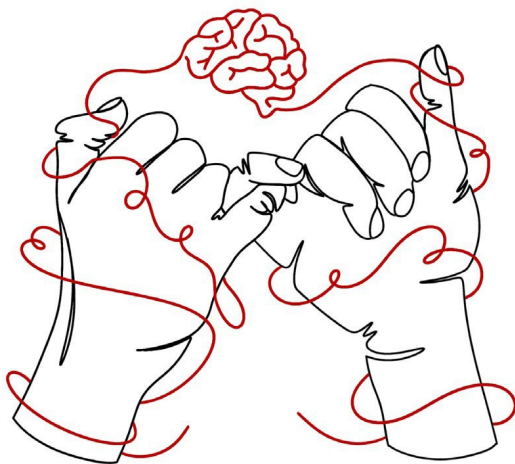




Connections Symposium

April 11, 2025

2:00–6:00p.m.



Welcome to the 2025 Connections Symposium at Wittenberg University!

The Connections Symposium is an opportunity to celebrate student achievement and showcase the many experiential learning opportunities integrated throughout our campus and curriculum.

We are pleased to feature presentations from Wittenberg students during the afternoon of April 11. In the following pages, you will find a schedule of events along with brief descriptions of each presentation. For those looking for a specific presenter, a list of presentations by author is included at the end of the program.

The afternoon will begin with **musical performances at 2:15 p.m.** in **Weaver Chapel** setting the stage for an engaging and inspiring event. **Presentations** are scheduled between **2:30 p.m. and 5:30 p.m.** at different central campus locations. **3 sessions of poster presentations**, accompanied by light refreshments, will be held in **Thomas Library**. **Talks and panel discussions** will take place throughout **Blair Hall in rooms 101, 108, 115, and 201**. **Art exhibitions** in **Koch Hall** will be open during the Symposium and remain open until **6:00 p.m.**, providing a thoughtful and creative conclusion to the day's events. A campus map highlighting these locations can be found on page 29.

While you're in the library, be sure to visit Sip's Coffee Bar, Wittenberg's student-operated café, where you can enjoy a special "Connections Symposium" menu featuring locally sourced pastries and beverages. It's a great way to support student enterprise!

Thank you for joining the Wittenberg community as we celebrate the inspiring and meaningful work of our students!

Musical Performance

2:15 to 2:30 p.m.

**2:15 to 2:30 p.m. 1. Partita in A minor BWV 1013 – Sarabande and
Weaver Chapel Bourrée Angloise – J.S. Bach
Mikayla Myers '25**

Johann Sebastian Bach's Partita in A Minor, BWV 1013 is a solo flute work showcasing Baroque dance forms. The Sarabande, the third movement is a slow, expressive dance characterized by its lyrical phrasing and ornamental intricacies, emphasizing Bach's mastery of melodic line and harmonic implication. In contrast, the Bourrée Angloise, the concluding movement, is a lively dance with rhythmic drive and intricate passagework, demonstrating the flute's agility and dynamic range. Together, these movements highlight Bach's ability to blend structural clarity with expressive depth, making them cornerstones of the unaccompanied flute repertoire.

Session 1

2:30 to 3:30 p.m.

2:30 to 3:30 p.m.
Blair Hall 101

Panel A– Voices of Addiction: An Exploration of Viewpoints on Addiction, Treatment, and Policy

Moderator:
Gwynne Davis

2. Gabriela Gonzalez '26

Addiction is a complicated sentence to hand out; depending on the connotation, this can be an uplifting or a detrimental diagnosis. While the denotated definition is quite clear, the emotional turmoil around addiction can cause stigma and shame for the patient. Addiction has often been explained as an error in the reward center in the brain that cannot properly handle dopamine. After careful review of the literature most recently published, addiction seems to resemble a brain disease - like a chronic illness- rather than a conscious choice that addicts make.

