large examples become impossible to display.

Our engine avoids both problems by keeping a single physical model of the curve and continuously reshaping it. Each loop is first laid out on a grid using an algorithm that guarantees every region keeps a usable size. The curve is then represented as a "necklace" of equal-sized beads that repel one another like solid disks and settle under simulated springs, so no strand can ever pass illegally through another. Clicking a region tells the program how many crossings surround it- one, two, or three- and it performs and smoothly animates the matching move.

The result is a fast, visual tool for exploring how tangled curves simplify. The project is open source, and future work will extend it to more complex diagrams and turn it into a mathematical puzzle game.

Sponsors: Eyad Said and Daniel Youd

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

Araf Israk '29

Dhaka, Dhaka, Bangladesh

Majors: Computer Science; Mathematics

Abdullah Yousafi '29

Lahore, Punjab, Pakistan

Majors: Computer Science; Mathematics

Stuart Bernath '26

Rockford, Illinois

Major: Computer Science

Tracing the Shape of a Story Across Translation: A Computational Study of Yu Jiao Li

How does the structure of a story change when it moves between languages? Working with Professors Daniel Youd and Eyad Haj Said, we investigate this question through Yu Jiao Li, a Chinese novel, and two of its French translations. Our project uses natural language processing to align passages across the texts and measure how much narrative information appears in each passage and how quickly that information changes.

This project is built upon the previous scholarship of Piper and Toubia that was published in 2021. We repeat the analysis with passages of different lengths to see how the scale of comparison affects the patterns we observe. We then visualize the measurements as shapes that allow us to examine the Chinese original alongside its translations.

In this presentation, we explain the process of turning historical literary texts into data, share our comparative approach, and discuss a central challenge of the work: distinguishing choices made by translators from differences between Chinese and French. The project brings computer science, digital humanities, and literary study together to ask what quantitative methods can reveal about translation—and where human interpretation remains essential.

Sponsor: Suzanne Goebel

LITS Classroom 203, Library, 9:40-10:05

Najeebah Junaid '28

London, United Kingdom

Majors: Biochemistry; Dental science

Affiliations: School of Health Sciences; Track and Field; Academic Senate

More Than a Schedule: Leading People Before I Lead Patients

This summer, I worked as an Activity Manager for Move Language Ahead (MLA), a summer New York immersion program for international students from around the world. Going in, I expected the job to be mostly about keeping a schedule running. What I did not expect was how much of it would come down to people reading a room, knowing when to step in, and figuring out how to hold someone accountable without losing their trust.

Day to day, I coordinated group logistics across multiple buses, planned NYC day trips, flights, hotels, money and shorter outings, and built out the activity schedule that shaped participants' free time. But the part of the job that stuck with me most was handling staff conduct issues: having direct, sometimes uncomfortable conversations with the Activity Leaders I supervised when something went wrong, whether that meant a curfew violation or a bigger performance concern.

I am on a pre-dental track, and I did not expect a summer job managing buses and schedules to connect to that path. But it did. Dentistry, like this job, is about far more than the technical skill. It is about communicating clearly under pressure, holding people accountable with care, and staying calm when something does not go as planned.

In this talk, I share what that summer actually looked like, the moments that pushed me to grow as a leader, and how an experience that had nothing to do with dentistry on paper ended up teaching me some of the most important lessons for the career I am headed toward.

Sponsor: Joshua Moore

Room 402, Sanger Science Center, 9:15-9:40

Helmi Kawsar '27

Dhaka, Bangladesh

Majors: Biochemistry; Quantitative Economics
Minor: Marketing
Affiliation: Global Experience Office

Beloit to York: My Semester Abroad in the United Kingdom

In the spring of 2026, I studied abroad in the United Kingdom at a university thirty times bigger than Beloit, University of York. Adjusting to a big campus, and a timetable that changed every week, I learned to take ownership of my education in a new way.

Beyond the classroom, I made friends with students from different regions through late-night games and city explorations. I also reconnected with Beloit friends living across the United Kingdom, and had amazing travel experiences.

I will share how I navigated an unfamiliar academic system and formed bonds in a large campus size. I also want to share my experience navigating the internship cycle throughout my time there, and how this semester has shaped me as a student developing a deeper appreciation for the friendships I have formed.

Sponsor: Matthew Laszlo

Room 150, Sanger Science Center, 1:05-1:30

Helmi Kawsar '27

Dhaka, Bangladesh

Majors: Biochemistry; Quantitative Economics
Minor: Marketing
Affiliation: School of Business

Connecting Biochemistry and Marketing, My Summer as a Product Management Intern

This summer, I worked as a Product Management Intern at Jelmar, maker of CLR Brands in the cleaning products industry. Throughout my internship, I learned how a product makes its way from the lab to the shelf. I also worked on consumer research and created presentations connecting the science behind our products to how they are marketed and sold.

I share my experience as a summer intern and how my studies in Biochemistry, Quantitative Economics, and Marketing came together in the consumer packaged goods industry. I also share how this experience helped me discover a career path at the intersection of science and marketing.

Sponsor: Joe Bookman

Room 402, Sanger Science Center, 10:05-10:30

Anna J Autumn King '27

Manchester, New Hampshire

Majors: Media Studies; Business Management; Japanese Language and Culture
Minor: Marketing
Affiliations: Global Experience Office; Media Studies Department

Tokyo to Rishiri: Solo Traveling Across Japan Documented through Photography

This past summer, I solo traveled across Japan, from large cities like Tokyo and Kyoto to lesser known places like Rishiri Island and Hikone thanks to the Anita M. Andrew Fellowship in Asian Studies.

Through the lens of a Sony A7 IV, Canon Powershot ELPH360HS, and iPhone 13, I captured friends; strangers; strangers who became friends; the vibrant, joyous, and chaotic sights and sounds of Gion Matsuri; and Sapporo August Festival, achieving a long-term goal of summiting the rocky, misty slopes of Mt Rishiri and capturing architecture, chocolate factories, hot springs, giant pumpkins, and so much more.

My photographs acts as your guide, taking you on an unconventional journey across Japan.

Sponsor: Cullyn Murphy

Powerhouse, Lunch

Jasmine Kingsbury '28

Hamilton, Ohio

Majors: Mathematics; Music
Affiliations: School of Media and the Arts; CELEB

Oliver Idzikowski '28

Nashville, Tennessee

Majors: Environmental Biology; Philosophy
Affiliation: School of Media and the Arts

Katelyn Schroeder '26

Aurora, Illinois

Majors: Creative Writing; Literary Studies
Affiliation: School of Media and the Arts

Breanna Patten '30

Champaign, Illinois

Major: Biology
Affiliation: School of Media and the Arts

Gabriella Willis '27

Kingston, New Hampshire

Majors: Psychology; Music
Minor: French
Affiliation: School of Media and the Arts

Lily Niesen '28

Deforest, Wisconsin

Major: Studio Art
Minor: Critical Identity Studies
Affiliation: School of Media and the Arts

Gutter Trash: A Rock Band

Gutter Trash is a student-led rock band consisting of Katelyn Schroeder on vocals, Jasmine Kingsbury and Ollie Idzikowski on electric guitar, Gabriella Willis on bass, Breanna Patten on drums, and Lily Niesen on dance. Check it.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 3:30-3:55

Jackson Kompkoff '26

Anchorage, Alaska

Major: Political Science
Minor: Education
Affiliation: School of Environment and Sustainability

Benjamin Goecke '28

Beloit, Wisconsin

Major: Environmental Biology
Minor: Undecided
Affiliation: School of Environment and Sustainability

Owen Thomason '27

Los Angeles, California

Major: History of Law and Justice
Affiliations: Ramah Studios; Izaak Walton League; School of Environment and Sustainability

Beloit Climate Action: The Relationship between Greenhouse Gas Emissions and Food Insecurity

The City of Beloit's strategic Climate Action Plan makes food security a cornerstone of its goals. Increasing production of and access to local food are clearly spelled out as specific targets to achieve a 20% reduction in food insecurity by 2033. The plan states that robust local food networks reduce carbon emissions by minimizing reliance upon carbon-driven supply chains. 21,810 people in Rock County are food insecure. Over a third of that number are children, an increase of nearly 20% since last year, according to Feeding America.

One solution we recommend is community gardens, collaborative projects on shared open spaces where participants share in the maintenance and products of the garden, including affordable fresh fruits and vegetables. In Beloit, they are practiced on a small scale, such as the Merrill Community Sharing Garden. Utility community gardens can serve to generate a portion of a local food network to both increase food security, and to limit our carbon dependency due to transporting and preserving non-local food. We illustrate our strategy for Beloit with best practices from comparable communities that were able to reduce food insecurity by 95% and obesity by 7% via sustainable areas of cultivation such as hydroponics basins or beds, and by amending local ordinances to encourage urban food production by business and community partners such as Urban Growers Collective.

Our research relies on the lessons that we are learning in a course called Principles of Sustainability, where we study success stories. We craft a strategy for increased production of local food at zero cost to the City on the basis that it correlates not only with a reduction in food insecurity, but also with lower climate emissions and local government expenditure on programs intended to combat food insecurity in Beloit. Community gardens supplement programs like Meals on Wheels or SNAP double up programs.

