



# Student Research & Creative Scholarship Colloquium

**Thursday, Nov 20 9:30 a.m-3:30 p.m. in S-247**

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WRIGHT'S HONORS PROGRAM

## Morning Session in S-247

### 9:30 a.m. – 10:20 a.m. Moral Corruption in Literature

In this session, students from Literature 115 HON9 will discuss the theme of moral corruption in literature. This theme can be traced throughout many works, and we will concentrate on several, including Christopher Marlowe's *Dr. Faustus*, William Shakespeare's *Macbeth*, Mary Shelley's *Frankenstein*, Fyodor Dostoyevsky's *Crime and Punishment*, Robert Louis Stevenson's *Dr. Jekyll and Mr. Hyde*, and Oscar Wilde's *The Picture of Dorian Gray*. (We will also touch on the Bible, John Milton's *Paradise Lost*, Samuel Taylor Coleridge's "The Rime of the Ancient Mariner," and Geoffrey Chaucer's "The Pardoner's Tale.") Students will examine some of the specific themes and questions of these works, including those topics they will more fully address in their 2500-3000-word final research papers.

**Presenters:** Literature 115 Honors Students

**Faculty Sponsor:** Professor Michael Petersen

### 10:20 a.m. – 11:00 a.m. Comp 101's Critical Thinking Skills and the Great Debates in Higher Education Coursework

This Honors English 101 seminar course for Fall 2025 has been reading and discussing Malcom Gladwell's *Outliers* and learning how success can be defined as the efforts we make to excel and the opportunities we take advantage of to support our growth. A key element of success for students, Gladwell argues, depends on recognizing the cultural legacies that support classroom learning. So, our class has been studying the cultural legacies of English 101 assignments and how they have described what higher education expects students to learn. For our short essays this semester, the class has been writing essays that address three key topic areas – love, power, and education. Three essays assigned have been classic college essay prompts for composition courses: 1.) Define Romeo's romantic expressions and behavior in his first meeting with Juliet, 2.) Examine how a United States governing document, such as the preamble to the Constitution or the Chicago Police Department's Mission Statement, articulates social obligations, and 3.) Compare and Contrast Shelley's "Ozymandias" and the "Allegory of the Cave" from Plato's *Republic*. This presentation shall outline ways students recognize how college-level thinking and writing skills lay the groundwork for further college learning. Students will discuss their own essays and how they have come to see "learning" as focused and specific within the legacies that have structured America's higher education system. By understanding and laying out the choices students have had in the past as they have designed their responses, and then by composing their own responses, the class has come to see how rhetoric and composition itself come from historical legacies that describe our nation's expectations for academic excellence.

**Presenters:** English 101 Honors Students

**Faculty Sponsor:** Professor Vincent Bruckert

### **11:10 a.m.–11:30 a.m. Music: A Note, A Click, An Emotion Away**

This presentation will focus on the multiple ways to create, express, and experience music, using different levels and forms of composition, from the conventional creative process of western music theory to the point and click nature of modern music today. "Love at First Sight", "A Rippled Reflection", "Missing You," and "Stay Steady" will all be presented after a brief introduction and explanation of the unique creative processes of each musical composition and its significance to the music.

*Presenters:* Andre Dejesus Pedroza

*Faculty Sponsor:* Professor MARRISA KERBEL

### **11:30 a.m. – 11:50 a.m. Exploring Electroluminescent Quantum Dot Displays for Foveated Brightness in Spatial Computers**

Current displays waste power by maintaining uniform brightness across the visual field, usually using a backlight, producing excess heat and reducing comfort. Electroluminescent Quantum Dot (ELQD) display technology enables per-pixel control and high color purity without a backlight, allowing dynamic dimming of peripheral regions based on eye-tracking data from a spatial computer (VR headset or AR glasses). Using simulation and literature-based modeling, this work demonstrates a potential 17–25% reduction in display power consumption while remaining imperceptible to the user. Ongoing efforts include in-lab fabrication for bottom and top-emitting ELQD panels, validating simulations with real device data, and refining eye-tracked brightness profiles to optimize efficiency, longevity, and user comfort in next-generation XR displays.