3. Alexa Kiblinger '28

Substance use disorders, also known as SUDs, are a significant public health crisis in the United States, affecting millions of individuals and their families. While drug policies have historically focused on punitive measures such as incarceration, research shows that addiction treatment is far more effective in reducing drug use and its associated harms. Federal and state funding for addiction treatment is necessary because it improves public health outcomes, reduces crime, and is more cost effective than punitive approaches.

4. Haleigh Heising '28

From the use of coca leaves for cultural reasons to our current opioid epidemic in the United States, drugs– both legal and illegal– have been used for various reasons for centuries. In more recent years, there has been a rise in deaths associated with drug use, along with increased crime rates and increased prevalence in infectious diseases, such as HIV and hepatitis. To combat this, governments internationally have implemented various drug policies to try and inhibit the use of illegal drugs. It begs the question: are these policies efficient in reducing drug use or are they fueling the issue?

5. Grace Koperna '25

People of all kinds are affected by addiction, across all levels of socioeconomic status, in any geographical location in the country, and people of all ages and races. Only about 6.5% of individuals that reported having an addiction, were also receiving or had received treatment for their addiction. Support systems for addiction are an essential part of recovery, whether this be the loved ones they surround themselves with, other addicts trying to live a sober life, or the systems they utilize to aid in their progress. Currently there are a variety of programs and methods addicts can take advantage of, but among these, there is variation in cost and or accessibility, as well as what is being offered among programs. This presentation will address the advantages and disadvantages of government funding for addiction treatment programs.

**2:30 to 3:30 p.m.
Blair 201**

Panel B - Economics and Finance

**Moderator :
Gabe Courey**

6. Human Capital and Hospital Bed Supply Cami Stevovich '25

The research I aim to study is the relationship between the Human Capital Index and number of Hospital Beds. I look at these two main variables to analyze the potential relationship between them and how number of Hospital beds in a country can affect the Human Capital Index. These two variables connect because, without the health and wellness from healthcare facilities, there can be a decline in human capital as a whole.

7. Determinants of Natural Gas Heat System Installation Matt Doerger

I study the relationship of household factors to the installation and purchasing of a natural gas heating system. These household factors include household income, house size, including number of occupants, household age, when the household was built, and political party as a dummy variable. Political party aims to see if a more progressive location would steer away from the use of nonrenewable fuel sources.

8. The Impact of Nuclear Energy on CO₂ Emissions Colby Kerns

I study the relationship between Nuclear Energy production and Carbon emissions using data from world bank. I look at 30 countries who used nuclear energy between the years 1992 and 2015. I hypothesize that an increase in nuclear power's share of total energy production is correlated with a decrease in carbon emissions.

9. Fertility Rates and Health Insurance Owen Treece

I study the relationship between fertility rates and health insurance coverage from 2019 through 2023; disregarding 2020 for pandemic reasons. The data was gathered from the United States Census Bureau. High childbirth costs and limited insurance coverage for fertility treatments exacerbate the decline in fertility in recent decades. While some states mandate insurance coverage for fertility treatments, the impact on birth rates is debated. I believe there will be a significant relationship between the

availability of health insurance coverage and fertility rates because with increased access to comprehensive health insurance, decisions on fertility become easier due to less out of pocket expenses.

10. The Relationship Between Immigrant Settlement Patterns and Cost of Living in the United States

Landon Briggs

I study the relationship between immigrant concentration and cost of living using data from the geographic comparison tables from the U.S. Census Bureau from 2019 and 2023. While conventional wisdom suggests that immigrants settle in lower-cost areas, prior research finds they are more concentrated in high-cost regions. I hypothesize that this trend is driven by perceived economic opportunity rather than affordability. I examine the correlation between immigrant population share and rental prices, considering factors such as labor demand and remittances. My findings contribute to understanding the economic motivations behind immigrant settlement decisions.

**2:30 to 3:30 p.m.
Blair 115**

Oral Presentations – Session 1

**Moderator:
Kelly Dillon**

**11. FIRE Week: Immersing in Mississippi's Culture and River Through Experiential Learning
Sydney Werner '27**

This presentation will focus specifically on the FIRE week trip to Mississippi with Dr. Phillips and Dr. Waggoner. I will be talking about the cultural aspect of the trip while one of my fellow peers who took the trip will be discussing the environmental side of the trip. We will have a presentation full of pictures from our trip to exhibit how FIRE week has impacted us as students and individuals.