Sponsor: Pablo Toral

Room 249, Sanger Science Center, 1:55-2:20

Meghan Koning '27

Mount Prospect, Illinois

Major: Political Science
Minor: Ancient Mediterranean Studies
Affiliation: School of Environment and Sustainability

Teamwork and Social Science Field Research in Unfamiliar Settings

This summer I took the Environmental Justice course at the Boundary Waters Wilderness Field Station to learn applied social science field research. Working as a team of undergraduate researchers, my classmates and I learned different methods of data collection and analysis. I found interdisciplinary learning, ethics, and visual sociology to be most impactful.

While we were not familiar with our research sites, the course taught students how to approach people in new communities. We gained experience talking to informants, taking notes, and debriefing about our interpretation and findings. Along the way, we learned how important it is to work as a team when conducting field research. We also realized that, while doing field research can lead to unexpected situations (such as getting separated from the group after a boat started to sink), we had developed the skills to solve these problems. Our confidence grew significantly as a result, both as researchers as well as creative problem-solvers in general.

In addition, I honed my teamwork skills. I worked with a biology major from Carleton College named Kaylei Stahl-Winch on a research project investigating the impact of gender roles in the Boundary Waters region. We conducted research through visual sociology and interviews and collected quantitative and qualitative data. Our mixed-methods approach built on the strengths that we had developed individually through our respective majors in biology and political science. Our findings revealed that because of gender-specific discrimination, role expectations, and obstacles, women develop different relationships to the land and natural resources in the Northwoods than other gender groups.

Sponsors: James Rougvie and Susan Furukawa and Ron Watson

Room 402, Sanger Science Center, 1:30-1:55

Owen Kutz '28

Monona, Wisconsin

Major: Japanese
Affiliations: Global Experience Office; School of Environment and Sustainability

Jarif Fijaan '29

Dhaka, Bangladesh

Major: Environmental Geology
Affiliations: School of Environment and Sustainability; Global Experience Office

Community Resilience and Coexistence Around the Volcanoes of Kyushu

We participated in a Global Experience Seminar in Kyushu, Japan, where we explored the relationship between volcanic landscapes, local communities, and resilience. Aso and the Unzen area are two volcanic regions hosting UNESCO Global Geoparks that demonstrate how people have learned to live alongside both the risks and benefits of volcanic activity.

We spent significant time in Aso, where the world's third-largest caldera is located. The formation of the Aso Caldera involved a number of eruptions and collapse into the emptied magma chamber below Earth's surface. Currently, there are a number of volcanic mountains in the region, including Mount Aso, while most of the other parts of the caldera have settlements and agricultural activities.

Unzen is another example of how people adjust to living near a volcano. Past eruptions and disastrous events are an important part of the area's past and have shaped how the people there think about dangers and being prepared for them. Mt. Unzendake volcano, near the city of Shimabara, has caused massive amounts of destruction to the surrounding area twice in the past with huge pyroclastic flows. Unzen shows how communities can keep their special way of life while dealing with a constantly changing place.

Through our experiences in Aso and Unzen, we learned that volcanic landscapes are not defined only by danger. Communities have developed ways to reduce risk while also benefiting from the natural resources created by volcanic activity. Geoparks provide education and memorialization in the modern day, assuring that similar disasters in the future will not be as catastrophic. Fertile soil, hot springs, geothermal energy, tourism, and other natural resources have helped shape local livelihoods and culture. Together, these regions illustrate how people can coexist with dynamic natural environments through adaptation, preparedness, and community resilience.

Sponsor: Joshua Moore

Room 402, Sanger Science Center, 9:40-10:05

Dariya Kylyshpay '28

Astana, Kazakhstan

Majors: Quantitative Economics; Computer Science
Minors: Entrepreneurship; Technology in Public Health
Affiliation: Global Experience Office

Studying Abroad in South Korea: Cultural Learning, Adaptation, and Exploring East Asia

In spring 2026, I spent a semester studying abroad at Ajou University in Suwon, South Korea. Interestingly, South Korea was not my original destination. I had initially hoped to study in Japan. Looking back, however, I am grateful that my plans changed. Arriving in Korea with little previous knowledge of East Asia became the starting point for a much broader exploration of the region's history, cultures, and people.

In this presentation, I share how living in South Korea transformed my understanding of East Asia. Through my courses, visits to historical and cultural sites, and everyday life in Suwon and Seoul, I learned about Korea's historical relationships with China and Japan and began to recognize both the connections and differences among East Asian societies. My semester also gave me opportunities to travel throughout South Korea, including Busan, Jeju, and Jinhae, and to Hong Kong, Guangzhou and Shenzhen in China, and several cities in Japan. Equally important were the friendships I developed with students from Korea and many other countries around the world.

I also discuss my university life at Ajou, including my participation in taekwondo, exchange student, chess, and volleyball clubs, and Korean university traditions such as club retreats and social gatherings. Despite speaking very little Korean, I was able to build friendships and become actively involved in campus life.

Finally, as an international student already studying in the United States, I compare my first experience adapting to life abroad with my second transition to Korea. I reflect on how learning to adapt once made the second transition faster and more confident, and why I believe study abroad can expand students' independence, cultural awareness, and understanding of the world.

Sponsor: Pablo Toral

Room 150, Sanger Science Center, 1:30-1:55

Eduardo Larsen '28

Santa Cruz de la Sierra, Bolivia

Majors: Quantitative Economics; Political Science
Minor: Finance
Affiliation: School of Business

Launch of the National Chamber of the Youth of Bolivia

I completed an internship at the Cámara Nacional de Comercio de Bolivia (CNC) during the summer of 2026. My work assignment was the institutional consolidation and public positioning of the Cámara Nacional de Juventud (CNJ), a youth-focused initiative designed to connect young entrepreneurs, professionals, students, and leaders with Bolivia's business sector. The project aimed to transform a modest initiative into an organization with defined structures, operational tools, and a national presence.

My work focused on four main areas: Institutional development, strategic planning, membership design, and public outreach. I contributed to the creation and approval of the CNJ Internal Regulations, the development of its first Operational Plan, the design of a membership model, and the formal establishment of the Founding Board. I also supported the launch of the organization's digital platforms, national socialization efforts, media positioning, and relationship-building with businesses, institutions, and potential partners.

The main outcome of the internship was the successful coordination of the CNJ's first official public launch event, which brought together more than 200 participants, including young people, entrepreneurs, representatives of government and civil society organizations, and media organizations. Through strategic partnerships and sponsorship management, the event achieved an estimated value exceeding $5,000 while requiring significantly lower direct expenses.

This experience demonstrated how institutional design, communication strategies, and stakeholder engagement can contribute to building sustainable organizations. By the end of the internship, the CNJ had established a formal foundation, developed an initial network of allies, received more than 80 youth applications nationwide, and positioned itself as a platform for youth leadership, entrepreneurship, and productive development in Bolivia.

Sponsor: Varan Kitayaporn

Room 150, Sanger Science Center, 2:20-2:45

Eduardo Larsen '28

Santa Cruz de la Sierra, Bolivia

Majors: Quantitative Economics; Political Science
Minor: Finance
Affiliation: School of Business

Making Formality Worth It in Bolivia

Bolivia has historically depended heavily on natural resource revenues, particularly hydrocarbons, while a large portion of workers and small businesses operate outside the formal economy. As resource revenues have become less reliable, strengthening the private sector and creating conditions for productive business growth have become increasingly important. This research examines why many workers and small businesses remain informal and explores policies that could make formal participation more attractive.

The study analyzes official data on employment, taxation, business registration, finance, and social protection in Bolivia, combined with academic research and policy experiences from Peru, Chile, Brazil, and Argentina. The analysis focuses on the costs and benefits that influence the decision to formalize, including administrative procedures, compliance requirements, access to credit, financial records, market opportunities, and social protection.

The findings suggest that informality in Bolivia is not only a consequence of weak enforcement or tax avoidance. Many workers and businesses remain informal because formalization often creates immediate costs while offering limited or uncertain benefits. Therefore, the report argues that

formalization should be viewed as an opportunity rather than only an obligation.

The study proposes a policy approach centered on simplifying registration, improving digital tools, using financial records to expand access to credit, connecting formal participation with visible benefits, and applying gradual enforcement. By making formal systems more useful and accessible, Bolivia can encourage voluntary participation, strengthen small businesses, and support the transition toward a more diversified and productive private-sector economy.

Sponsor: Katherine Harris

Richardson Auditorium, Morse-Ingersoll Hall, 11:15-11:40

Joshua Lewis '29

Keflavik, Iceland

Major: Mathematics
Minor: Law & Justice

The Unitary Executive Theory: From *Humphrey's Executor* to *Trump v. Slaughter*

For nearly a century, *Humphrey's Executor v. United States* (1935) shaped the relationship between presidential authority and independent federal agencies by permitting Congress to restrict the President's ability to remove certain agency officials. The decision became central to a broader constitutional debate over the unitary executive theory, the view that Article II's vesting of "the executive Power" in one President requires meaningful presidential control over officers exercising executive authority.

I participated in legal research related to this question alongside fourteen lawyer-colleagues, assisting research prepared for Professor Steven G. Calabresi, who joined an amicus curiae brief before the Supreme Court in *Trump v. Slaughter*. The project required examining constitutional text, the historical understanding of executive power, presidential removal authority, Supreme Court precedent, and the development of the modern administrative state. The research focused particularly on whether the constitutional structure permits Congress to insulate officers exercising executive power from presidential removal.