*Presenters:* Maxx Bierwirth

## **Afternoon Session in S-247**

### **2:00 p.m. – 2:15 p.m. When the Levees Broke**

This project investigates the relationship between race, income, and population return rates in New Orleans neighborhoods following Hurricane Katrina. Using raw data from federal and local sources, including the U.S. Census Bureau, HUD, FEMA, and population tracking platforms like FRED and USAFacts, this project compares recovery outcomes across racially and economically distinct communities. By analyzing demographic shifts, housing damage, and neighborhood-level population return trends, this study aims to highlight patterns of unequal restoration and displacement. The research draws from both pre- and post-Katrina datasets to assess whether Black and low-income communities experienced slower or less complete recovery than white or higher-income areas. The data-driven approach offers a sociological lens on disaster recovery,

urban inequality, and structural barriers in the aftermath of one of the most devastating storms in U.S. history.

**Presenters:** Torry Rayford [Sociology 201 Honors Project]

**Faculty Sponsor:** Professor Sydney Hart

**2:20 p.m. – 2:30 p.m. Chicago Weather Hazards: An Analysis of the Effects and Influences on Chicago citizens**

This presentation is on the weather hazards of Chicago, Illinois and the effects and influences these weather hazards have on not only our current life but in the past and in the future as well. Throughout this project, I've had the opportunity to study and learn about the different types of weather hazards that we as Chicago citizens have to face throughout our years and years to come. My research has led to some very fascinating findings such as what different kinds of hazards may mean for Chicago citizens. A hazard that I found during my research was something called the La Nina. The La Nina affects us because it indicates colder weather in the Chicago area during winter. This kind of weather hazard is only a part of the hazards that affect and influence lives in Chicago.

**Presenters:** Sebastian Pesch [Geography 201 HONORS]

**Faculty Sponsor:** Professor Monika Moore

**2:30 p.m. – 3:00 p.m. The Effects of Climate Change [poster presentation]**

This project explores how climate change simultaneously affects human health, animal populations, and ecosystems, emphasizing the connections among them. Using data from academic studies, government reports, and environmental organizations, I compared patterns and rising temperatures, animal migrations, and impacts on agriculture and health. The findings show that as global temperatures increase, animals are shifting their ranges, which can alter disease transmission and food availability for both wildlife and humans. Economic and health challenges are most severe in vulnerable regions, highlighting the uneven impacts of climate change. By presenting visual data such as graphs and charts, this poster demonstrates how environmental, biological, and social systems are all connected, highlighting the need for solutions that address change in a more unified way.

**Presenters:** Carlos Olivera [Geography 201 HONORS]

**Faculty Sponsor:** Professor Monika Moore

**2:30 p.m. – 3:00 p.m. Ecosystems in the Mariana Trench [poster presentation]**

This project investigates how ecosystems in the Mariana Trench survive under extreme pressure and total darkness. Drawing on research from scientific journals and ocean exploration studies, it examines how deep-sea organisms, such as the snailfish and chemosynthetic bacteria, have

evolved to thrive in one of Earth's most hostile environments. These organisms rely on chemical energy from hydrothermal vents instead of sunlight and possess flexible bodies, specialized enzymes, and slow metabolic processes that resist intense pressure. The study highlights the resilience and adaptability of life in extreme environments, providing insight into deep-ocean ecosystems and the potential for life to exist beyond Earth.

**Presenters:** Christian Munoz [Geography 201 HONORS]

**Faculty Sponsor:** Professor Monika Moore

**2:30 p.m. – 3:00 p.m. The Influence of Urban Green Space Characteristics on College Students' Stress and Mental Well-Being [poster presentation]**

This project is a proposal to investigate the influence of urban green space characteristics on college students' stress and mental well-being. As mental health continues to rise among college students, understanding how green spaces in or near college campus shape mental health outcomes has become important. This study justifies on why this topic matters and explains how the study will be constructed to observe the relationship and patterns of green spaces' restorative effects on college students' mental health and which characteristics best support students' well-being. Results from this study can provide insight to inform future decisions by campus designers and urban planners in creating green spaces that are accessible, inclusive, and restorative to improve student wellness.

**Presenters:** Meisy Donis [Geography 201 HONORS]

**Faculty Sponsor:** Professor Monika Moore



*Faculty sponsors: Professors Michael Petersen, Vincent Bruckert, Marissa Kerbel, Sydney Hart Monika Moore.*

*Honors Program Coordinator: Professor Natasha Todorovich*

*Many thanks to our student presenters and to our faculty sponsors!*