**12. FIRE Week in Costa Rica – Service and Beyond
McKenna Clark '26, Olivia Follick '26, Jillian Paskvan '27**

Our presentation will highlight our week of service spent in Guanacaste, Costa Rica. During this week, we immersed in the Tico culture, engaged and connected with local communities, and experienced hands-on workmanship.

While this trip was service-focused, we were still able to connect it to our different departments and future career paths. We fostered a sense of community, both with our Witt group and with those we met along the way. We were each deeply impacted by this trip, in our own individual ways.

Oral Presentations–Session 1

Moderator :
Stephen
Matthews

13. How has the increase in remote work impacted relationships in the workplace?

Emma Gearhart '26

The ultimate goal of my research is to identify the ways in which relationships in the workplace have functioned before, during, and after Covid-19. I plan to interview workers in the business realm to collect their opinions on this topic. This will trace the history of relationships and the evolution of remote work as we know it today. This paper will seek out the benefits and the hindrances to the productivity of a team of individuals when remote work is involved. It will also dive into the interactions within a team by finding answers to questions such as: Do people who are remote feel left out? Is there animosity within the team? Do they feel more or less distracted at home? How does being hybrid play into this? How do demographics such as how many children are in household and parenting eases/complications, and commute time affect this?

14. Investigating Perceptions of Police in America and Around the World

Beckham Corbett '26

Over the years there has been much debate over how policing should be implemented within communities/society. This study focuses on people's perceptions on policing. In this study I investigate the public perception of policing as it pertains to use of weaponry and the safety of the officers versus offenders. The goal of this study will be to critically examine people's perspectives of policing in the United States, Netherlands, and Scotland and to develop practices that will enhance perception in the United States.

15. How does meditation and muscle relaxation affect test anxiety and test scores in students at Wittenberg University?

Aisha R. Khan '25

Test anxiety is an important factor that negatively affects a student's success in the education process. One component of test anxiety is physiological arousal. This research will examine whether one intervention for the physiological

component of anxiety can decrease anxiety and increase performance. Students struggle with test anxiety all around the world, I wonder how we can keep from test scores being reduced by just anxiety, so that real knowledge can be tested without other factors playing a significant role. My goal is to show that meditation can decrease test anxiety more than muscle relaxation in students at Wittenberg University. I plan to present the literature behind the studies, the methods, and possibly the results of the study.

**2:30 to 3:30 p.m.
Thomas Library**

Posters - Session 1

**Moderator :
Amanda McLellan**

16. tRNA Resilience Under Oxidative Stress Aaron Welch '28

This poster will present the data and methods of work in microbiological research. The research includes working with yeast cells to extract their tRNA and find out how the cell carries out its quality control on the abhorrent tRNA. What happens when we stress the cells with peroxide or remove certain proteins? This project has the answers.

17. Analysis of Lead and Cadmium in Dark Chocolate Victoria Pipinich '25

Previous research performed by Consumer Reports has found certain dark chocolate bars and cocoa powders contain high amounts of lead and cadmium. To confirm these results, dark chocolate bars and cocoa powders were digested and tested using atomic absorption spectroscopy. Each sample of chocolate was analyzed for lead and cadmium and compared to the California maximum allowable dosage level (MADL) of lead/cadmium consumption per day. The MADL levels for lead and cadmium are 0.018 and 0.145 ppm/g of a serving size of chocolate product per day respectively. In addition, calcium in chocolate products was also analyzed and compared to the calcium value listed on a chocolate product's nutritional facts label to determine how well the digestion process was working. Two chocolate bars exceeded the MADL levels for both lead and cadmium while the rest of the chocolate bars fall within the limit of allowable lead and cadmium to digest per day.