In June 2026, the Supreme Court decided *Trump v. Slaughter*, holding that the Federal Trade Commission's statutory removal protection violated the separation of powers and overruling what remained of *Humphrey's Executor*. This presentation examines the constitutional theory underlying that dispute, the legal research in which I participated, and how the Court's decision fits within the longer historical debate over presidential control of the executive branch.

Sponsor: Pablo Toral

Room 150, Sanger Science Center, 3:20-3:45

Giovanna Lima '29

Brasilia, Brazil

Majors: Environmental Justice; Data Science; Literary Studies
Affiliation: School of Environment and Sustainability

Growing Food Justice: Lessons from Urban Gardens in Chicago and Brazil's Sisteminha

This presentation is based on a research project on food security that I completed for my environmental studies major. The project sought to identify best practices to address urban food insecurity via urban farming. It followed a comparative methodology by taking two case studies, the

United States and Brazil. My research built on my interdisciplinary environmental education. I used analytical frameworks and research methods from biology, economics, ethics, policy, and urban studies.

I set out to compare the benefits of two programs, urban gardens in Chicago and Embrapa's Sisteminha, an integrated small-scale food production model developed in Brazil. Among the best practices in each system, I studied resource reuse, biodiversity, local food production, community participation, and integrated agricultural practices.

My findings showed that food insecurity affects communities differently, depending on their economic, geographic, and environmental conditions. Low-cost community-based food systems can provide practical strategies for food access and resilience. By considering the ecological, social, and economic benefits of Chicago's urban gardens and Brazil's Embrapa's Sisteminha, the presentation explores why these approaches can serve as affordable and adaptable frameworks for different communities and local contexts.

Rather than replacing conventional agriculture, these models complement existing food systems while expanding access to nutritious food, strengthening local resilience, and advancing food security and food justice. The presentation will also consider how lessons from these models could inform policies and community-based initiatives in other regions, such as in Beloit.

Sponsor: Pablo Toral

Room 249, Sanger Science Center, 1:05-1:30

Brooke Lowe '27

Wisconsin Rapids, Wisconsin

Majors: Political Science; Sociology
Minor: Law and Justice
Affiliation: School of Environment and Sustainability

Incorporating Indigenous Perspectives in Environmental Law and Justice

During my experience in the environmental justice course in the Boundary Waters offered at the Wilderness Field Station in June, I visited five Ojibwe reservations to learn how Native American nations approach environmental stewardship, and how they engage in law and policy-making impacting the Boundary Waters in particular, and the greater Ojibwe nation in the Arrowhead of the Great Lakes area of Canada and the United States.

The epistemological differences between Indigenous cultures and Western positive law were reflected by this course. Nature is defined in utilitarian terms as "natural resources" whose "use is to be regulated" by Canadian and U.S. law. The understanding that humans and nature form a single community informs the Native American understanding of environmental law, which offers a normative framework to guide "environmental stewardship."

These epistemological differences became apparent on the ground while conducting field research. I used legal epistemological approaches as my analytical frameworks to interrogate the data that I collected via fieldwork with my undergraduate research team through five Ojibwe reservations of northern Minnesota and Northern Wisconsin. Via in-depth open-ended interviews, visual sociology, and archival resources curated by the Ojibwe, I was able to form a new understanding of how overlapping legal epistemologies coexist in the U.S. and Canada.

The many people who welcomed me and my classmates onto their reservations and shared their experiences detailed the importance of the human and spiritual connection to nature, reflected in the traditions and choices that are made by Indigenous people when using natural resources and

creating customary law and informing environmental policy.

Through exploration of Indigenous history and current issues, I learned different approaches to sustainability and the role of law as an instrument of environmental stewardship, which I found to be absent from U.S. environmental policy in some areas of study. The erasure and denial of Indigenous history and culture from law-making at different levels of analysis, from the federal to the local, has denied them the authority vested upon them by virtue of the treaties signed with the UK and the US governments.

The various beliefs and approaches to the environment we learned from each visit to the reservations were holistic and intentional with the goal of always protecting life in nature the same as life in humans, Ojibwe or not. The welcoming communities I experienced and the values we were shown throughout the visits and the course provided a deeper understanding of Indigenous culture and approaches to environmental regulation. As I consider attending law school, this course opened my eyes to the law as a living tool that can facilitate cross-cultural collaboration, environmental stewardship, and human development.

Sponsor: Sylvia Lopez

Impact Beloit Classroom 109, Library, 11:35-12:00

Vincent Lutz '27

Cary, Illinois

Majors: Business Management; Spanish
Minor: Sports Management
Affiliation: School of Business

Exploring *La Isla del Encanto* Like a *Boricua*: My Study Abroad Experience

After much contemplation and hesitation, I decided to take part in a study abroad program this summer at the Universidad del Sagrado Corazón in San Juan, Puerto Rico. It was the first time I had traveled solo anywhere in the world, and to say I was nervous is an understatement. But once I arrived on Puerto Rican soil, all my worries vanished and turned into excitement. I quickly became immersed in the culture through means of language, traditions, cuisine, sports, and most importantly, the people. All of these things have contributed to the memories that I now carry with me and inspire me to chase the feelings I had during my time there.

During my time at Universidad del Sagrado Corazón, I partook in an internship and a class. My internship was with the athletic department and since it was summer, I got an opportunity to be a part of its offseason operations in preparation for the upcoming season. Outside of school, I was able to connect with other American students and *boricuas* alike. Through my new friendships, I traveled all over the island, seeing Puerto Rico's natural beauty firsthand and experiencing it like a true local. I am forever grateful that I was able to have the opportunity to experience it with such authenticity.

In my presentation, I talk about how my internship has influenced my future ambitions and important lessons I learned from it. Additionally, I discuss how Puerto Rico welcomed me with open arms and how it has helped shape my perspective on culture and life in general.

Sponsors: Joseph Derosier and Christa Story

Impact Beloit Classroom 109, Library, 3:15-4:15

Kate Mann '27

Des Moines, Iowa

Majors: Critical Identity Studies; Political Science
Affiliations: Global Experience Office; School of Global & Public Service

Olivia Fisler '28

Chicago, Illinois

Majors: Studio Art; Psychology
Affiliations: Global Experience Office; School of Media and the Arts

Vivian Kopka '27

Park Ridge, Illinois

Majors: French and Francophone Studies; Creative Writing
Minor: Journalism
Affiliations: The Round Table; Global Experience Office

Ollie Idzikowski '28

Nashville, Tennessee

Majors: Environmental Biology; Philosophy
Affiliation: Global Experience Office

Max King '29

Houston, Texas

Major: Undecided
Affiliation: Global Experience Office

Jamie Edwards '28

Green Lake, Wisconsin

Majors: Studio Art; Creative Writing
Affiliations: Global Experience Office; School of Media and the Arts

From Beloit to Dakar: Art, Decolonization, and Social Change in Senegal

Over the summer, we took a three-week seminar about and in Dakar, the capital city of Senegal and a hotspot for contemporary African art, culture, and political change.

In this presentation, we discuss the confluence of art and politics in Senegal by sharing our personal experiences and academic endeavors throughout the seminar.

Senegal gained independence from France in 1960, yet French language and culture still remain influential in academia, politics, and everyday life. Part of our studies in Dakar looked at how the country still feels the effects of years of colonization, especially in an ever-globalizing economy.

During our time, we visited countless art museums and galleries, conversed with local artists, and learned from teachers through our partnership with the West African Research Center (WARC).

We highlight our journey navigating culture shock and other cultural differences that contributed to countless valuable learning opportunities. The connections our faculty made have allowed us to experience this opportunity of a lifetime.

All students were required to keep a journal, which played a critical role in the completion of the course. Each of us created a final project in the form of a podcast or video essay, where we each summarized our experience into one thesis, based on topics which stimulated personal interest.

These presentations focus on our projects, but we also encourage audience discussion related to any facet of the course and questions about Global Experience Courses in general.

Sponsor: Sonya Maria Johnson

Richardson Auditorium, Morse-Ingersoll Hall, 4:05-5:00

Mateo Marek ’25

Madison, Wisconsin

Majors: Health and Society; Psychology
Minor: Critical Identity Studies

Asha Johnson

Rock County, Wisconsin

Major: Service Facilitator
Affiliation: Sondercove Wellness

Dominique Christian

Madison, Wisconsin

Major: Founder/CEO
Affiliation: Sondercove Wellness

Array Provider

Rock County, Wisconsin

Major: Service Facilitator
Affiliation: Sondercove Wellness

Sondercove Wellness — a Shelter, a Movement, a Soft Place to Land

Welcome to Sondercove Wellness — a Black-led mental health and substance use support center for community wellness; we serve Rock and Dane County through Wisconsin’s Comprehensive Community Services (CCS) program. We are excited to invite you to join us while we share about community-based care, peer support services, and Black mental health initiatives rooted in self-determination and autonomy.

Sondercove Wellness was born in the moments where the system said, ‘no,’ but the community said, ‘I got you anyway.’ Sondercove came from lived experience. From walking through mental health challenges that weren’t always named, from navigating substance use without clean labels or neat endings. From being told, ‘you’re strong,’ when what was really needed was softness, safety, and someone to sit beside the storm. Over time, through community, connection, and collective healing, a different vision began to take shape. One where recovery wasn’t a destination but a relationship. Where people could show up in pieces and still be whole. Sondercove Wellness was created for those who’ve been told, ‘you’re too much,’ and for those who’ve been told, ‘you’re not enough.’ It’s for the ones who fell through the cracks and built homes in the spaces between. It’s for the people who’ve survived systems and still find ways to love others, and for every soul who’s ever been met with punishment when what they needed was care — This is a place where lived experience is sacred. Where harm reduction is a language of love. Where being seen doesn’t come with conditions.” - Dominique Christian.

This panel is curated and moderated by alum Mateo Marek (’25), and will introduce current students from backgrounds in the humanities, social sciences, and health sciences to how to pursue careers in emerging interdisciplinary health science fields as exemplified by Sondercove Wellness.

Sponsor: Emily Sager

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

Willow Mashkuri '28

Middlesex, Vermont

Major: International Relations
Affiliation: School of Global & Public Service

Vermont Green: It's Much Bigger than the Sport

Vermont Green is a semi-professional football club based in Burlington, Vermont. In the summer of 2026, I worked as a Community Intern, meeting with local soccer clubs, making sure the players integrated into the community, and being the first person fans saw when checking into the stadium. On some match days, I also announced the starting lineups, advertisements, and a play-by-play of the match in front of more than 3,000 people. The position constantly involved interacting with people from all over the state. I share how I found the internship and what I learned.

Sponsors: Sylvia Lopez and Suzanne Goebel and Charles Westerberg

LITS Classroom 203, Library, 2:05-2:25

Ryan McGonagle '27

Frankfort, Illinois

Major: Psychology
Minors: Anthropology; Health & Society
Affiliation: Community Connections

Kenza Motanga '28

Cypress, Texas

Majors: Data Analytics; Quantitative Economics
Affiliations: Community Connections; School of Business

Community Connections Data and Research in Practice within Illinois and the Beloit Community

Through Impact Beloit's Community Fellowship we have been able to intern at community organizations, where we utilize our research skills and knowledge and partake in research and evaluation that makes a difference in the health and well-being of local communities.

Ryan: I have been interning with the Division of Health Research and Evaluation (HRE) at the University of Illinois College of Medicine of Rockford (UIC). The Division's goal through community-based research is to further the health of rural communities, families, and individuals. So far I have assisted with both qualitative and quantitative projects such as survey data entry, recruitment, and qualitative analysis. The time spent at UIC's HRE Division has offered me valuable insight into the inner workings of community health-based research and how research is produced.

Kenza: I am working with the Leadership Development Academy of Rock County as a data and communications intern. I have had the opportunity to conduct surveys and highlight key metrics, familiarize myself with new database systems, and learn more about the Beloit Community.

Sponsor: Benjamin Adams

Room 150, Sanger Science Center, 1:55-2:20

Richard McGregory '27

Madison, Wisconsin

Major: Business Management
Minor: Finance
Affiliation: School of Business

Harnoor Singh '29

Panjab, India

Major: Cognitive Science
Affiliations: CELEB; School of Business

Modelling Investor Irrationality

Over the summer, we explored investor behavior with the goal of examining whether popular investment advice follows traditional financial models or whether it may also be influenced by cognitive factors. To do this, we created three agents: a classical volatility-targeting agent, a momentum agent that responded to recent price trends, and a cognitive agent that responded to perceived-risk factors such as loss sensitivity, surprise, drawdown, and memory of prior losses. Using historical returns for the S&P 500 and eleven S&P sector ETFs, we examined the portfolio behavior generated by each model. Ablation studies showed that drawdown was the dominant contributor to the cognitive agent's perceived risk, emphasizing the importance of reference-dependent behavior within the model.

To examine whether these mechanisms could generate recommendations resembling professional advice, we compared model-implied sector rankings with eight dated sector outlooks from Charles Schwab and Wells Fargo Investment Institute, comprising 88 sector-level observations. Across the pooled sample, the cognitive agent produced sector rankings that most closely resembled professional recommendations when compared with the momentum and classical volatility-targeting agents. However, this relationship varied across institutions.

The findings showed that a cognitive model could generate investment recommendations similar to professional advice, in some cases more closely than simpler traditional financial models. This suggests that cognitive factors may help explain how investment advice is formed.

Sponsors: Rachel Bergstrom and Sylvia Lopez

Impact Beloit Classroom 109, Library, 1:05-1:30

Sadie Mitchell '28

River Forest, Illinois

Majors: Biology; Health and Society
Minor: Spanish
Affiliation: School of Health Sciences

Learning Medical Spanish Through Clinical Experiences in Ecuador, Chile, and Argentina

This summer, I traveled to Ecuador, Argentina, and Chile to strengthen my medical Spanish skills and gain experience in clinical settings through physician shadowing. In each country, I participated in medical Spanish courses focused on body systems, medical vocabulary, and advanced grammar. Outside the classroom, I observed healthcare professionals in a variety of settings, including a women's health clinic in Ecuador, a cardiology practice in Argentina, and various hospitals in Chile, where I observed surgeries across multiple specialties.

These experiences gave me a broader understanding of both healthcare and communication

across cultures. I learned that effective medical communication requires cultural awareness as well as language proficiency. Comparing private and public healthcare settings also gave me insight into how differences in patient volume and resources can affect clinical environments.

Most importantly, this experience strengthened my desire to work directly with patients. While I initially viewed the experience primarily as an opportunity to improve my Spanish and explore medicine, I returned with a clearer interest in nursing and in providing empathetic, culturally responsive care to Spanish-speaking patients.

Sponsor: Emily Sager

Richardson Auditorium, Morse-Ingersoll Hall, 11:40-12:05

Christian Moore '27

Dubuque, Iowa

Major: Political Science
Minor: Marketing
Affiliation: School of Global & Public Service

From the Campaign Trail to the Capitol: Lessons Learned Through Trial and Error

I began working on the campaign for Representative Clinton Anderson in 2024. That winter, I worked as an intern in the Wisconsin State Assembly. The following summer, I stepped outside of politics and worked at an insurance brokerage in employee benefits consulting. In truth, that job was also extremely political. I learned how grossly dysfunctional the American health care system can be, and how draconian businesses have become in their standard practices.

This is not a presentation about my time in insurance. But that experience is important, because it is the reason I returned to the political world.

I came away from that summer with a much clearer understanding of how decisions made in government eventually become very real problems for businesses and the people who work for them. I wanted to understand the other side of that relationship. I wanted to be closer to the process that creates the rules, rather than skirting existing rules to line the pockets of executives and fatten corporate coffers.

That brought me back to politics this summer, but not to the same place I had left it. I returned with an opportunity to work on both sides of the political process: building a campaign to win the ability to govern, and then stepping inside the institution responsible for doing it, in the Wisconsin State Senate.

Through the course of this presentation, I will recount some of the opportunities that laid the foundation for this internship, things that I improved upon, as well as many of the things that I did for the very first time that helped me to succeed.

Sponsor: Eyad Haj Said

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

Jeremy Mueller '27

Loves Park, Illinois

Majors: Computer Science; Data Science

Blake Nelson '27

Monument, Colorado

Major: Computer Science

Predicting Atmospheric Circulation Patterns that Promote Extreme Precipitation Using Machine Learning

As climate change drives more extreme weather events it's important to understand the atmospheric patterns that create these events and create systems to predict them. Three specific circulation patterns of interest are the cut-off low (COL), cut-off high (COH), and closed low (CL). COLs specifically are low-pressure systems that remain stationary, resulting in increased rainfall and flooding.

The goal of our research this past summer was to create machine learning models capable of predicting future COLs based on historical air pressure and wind data. We succeeded in creating two preliminary models that narrow down the possible regions within a day that a COL could occur. One being a deep neural network, and the other being a recursive neural network.

During our presentation we provide an overview of the structure of the dataset we are working with and the architecture of the models we created alongside their results. We also discuss the future of this research and the future work that will take place in order to increase the precision of our results beyond what could be achieved with a single pass through our models.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 2:10-2:35

Matthew Narh '28

Willow Springs, Illinois

Major: undeclared

Brinley Richards 'XX

Unknown

Major: undeclared

Gabriel Fine '28

San Francisco, California

Major: Physics

Beloit Climate Action: Water Sustainability

This is a project for International Politics of Climate Change with professor Pablo Toral. With the increase of water level, and the other water stressors afoot within Beloit. Beloit as a city has seen since 1985 a 10% decrease in the water yield while expecting the demand for water to go up 20% by 2050, coupled with the sheer amount of wastewater within this city, we find it a necessity to try and better manage, and then mitigate the amount of wastewater generated within buildings with green infrastructure.

Improving the conditions of which water is filtered through, and making continual steps towards the purification of water and the collection of rainwater and other available water to use in sustainable ways, This will be killing 2 birds with one stone within the community and for the water systems within Beloit. This is the issue we are going to tackle with our project, but in the most broad

sense we are looking at the water cycle as a whole, and what as a city we can do to make our relationship with that cycle more sustainable, we wish to learn more about the water cycle and how a city interacts with that cycle at all stops and facets, and what we can do to improve that relationship.