18. PICOT Kylah Tucker '27, Kamryn Jones '27, Myah Johnson '27, and Lucy Short '27

In young adults aged 18 to 25 years old in a community with high rates of overdosing, how does naloxone intervention compare to 18 to 25 year olds who don't receive intervention treatment affect lowering overdose rates within six months?

19. Determining How NAC and OCD Affects the Gene Expression of the Dopamine Receptor 4

Caitlyn Shelton '26

A previous study showed new possible treatment for obsessive compulsion disorder (OCD) could be N-acetylcysteine (NAC) (Allen et al., 2018). In the study by Allen mice were treated with serotonin receptor agonist to induce OCD and had decreased symptoms when given NAC. The gene expression of *drd4*, *slc6a3*, *arrb2*, *nck1*, *gnai1*, and *klhl12* were compared between six different mice groups. *Gnai1*, and *klhl12* had an increase in gene expression with NAC, and *arrb2* had a decrease in gene expression with OCD which was treated with NAC. This project identified how NAC increases the expression of *gnai1*, *klhl12*, and *arrb2*.

20. Perfectionism, Impostor Phenomenon, and Mental Health in Emerging Adulthood: The Moderating and Mediating Role of Self-Compassion.

Avery Livingston '25

This study explored the unique predictive relations between socially prescribed perfectionism and both impostor phenomenon and mental health while examining self-compassion, the ability to treat oneself with kindness in times of failure, to reduce these negative effects. Participants completed an online survey measuring perfectionism, impostor feelings, self-compassion, and mental health, and then was analyzed using correlation and regression charts. By analyzing these relations, this study aims to provide insights into how self-compassion might protect against the harmful effects of perfectionism and impostor feelings, with potential applications for mental health interventions.

21. Chicken or the Egg? The Nursing Shortage vs. the Nursing Faculty Shortage: A Scholarly Review of the Literature

Madison Doerman '28 and Garrett Slater '28

The impact of the pandemic, while bringing the nursing shortage into the public eye, also served to perpetuate the nursing shortage. With many nurses retiring earlier than expected and others unexpectedly leaving the profession for reasons due to COVID, the nursing shortage impact may have hit harder and sooner than expected. If there are not enough nursing faculty to teach nursing students, there will never be enough nurses to satisfy the need and overcome the shortage. The authors sought to review the literature to discover any key areas common to both staff nursing and nursing faculty pertaining to retention of nurses.

22. Analyzing Ticket Pricing for the Cleveland Browns and Guardians

James D'Isidoro '28

I am explaining what affects ticket pricing for the Cleveland Browns and Guardians. I include what has affected the ticket pricing in the past and attempt to predict what will affect ticket pricing in the future. I give my predictions for the ticket pricing for the next season for both teams. Finally, I explain the importance of knowing when tickets will go up or down.

23. Comparing Turtle Trapping Methods: Evaluating the Efficiency and Ethical Impacts of Basking Traps vs. Hoop Nets

Harrison Hamlin '25

This study compares two common turtle trapping methods: basking traps and hoop nets, assessing their efficiency and ethical impacts. Basking traps, designed to mimic natural basking environments, are passive and may reduce stress turtles, yielding higher capture rates in shallow waters. In contrast, hoop nets are more effective in deeper waters but raise concerns about injury rates and bycatch. This meta-analysis investigates which method is more efficient and humane, hypothesizing that basking traps offer better outcomes in terms of both turtle welfare and capture success.

24. Utilization of Native Species for the Higher Accreditation of the Wittenberg University Arboretum

Sarah Fitterer '25

My senior capstone focuses on continuing the work I did over the summer with Dr. Collier on the accreditation of Wittenberg as a Level 1 arboretum, with a focus on using native plants in collections and gardens to increase species diversity, while providing education on why we should choose native plants over other, non-native species.

25. Obesity in School Students in Relation to Academic Performance and Achievement

Brooke DeHart '27, Lily Winkle '27, Maggie Pickrel '27, Aubrey Stager '27

In school aged children, how does access to a healthy school lunch program, compared to schools without a healthy school lunch program, reduce obesity rates and increase academic achievement within 1 year of the program?