Sponsor: Helen Werner

Room 402, Sanger Science Center, 3:00-3:25

Chloe Osborne '27

Cornwall, New York

Major: Chemistry

Recovering Rare Earth Elements from Waste LED Lightbulbs with Acid Leaching

Last spring, I had the opportunity to work on a research project while studying abroad at the University of Jyväskylä to recover rare earth elements (REEs), from waste LED lightbulbs. Under the European Critical Raw Materials Act published by the EU in 2023, the EU aims to source at least 25% of its critical raw materials demand from recycled sources by 2030. LEDs are a prime target to recycle REEs from, given their high concentration of elements such as gallium, yttrium, europium, and lutetium, and their rapid adoption over the past decade. In this presentation, I will go over the experimental procedures I performed to recover REEs in a sample of LED lightbulb filaments, from thermal oxidation to acid leaching, and analysis through XRF and ICP-OES. I will discuss then challenges I encountered in this experiment, as well as discuss environmental policy, and the outlook of recycling REEs from LEDs.

Sponsor: Suzanne Cox

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

Lauren Parada '28

Rockton, Illinois

Major: Psychology
Minor: Performing and Applied Arts

Effects of Para-professionals in Beloit Classrooms

Special education programs are at risk; students and teachers are both greatly affected by the deficiencies. Para-professionals are meant to be a classroom aid for specific students and guide them through their learning experiences. When the aids are inept, the entire classroom dynamic shifts and affects the experiences of every student and teacher in the classroom. Effective teaching and learning environments are crucial to retaining knowledge.

Observations at Beloit Memorial High School demonstrate insufficiencies in special education programs within public school systems.

Students who are left behind due to unfit para-professionals have an unfair disadvantage compared to students without learning challenges.

Sponsor: Tawnya Cary
Dave Berg, Andrew Cannizzaro (Miami University, Oxford, OH)

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

Malaika Parpart '28

Wonder Lake, Illinois

Major: Environmental Biology
Minors: Spanish; PART
Affiliation: School of Environment and Sustainability

Finding New Species and Finding My Passion: What Studying the Genetics of Tiny Crustaceans Taught Me

Amphipods –small, aquatic crustaceans– possess life history traits that cause to them exhibit unique dispersal patterns across landscapes (small body size, lack of a dispersive larval stage, etc.), meaning that studying them can teach us a lot about the processes of evolution, speciation, and dispersal in aquatic environments. This past summer, I completed an undergraduate research internship at Miami University in Oxford, Ohio through the National Science Foundation's REU program. There, I studied the biogeography of the freshwater amphipod *Sicifera bifurca*, a species that occurs in the south-central US. Given this species' large range and the limited dispersal ability of amphipods, my project hypothesized that *S. bifurca* represents a complex of multiple cryptic species. In collaboration with my advisor, I obtained samples from sixteen sites across the species' range, extracted and sequenced DNA from four genes, and reconstructed phylogenetic relationships and evolutionary history using multiple analyses.

My research revealed *Sicifera bifurca* to be a complex containing at least 8 species, as well as an interesting pattern of species evolution. The southernmost species in the complex had the oldest divergence time, indicating south-to-north colonization of the country, rather than the previously hypothesized north-to-south movement. These data help us understand factors that have shaped the evolution of aquatic diversity in this part of the United States, and better protect existing aquatic biodiversity.

In addition to my research project, this presentation will discuss the experience of participating in an REU program, from the application process to the payoff. I will discuss what I learned, the benefits of the experience, and advice I have for any student interested in fitting a similar experience into their time at Beloit.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 3:05-3:30

Rowan Raymond '29

Beloit, Wisconsin

Major: Environmental Biology

Hailie Gruener '28

Carpentersville, Illinois

Major: Biochemistry

Angela Karanja '29

Nairobi, Kenya

Majors: Anthropology; Data Analytics

Beloit Climate Action: Greenspaces and Ecosystems

International Politics of Climate Change is a course that helps students develop an understanding of climate change, its causes, and solutions, both in terms of remediation of the sources of global

warming and adaptation to the extreme weather events generated by climate change. The course focuses on the ways science informs climate law and policy, and the key actors involved in climate action, from the local level to the global level. Our presentation is informed by the lessons learned in this course, where we reviewed Beloit's current Climate Action Plan. Our group focused in the "Greenspaces and Ecosystems" section. Greenspaces and ecosystems include areas where there are living organisms, normally urban forests and gardens.

We chose Greenspaces and Ecosystems of Beloit because we find that it is one of the areas that is most visibly affected by climate change. Citizens can see the change in plants, leaves dropping prematurely or late because of variations in temperature and variations in weather. The health of ecosystems is visible to the naked eye and measurable, thereby most likely to motivate the community into action. We also know that green spaces generate significant benefits to the community. More greenery, more incorporation of ecosystems, means a reduction in urban heat, reduces flooding, and increases habitat.

Our presentation maps out strategies for implementation in Beloit. Those strategies include increasing the tree canopy coverage throughout the city, increasing pollinator supportiveness and turf replacement with native grasses and wildflowers, and reducing the heat island effect through citywide "dark" impervious surface coverage reduction. Empirical data demonstrate these practices reduce urban heat, absorb stormwater, and restore native biodiversity. These interventions require no additional resources and can be spearheaded by the City Council by amending existing ordinances. We illustrate with examples from communities that have adopted them with great success.

Sponsor: Tom Stojsavljevic

Room 249, Sanger Science Center, 2:35-3:05

Ellie Repinski '27

Milwaukee, Wisconsin

Majors: Mathematics; Quantitative Economics

Mathematical Modelling of Human African Trypanosomiasis

During the Pakula Biomedical Fellowship this summer, Professor Stojsavljevic and I worked together to create a new mathematical model for human African trypanosomiasis (HAT), more commonly known as African sleeping sickness. HAT is a neglected vector-borne disease that is endemic to rural regions of sub-Saharan Africa. Although HAT has historically caused large-scale outbreaks and substantial mortality, its impact extends beyond death rates. Chronic infection, neurological complications, and the social and economic burdens placed on affected communities make HAT an important public health concern, however, in general, it receives very little global attention and funding.

Over the course of the summer, we developed a unique compartmental model of HAT that incorporates human, vector, and zoonotic components. Our mathematical model consists of 10 nonlinear ordinary differential equations with 16 parameters. We symbolically computed the basic reproductive number through the next generation matrix method and found the equilibrium states, as well as determined the local stability conditions for both equilibrium. In addition to symbolic computation, we numerically simulated the model to show the conditions under which the stability of each equilibrium state can be achieved.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 2:35-3:05

Jeremy Cunnigham du Rivage '27

Chicago, Illinois

Major: Environmental Arts and Communications
Minor: Political Science
Affiliations: School of Environment and Sustainability; School of Media and the Arts

Nya Cotton '28

Chicago, Illinois

Majors: Economics; International Relations

Kaden sako '27

Malibu, California

Major: Engineering

Beloit Climate Action: Navigating Sustainable Transportation and Land Use

The City of Beloit is developing its first Climate Action Plan to reduce greenhouse gas emissions 46% by 2033 and achieve net-zero emissions by 2040. Transportation and land use represent major contributors to Beloit current emissions, driven by high vehicle miles traveled, limited public transportation coverage, and development patterns that prioritize car travel over active mobility.

Beloit existing transportation systems reflect gaps in walkability, inconsistent sidewalks, minimal protected bike lanes, and long distance between essential destinations such as grocery stores, parks, and employment centers. By improving the quality of our fair city's public transportation we can ensure the transport of our essential workers and make workplaces more accessible to residents. By reorganizing the existing infrastructure to better serve the community, we can keep costs low while still making practical, noticeable improvement in the lives of community members. Additionally, encouraging mixed land use and promoting biological growth in areas that are otherwise a concrete jungle will improve the walkability of the city and the lives of residents while maintaining a similarly low cost.

This presentation is informed by the research conducted by a group of students in the Principles of Sustainability course, where they learned key principles of sustainability and identified best case studies in the course.

Sponsor: Emily Sager

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

Lily Rogers '28

Woodbury, Minnesota

Majors: Critical Identity Studies; Literary Studies

Summer Storytime: My Experience Interning in Youth Services at the Hedberg Public Library

During the summer of 2026, Lily interned in the Youth Services department of the Hedberg Public Library in Janesville, WI through the WAICU program.

They discuss their experiences working in the children's room of the library which included crafting and leading a weekly storytime program, assisting with the summer reading program, and community outreach through the library's brand new bookmobile, which highlights the vital role of libraries as a community resource and third space.

Lily also shares how they utilized the common grant program through Career Works to make the internship more accessible to them.

Sponsors: James Rougvie and Susan Furukawa and Ron Watson

Room 402, Sanger Science Center, 1:05-1:30

Ivy Salmi-Perry '28

St. Paul, Minnesota

Majors: Anthropology; Environmental Geology
Minor: Spanish

Ava Tedesco '29

Evansville, Wisconsin

Majors: International Relations; Japanese
Minor: Philosophy

Hidden Christianity Through the Lens of Cultural Landscapes

During the summer 2026 Japan Global Experience Seminar, we traveled to and learned about how UNESCO recognition can influence what aspects of cultural and natural heritage are preserved as communities face diminishing populations. During the Edo Period, under the Shogunate, Christians were persecuted for their beliefs during a 265-year ban on the Christian religion. Due to this oppressive policy, believers of the faith, known as Hidden Christians, had to adapt their practices to remain invisible in order to preserve their heritage, which created new practices. Christianity, which was brought through Western influence, was perceived as a threat to Japan as a whole. Building on already complex and tense political events, Japan entered the Sakoku period, which isolated Japan by closing its borders and cutting off international trade.

We visited two important sites that allowed Hidden Christianity to be preserved: Kasuga Village and Mt. Yasumandake. Shintoism, Buddhism, and Hidden Christianity were all practiced at Mt. Yasumandake. Kasuga Village's cultural landscape allowed Hidden Christians to practice undetected through prayer, worship, land cultivation, and pilgrimages. Practices needed to become intangible to remain undetected. While there are tangible artifacts, cultural landscapes provide a space where intangible cultural practices can be preserved and understood. UNESCO defines cultural landscapes as long-lasting close relationships between humans and their environment. These sites are a way for intangible cultural traditions to be preserved in the face of rural depopulation and aging.

Sponsor: Emily Sager

Impact Beloit Classroom 109, Library, 1:30-1:55

Valeria Samaniego '28

Round Lake, Illinois

Majors: Biology; Nursing
Affiliation: School of Health Sciences

Is Nursing for Me? Exploring Healthcare Through CNA Training

Entering college as a first-generation college student, I originally planned to pursue political science on a pre-law track. After realizing that career path was no longer something I wanted for myself, I found myself unsure of what direction I wanted to take academically and professionally.

As I began exploring nursing, I wanted more than just an idea of what working in healthcare would be like. I wanted an experience that would allow me to determine whether nursing was truly something I could see myself pursuing. I decided to complete a Certified Nursing Assistant (CNA)

program to gain hands on experience working in healthcare and providing direct patient care with the help of the Common Grant.

Throughout my training, I learned skills related to patient safety, communication, daily care, and supporting individuals with different needs. The experience also introduced me to the responsibilities and challenges that come with caring for another person, which gave me a perspective on healthcare that I could not have gained solely in a classroom. Becoming a CNA became more than earning a certification. It was a way for me to explore a possible career and become more confident in the direction I wanted to take after initially feeling uncertain about my future. My presentation will focus on my transition into nursing, the process of becoming a CNA, what I learned from the experience, and how it influenced the way I now view my future in healthcare.

Sponsor: Cullyn Murphy

Powerhouse, Lunch

Annabelle Sherman '27

Brooklyn, New York

Major: Creative Writing
Minor: Music

Annabelle Sherman: Multi-instrumentalist Folk Songwriter

I am a multi-instrumentalist folk songwriter who sings about questions I do not have answers to, and answers I think I have found. You can definitely hear me singing in Commons as well as in campus musical events. You may also look forward to my upcoming debut album "The Magician and The Moon."

Sponsor: Kathy Landon

Room 402, Sanger Science Center, 11:10-11:35

J.D. Shoniker '29

Burlington, ON, Canada

Major: Quantitative Economics
Minor: Finance
Affiliation: Global Experience Office

A Taste of Studying Abroad as a Student-Athlete: the Global Experience Seminar in Kyushu, Japan

Studying abroad may seem a daunting endeavor. For many, college is the first time living away from home. The idea of uprooting again, potentially to a place with an entirely different culture and language, can be frightening. Further, being a student-athlete can add to the perceived difficulty. Lining up time abroad with athletic season schedules, being able to continue to train for one's sport while abroad, and staying on-track nutritionally are all considerations that may deter an athlete from studying abroad.

The Global Experience Office's Summer Seminars are a fantastic way to test the waters studying abroad. They provide an intense, condensed international learning experience that can provide insight on (and likely further compel one to) study abroad. Particularly for athletes, the shortened time frame of these seminars helps to eliminate the barrier of conflicting timing with one's sports season. If one is resourceful and proactive in their approach to studying abroad, the experience can be both experientially impactful and even beneficial towards one's athletic goals.

Sponsor: Sylvia Lopez

Impact Beloit Classroom 109, Library, 11:10-11:35

Sophia (Bailey) Singer '29

Deerfield, Illinois

Major: Spanish
Affiliations: School of Global & Public Service; School of Business

Studying Abroad in Chile

During my 2026 summer, I spent five weeks studying Spanish abroad in Chile. I was nervous to leave home, especially to a different continent that is much farther from home than other place I had been to before.

In this presentation, I talk about logistics, living with a Chilean family, and exploring Valparaiso, the major seaport in which I resided. I also share experience visiting other Chilean sites, such as Santiago, Pucón, and the Atacama Desert, talk about my time at Pontifica Universidad Católica de Valparaíso (PUCV), where I took two classes: advanced grammar and Conversation and Culture in Chile, and offer effective steps I took to practice speaking Spanish and building my vocabulary.

I am grateful for this experience to observe, study, and be welcomed into a different community than my own. It definitely increased my awareness of privileges and opportunities I have.

Sponsor: Kevin Smith

Room 150, Sanger Science Center, 10:45-11:10

Madhav Singh '28

Mumbai, Maharashtra, India

Majors: Computer Science; Quantitative Economics
Affiliation: School of Business

Anomaly Based Detection of Short-Term Crash Risk in Individual Stocks

Financial markets are punctuated by abrupt declines that can erase months of accumulated gains, yet individual investors seldom have a systematic means of anticipating such episodes. This project examines whether an automated detection system can identify when a single stock has entered a period of elevated short-term risk, and whether exiting during these intervals can limit losses relative to a buy-and-hold approach.

The system performs three operations on each trading day. It first removes broad market and sector influences to isolate the return behavior specific to an individual company. It then applies a set of anomaly-detection procedures that evaluate current conditions against the stock’s recent historical norms. Finally, it identifies extreme days and estimates the probability of a sharp decline within the following trading week. These risk signals were translated into transparent exit and re-entry rules and evaluated through backtesting on more than a decade of daily price data for several large firms.

The detector identified high-risk periods more reliably than chance and reduced losses for stocks that experienced genuine crashes. Its advantage was limited, and in some cases negative, for stocks that remained stable, indicating that the strategy’s value depends on the frequency of severe events. Because the model estimates the magnitude of risk rather than the direction of price movement, it is best understood as a tool for mitigating downside exposure rather than for selecting profitable investments.

Sponsor: Eyad Said

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

Madhav Singh '28

Mumbai, Maharashtra, India

Majors: Computer Science; Quantitative Economics

Machine-Learning Screening for Cardiovascular-Kidney-Metabolic Disease Without Diagnostic Labs

Heart disease, chronic kidney disease, and metabolic disorders increasingly develop together as a single condition, cardiovascular kidney metabolic (CKM) syndrome. Judging how far it has progressed usually depends on diagnostic laboratory tests. The clinics and community settings that reach the most people, including pharmacies, health fairs, and rural practices, rarely have those tests on hand, so many of the people who could act earliest are never screened.

My project asked how much of that assessment can be recovered from routine information alone, such as age, lifestyle, body measurements, and a basic blood count. Working with national health survey data from the United States and South Korea, I built and compared a range of machine learning models, from standard classifiers to gradient-boosted trees, alongside deep learning neural networks. Throughout, the models were kept from seeing any diagnostic labs, and I tested whether a model trained in one country still held up when applied to the other.

Routine data proved useful for sorting patients by risk, but it reached a firm limit that more complex models could not push past. For kidney disease, a redesigned approach substantially sharpened the screen. The work suggests routine data is best treated as an early, low-cost filter that identifies who genuinely needs laboratory follow up.

Sponsor: Daniel Youd

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

Indrayudh Sinha '28

Kolkata, India

Major: Interdisciplinary Studies

Economy and Ecology in the Bengal Delta

The Bengal Delta is the world’s largest deltaic ecosystem, spanning over 10,000 kilometres. It has historically been a vibrant centre of commerce and settlement. My research, funded by the Anita Andrews fellowship, explores how colonial efforts to build fixed, rent producing property systems ran up against the delta’s riverine and swampy character. More flexible precolonial arrangements and trade driven towns eventually were replaced by stricter rules that placed revenue generation and industrial improvement above everything else. Landscapes changed, labour relations shifted, and resources were produced and used in new ways. This historical project attempts to capture the intersection between ecological features and economic history of one of the most prominent settlements of European colonialism.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 10:20-11:00

Diego Kenji Taira '28

Lima, Peru

Major: Political Science

Varvara Kuragina '29

Kirov, Russia

Major: Marketing
Minors: Political Science; Entrepreneurship
Affiliation: School of Business

Eduardo Larsen '28

Santa Cruz de la Sierra, Bolivia

Majors: Quantitative Economics; Political Science
Minor: Finance
Affiliation: School of Business

Max Von Klinggraeff '29

Edina, Minnesota

Major: Public Health

Beloit Climate Action to Strengthen Local Businesses Through Climate Resilience

This presentation advances a strategy developed in the context of our Principles of Sustainability course to help the City of Beloit advance the agenda spelled out in its Climate Action Plan by becoming a regional hub for sustainable businesses.

Some of the anticipated consequences of climate change in Beloit include extreme weather, vector-borne diseases, and infrastructure failure. In response to these challenges, the plan commissioned by the City of Beloit presents to us the opportunity to reduce the costs associated with climate change, while strengthening the local economy. Electricity and transportation account for approximately 78.5% of the city's greenhouse gas emissions, making these sectors particularly important for both environmental and economic intervention.

Current estimates indicate potential economic savings of approximately $77.8 million through transportation improvements, $5.3 million through building and energy improvements, and $12.2 million through waste reduction. Therefore, climate action can also function as a strategy for local business development by lowering the costs of doing business in Beloit. Once sustainable initiatives are in place, Beloit will gain recognition as a sustainable business location and attract further investment from other communities. Scientific research has found that businesses and industries that embrace sustainability practices into their daily operations are more innovative.

Building on this opportunity, our proposal focuses on supporting local businesses that adopt climate-resilient practices such as reducing energy, transportation, and waste costs. In particular, strengthening local businesses can provide a more diverse economic foundation for Beloit and reduce dependence on major non-local corporations, thus strengthening the local basis for the business ecosystem. Critical to our approach is the development of partnerships with the Greater Beloit Chamber of Commerce and the Greater Beloit Economic Development Corporation to provide businesses with grants, technical assistance, and other resources for climate-resilience improvements. Finally, our proposal seeks to promote employment opportunities in growing sustainability conscious industries, lower the cost of doing business within the community, and establish a stronger and more sustainable economic foundation for Beloit.

Sponsor: Suzanne Goebel

LITS Classroom 203, Library, 3:40-4:15

Jared Torres '28

Mesquite, Texas

Majors: English and Creative Writing; Education
Affiliations: Beloit College Football; Community Connections

Anthony Carter '28

Milwaukee, Wisconsin

Majors: Psychology; Education and Youth Studies
Affiliations: Beloit College Basketball; Community Connections

Tess Hunter '29

Rockford, Illinois

Major: Psychology
Affiliation: Community Connections

Lillie Aubin '26

Milwaukee, Wisconsin

Major: Anthropology
Affiliations: BCDC; Community Connections

Lily Hess '28

Beloit, Wisconsin

Major: Marketing
Minor: Visual Studies
Affiliation: Community Connections

Skill-Building Through Community Engagement

Lily Hess: Through the Civic Engagement class I was partnered with Family Service as their social media intern. I was able to refine my marketing skills through creating campaigns to share the agency mission of enhancing the lives of people through education, advocacy, case management, and counseling.

Jared Torres: For my internship I worked with Even Start, located at Merrill Elementary in Beloit. This program helps low income families break the cycle of poverty through integrated education for both parents and children.

Lillie Aubin: I volunteer at the Beloit Historical Society, working to collect and preserve the history of the City of Beloit. I discuss how the work BHS does is valuable to the community and what I have learned through my experience working there.

Anthony Carter: This semester I am interning at Family Services in Beloit. Throughout my presentation I talk about my experiences working with children from all ages and helping prevent things such as drug use, self-harm, etc. We will be going from different schools and hosting many events to help kids.

Tess Hunter: For PRAX 286, I was an intern at the after-school program known as the Doris Wiles Center of Hope, serving the Beloit city area on and off since 2008. My presentation focuses on the unique role after-school programs have in the socio-emotional development of their population, and covers some of the goal-setting and engagement strategies that were found and presented to the center during my time at the organization.

Sponsor: Constantine Hadavas

Impact Beloit Classroom 109, Library, 2:35-3:00

Niko Torres Holloway '29

Houston, Texas

Majors: Anthropology; Economics
Affiliation: Associazione Acqua - Università degli Studi di Perugia

Bones and Bronze: My Archaeological Experience in Italy

The Italian Necropoli Del Vallone Di San Lorenzo is an Umbro-Etruscan necropolis that was first excavated in 1855 by Domenico Golini. The necropolis is located by the town of Montecchio, a medieval hill municipality best known for its hiking trails and the production of olive oil and wine. The historic landscape is beautiful, and the steep terrain makes archaeological work at the gravesites an interesting yet challenging task.

During the summer of 2026 I contributed to the Field School directed by Prof. Sarah Harvey (Kent State University) and Prof. Gian Luca Grassigli (Università degli Studi di Perugia). The collective focus of the field school was to excavate the Etrusco-Umbrian necropolis further, as several new tombs had been found during the previous year. My personal goals were to contribute significantly to the expedition, and to improve my own skills integral to conducting archaeology effectively, which include but are not limited to: stratigraphy, osteology, land surveying/ GIS (Geographic Informational Systems), site mapping, identification of material cultures specific to the region, and teamworking skills with my peers on the dig site.

In this presentation, I will share what I learned through this experience, as well as how I prepared myself to be a useful member of a dig site where the majority language spoken was Italian, and the steps I took to connect with people who would help me improve my archaeological skills to the fullest during our month-long field school.

Sponsor: Laura Grube

Room 150, Sanger Science Center, 11:35-12:00

Selin Tufte '28

Clarkdale, Arizona

Major: Business Management
Minor: Finance
Affiliation: School of Business

Bridging Early Learning Gaps with Discovery PLAYce

Discovery PLAYce is an early-learning lab developed through the Beloit Public Library to strengthen children's school readiness by supporting early literacy, executive function, and caregiver confidence and engagement. Belmark Associates, a student-run market research group, was hired by the Beloit Public Library to do a 5-year evaluation of the new space. My work on this project included meeting with library staff to understand the program's goals, preparing the Farmer's Market learning-station survey, and distributing both digital and paper versions of the Discovery PLAYce general survey to caregivers. These tools allow us to gather direct feedback on how families interact with learning spaces and what supports their need to encourage rich, developmentally appropriate play.

The presentation outlines the work carried out, the lessons learned, and how survey data and community partnerships influenced the recommendations for the final Discovery PLAYce environment. This project shows libraries can act as effective early-learning centers, helping caregivers feel more confident, and providing children with the basic skills they need to succeed in school and in all areas of life.

Sponsor: Greg Koutnik

Room 150, Sanger Science Center, 2:55-3:20

Noor ul Ain '27

Islamabad, Pakistan

Majors: Economics; Political Science; Environmental Justice

What the Map Leaves Out: Questioning the Neutrality of Scientific Data

Environmental data can seem like it speaks for itself. A map, satellite image, or water-quality measurement feels objective because it gives us something we can see or measure. But behind every piece of data are choices: What gets measured? What gets left out? Whose knowledge is trusted? My research began with these questions and explores how environmental data can be both a powerful tool for environmental protection and a way of shaping what problems, and which communities, become visible.

I draw on James C. Scott's idea of 'legibility' and J.B. Harley's work on the politics of maps to understand what happens when complicated environments are turned into maps, statistics, and categories. I then apply these ideas to several cases, including satellite monitoring of forests, the Chernobyl disaster, the Flint water crisis, environmental monitoring during armed conflict, and citizen-led radiation monitoring after Fukushima.

Across these cases, I found that better data does not automatically lead to better environmental decisions. Maps and measurements can reveal deforestation, pollution, radiation, and other risks, but political institutions still influence which problems receive attention, whose evidence is believed, and what happens after a problem is identified. At the same time, cases such as Flint and citizen monitoring after Fukushima show how communities can produce their own evidence when official systems fail to capture what they are experiencing.

Ultimately, my research argues that environmental justice is not only about having accurate scientific data. It is also about asking who gets to produce knowledge, whose experiences are included, and who has the power to decide what the data means. Environmental science becomes more useful and more just when scientific expertise is considered alongside community knowledge and public participation.

Sponsor: Pablo Toral

Richardson Auditorium, Morse-Ingersoll Hall, 9:20-9:50

Noor ul Ain '27

Islamabad, Pakistan

Majors: Economics; Political Science; Environmental Justice

May Myint Mo Zaw '27

Yangon, Myanmar

Majors: Political Science; Quantitative Economics

Will Lyng '28

Helena, Montana

Majors: Biology; Environmental Geology
Minor: Spanish

Kyle Arnold '30

New Salem, Massachusetts

Major: Undecided

Beloit Climate Action: Implementing Greenspace and Ecosystems

Our Principles of Sustainability course examined the City of Beloit's Climate Action Plan (CAP), and our project focuses on its "Greenspace and Ecosystems" action areas. Our initiative aims to lower average temperatures by increasing tree canopy coverage by providing natural shade, reduce energy usage, and increase air quality by absorbing carbon dioxide and other air pollutants. These benefits are increasingly important as Wisconsin's average temperature is projected to rise about 4°F by mid-century, while urban forests can be approximately 3.0 °F cooler than non-green areas. Beloit receives about 36.34 inches of precipitation annually, and a single large deciduous tree can intercept roughly 760 gallons of rainfall each year, reducing stormwater runoff. Tree canopy can also reduce public health risks associated with extreme heat and air pollution, particularly as Beloit's annual PM2.5 level of 8.2 micrograms exceeds the World Health Organization's annual guideline of 5.

Beloit has significant potential to expand its tree canopy, leading to carbon sequestration, energy saving, and stormwater runoff. Currently, Beloit shows a low density of tree and shrub cover with an average of 19.4% citywide. Urban and low-income neighborhoods are less likely to have canopy cover, and therefore experience negative health outcomes associated with heat islands at a higher rate than high-income areas, thus violating U.S. environmental justice regulation. By 2033, the sector goal of the CAP is to increase tree canopy coverage to 23%, while focusing on marginalized residences.

The City of Beloit's Climate Action Plan communicates various initiatives by which residents of the area can individually and collectively, whether part of a household or a business, support the implementation of greenspaces and ecosystems. One area of these initiatives has been to inspire residents to plant trees in their yards, providing shade in extreme heat; selected from specific tree types which will be well-suited for the changing climate in Beloit.

Sponsors: Gloria Bradley and Sonya Maria Johnson **Room 349, Sanger Science Center, 10:45-11:10**

Madeline Wilhelm '27

Mukwonago, Wisconsin

Majors: International Relations; Anthropology
Minor: Spanish
Affiliations: Restorative Justice Campus Initiative; Center for Integrative Learning

Restorative Justice & Beloit: What It Is, Where We Are, and Where We Are Going?

The Restorative Justice (RJ) Campus Initiative offers opportunities for dialogue, non-punitive accountability, and collective healing through the centering of community building as a beginning point to develop connections between individuals throughout the college. The aim is to create a foundation from which to normalize addressing campus-wide concerns. This is a voluntary process which focuses on repairing harms and resolving conflict within our campus community, transforming moments of conflict into opportunities for connection and both individual and collective growth. I am the current intern for the Restorative Justice Campus Initiative and am trained in restorative principles and facilitating restorative circles, working under the direction of Dr. Gloria Bradley. She is joined by the chief advisor, Josh Moore, and the faculty leader, Dr. Sonya Maria Johnson.

The goal of this presentation is to provide an educational space for more members of the campus to learn about RJ and why it is an indispensable tool on our campus. I will discuss what exactly RJ is, how it is currently being implemented at Beloit College, and how we see it growing as part of a resilient and compassionate campus culture.

Sponsor: Deborah Lynch

Open House: Greenhouse, Science Center, Drop in 12:30-2:00

Kylie Wolff '28

Alberta, Canada

Majors: Chemistry; Cognitive Science

Riva Choudry '28

Evanston, Illinois

Major: Biochemistry
Minor: Health and Society

Lela Faye Pagles '29

Roscoe, Illinois

Major: Undeclared

Beloit College Greenhouse Tours and General Information

The Beloit College Greenhouse provides students with a space to learn and relax while living on a busy campus. As student attendants, we keep the Greenhouse an inviting and enjoyable space for all visitors. We also gain horticultural experience through caring for over 100 plants that belong to 35 different botanical families. For instance, instead of pesticides, we gently wash and remove pests by hand. Each student worker contributes something unique to the space, helping it grow and flourish for the campus community's enjoyment.

The Greenhouse is open to the campus Monday through Friday, from 8 a.m. to 4 p.m. The 1,600-square-foot greenhouse is divided into five rooms: Tropical Room, Succulent Room, Lab Room, Headhouse, and Central Plant Room. Some of the plants are more than 30 years old, including the oakleaf fig (*Ficus lyrata*) and night-blooming cereus (*Epiphyllum oxypetalum*). Other plants, such as our staghorn fern (*Platycerium bifurcatum*), are over 50 years old.

During the Beloit and Beyond Conference, the Greenhouse is open from 12:30 to 2:00 p.m. for tours. This is to help encourage more students and staff to come and enjoy this amazing space more often. During the open house we share personalized tours of this wonderful space, showing others the peace and excitement that can be found in the Greenhouse environment.

Sponsor: Pablo Toral

Room 402, Sanger Science Center, 8:50-9:15

Bethany Yu '27

Maple Grove, Minnesota

Majors: Political Science; Media Studies
Affiliations: School of Global & Public Service; Global Experience Office

Biking Over Cobblestones: Applying a Liberal Arts Perspective in the Netherlands

Last spring, I studied abroad at Maastricht University in the Netherlands, where I quickly learned that biking over Dutch cobblestones is very different from my Minnesotan hometown. With time, I learned to navigate roads, became a café regular, ate far too many stroopwafels, and attempted to learn Dutch. These experiences were both part of adapting to life abroad and learning to understand the place where I was living.

My courses at Maastricht gave me ways to think about experiences abroad, exploring questions of power, identity, and governance. In "EU Law and Politics", for example, I learned the institutions and legal structures that shape the European Union (EU). Visiting institutions in Brussels and The Hague, and traveling across the EU brought these ideas beyond the classroom.

In the class “Social Change, Identity, and Collective Action” analytical frameworks were applied to understand how culture, identity, and social movements shape change. Studying global and American social movements alongside international classmates was especially interesting. I often found myself explaining parts of my American/Minnesotan life that I had not done before. These experiences pushed me to think critically about what it means to be American and how my own identity shapes the way I understand the world.

My final course, “Vulnerable Bodies" challenged how I thought about vulnerability, aging, and what it means to live a successful life. Learning about concepts like embodied success, agency, and ethics of care changed how I understood ability, dependence, my own body, and intergenerational relationships.

This presentation reflects on how my coursework, travel experiences, and the relationships I built in Maastricht were shaped throughout my semester abroad. Ultimately, my experience reinforced my understanding of a liberal arts education as a way of approaching life with curiosity, reflection, and an openness to new perspectives.

Sponsor: Pablo Toral

Room 249, Sanger Science Center, 1:30-1:55

May Myint Mo Zaw '27

Yangon, Myanmar

Majors: Political Science; Quantitative Economics
Affiliations: School of Environment and Sustainability; School of Business

How Economic Theory Can Protect the Boundary Waters

The Boundary Waters-Quetico, headwaters of the Winnipeg River, is a vast protected wilderness of 4.3 million acres spanning across the United States and Canada. It is one of the world’s few lake-dominated boreal forest ecosystems and essential to the survival of the communities and native Ojibwe tribal nations that inhabit it. Following the overturn of the 20-year mining ban on the Boundary Waters by the US Federal Government in April 2026, a Chilean multinational enterprise moved forward with plans for copper-nickel mining close to Ely (MN), threatening the Boundary Waters with the potential of sulfide contamination.

My research interrogates the impact of new mining on the local economy through classical economic theories of comparative advantage, cost-benefit analysis, and the boom-bust framework. My findings show that Ely has a thriving tourism industry and a growing manufacturing sector that generate over a billion dollars in revenue each year. Polluting the Boundary Waters would have grave moral and economic costs. While the prospects of a new mine has generated interest in the community due to the promise of good-paying jobs, the impact on the existing economic activities could deprive Ely of a diversified sustainable economy past the mine’s expected 20-year lifetime.

I collected data using ethnographic research methods, visual sociology, and archival resources. I conducted my field research with a team of fellow undergraduate researchers as part of an Environmental Justice course at the Wilderness Field Station in June. Traveling by van or canoe, we camped in the Boundary Waters for a month; visited five Native American reservations; and the town of Ely. We interviewed community and business leaders, environmental advocacy groups, NGOs, and government officials, and Ojibwe leaders, to shed light on how each actor is currently reconciling environmental stewardship with economic development.

Sponsor: Kristin Labby

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

Marta Zholnerchyk '27

Rowayton, Connecticut

Major: Biochemistry
Minors: Kinesiology and Movement; Performing and Applied Arts
Affiliation: School of Health Sciences

Investigating Smooth Muscle Cell Changes in Abdominal Aortic Aneurysms

This summer, I participated in the 10-week Summer Undergraduate Research Experience in Cardiovascular Sciences (SURE CV) at the University of Wisconsin-Madison. I joined the Liu Lab, which studies vascular biology and cardiovascular disease, and investigated abdominal aortic aneurysms (AAAs), a condition in which the wall of the aorta weakens and expands over time.

My project focused on vascular smooth muscle cells (VSMCs), which normally help maintain the structure and function of blood vessels. During AAA development, these cells can change from their normal contractile state into a more inflammatory state that may contribute to disease progression. I specifically investigated KAT2B, a protein that may help regulate this change. Previous work from the lab showed that mice lacking KAT2B developed smaller aneurysms, suggesting that it may play an important role in AAA development.

I worked with aortic tissue collected from mice at different stages of AAA development. I prepared tissue sections, performed immunofluorescence staining, used confocal microscopy to image the samples, and analyzed changes in protein expression over time. I also gained hands-on experience performing microsurgeries used in the lab's mouse models of vascular disease.

This was my first full-time biomedical research experience and gave me the opportunity to take part in multiple stages of cardiovascular research, from animal models and surgery to tissue analysis and imaging. Through SURE CV, I also presented my research, learned from other cardiovascular researchers, and gained a better understanding of how laboratory research can be used to investigate human disease.

Sponsor: Maria Scarpaci

LITS Classroom 203, Library, 3:15-3:40

Laurel Zolper '27

Baraboo, Wisconsin

Major: Business Management
Minor: Marketing
Affiliation: Community Connections

Calahan Fox '28

Orfordville, Wisconsin

Major: Engineering
Affiliation: Community Connections

Jesse Sage Epstein '28

Austin, Texas

Major: Business Management
Minor: Sports Management
Affiliations: School of Business; Community Connections

Interning Beyond the Bubble: Representing Beloit College in Professional Community Spaces

Our panel explores how the Impact Beloit Concierge Internship has helped us connect our Beloit College education to the professional world. Representing marketing, sports marketing, and engineering, we share how our diverse experiences have strengthened our skills, challenged us to grow, and prepared us for life beyond campus.

Through the combination of hands-on internships and an accompanying course, we have developed practical skills in professional communication, networking, workplace expectations, and adaptability. We reflect on how these experiences have helped us recognize our strengths, identify areas for growth, and clarify our career interests.

We also highlight the importance of building professional relationships with colleagues, supervisors, mentors, and faculty. These connections have provided valuable insights into our industries and demonstrated the importance of asking questions, taking initiative, and learning from others.

Finally, we discuss how our internships have shaped our future goals, whether by reinforcing existing career interests or introducing new possibilities. By bringing together distinct experiences, we demonstrate how the Concierge Internship Program helps students apply their education, build professional connections, and prepare for opportunities beyond Beloit.

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