26. Nursing Student's Perceptions of Learning with NGN-style Case Studies

Sarah Deaton '28 and Fatima Abu '28

Poster that includes a summary, methods, conclusion, results, visual graphs, and articles cited during the research process. Two visual graphs that represent each the junior and senior nursing cohorts that illustrates the nursing student's perceptions on the NGN-style case studies. Many nursing students agreed that the NGN-style case studies promoted both their critical thinking and clinical judgement.

Art Sessions - Thomas Library

2:30 to 5:30 p.m.

Moderator :

Amanda McLellan

27. The Art of Expression

Lanie Mersch'26

I will be sharing 3 oil paintings. One painting portrays an anatomical heart inside of a gold heart frame, representing a sense of cherish and fragility. Another painting is a close-up perspective of a person flossing their teeth, while some of their teeth portray the properties of sugary candy. This represents the juxtaposing relationship of oral hygiene and sweets. The final piece is an accumulation of plants with 3-dimensional elements coming off of the canvas in multiple directions, portraying a sense of lack of direction through playful expression.

28. Bluey

Abby Rohrer '26

My first oil painting is of two nail polish bottles on panel. My second oil painting is of my Burmese Mountain dog on wood panel wrapped in canvas. These pieces were made at the end of my Fall '24 Painting II course. These pieces helped me gain skill and confidence in my artistic ability.

Session 2

3:30 to 4:30 p.m.

3:30 to 4:30 p.m.
Blair Hall 101

Panel A– Voices of Addiction: An Exploration of Viewpoints on Addiction, Treatment, and Policy

Moderator:
Gwynne Davis

29. Ian Dawson '28

The decriminalization of drugs is beneficial because it allows drug enforcement to focus on being a control strategy, it decreases the number of violent crimes, and the drug market decreases due to an increase in drug treatment options. Many current drug policies focus on punishment, which often overburdens the legal system and does little to solve the root causes of drug-related issues. By decriminalizing drugs, enforcement efforts can shift toward being a control strategy that prioritizes public safety and focuses on managing the availability and use of drugs rather than penalizing users.

30. Lanie Mersch '26

Addiction has been a popular topic of discussion for a long time. Most people think of addiction as strictly referring to substances. However, behaviors can also be addictive. Currently, gambling disorder is the only disorder characterized under “Non-substance-related Disorders.” Other behaviors that have been considered to be addictive have insufficient peer-reviewed evidence to be able to establish necessary diagnostic criteria and descriptions needed to properly classify them as a type of mental health disorder. We need to work to overcome these problems in order to properly recognize that behaviors can just as easily be as addictive as substances.

31. Haley Pitman '26

As drug use becomes more common, the problems associated with it also increase. This persistent and complex issue has forced governments to create regulations as an attempt to reduce drug prevalence. Although there have been a variety of policies implemented as a tool to protect public health, the strong presence of drugs remains. Unfortunately, use is widespread, overdose rates continue to be high, and black drug markets are

still lucrative. Despite this effort to reduce drug use, they have proven to be ineffective as they have not decreased the selling or consumption of drugs, causing greater harm than good.

32. Ava Schiff '28

This talk will address the controversial opinion on whether or not addiction is a brain disease. We will discuss what defines and qualifies as a brain disease, including both the DSM-5 definition and others. We will also address what addiction is and whether addiction is, or is not, beyond a reasonable doubt, a brain disease.

3:30 to 4:30 p.m.
Blair Hall 201

Panel B - Economics and Finance

Moderator:
Gabe Courey

33. Educational Attainment and Retirement Income **Rocco Royer**

I am studying the relationship between education level and retirement income. I use 2019 and 2024 data from the Center for Retirement Research at Boston College, the SSRN, and the SAA. I hypothesize that states with higher educational attainment will have higher retirement income, on average.

34. Income Inequality and Homicide Rates in the US **Travis Demsher**

I study the relationship between intentional homicide and income inequality using data from multiple sources including the CDC and SHADAC in the years 2018 and 2022 hypothesize that there is a strong positive correlation between intentional homicide rates and income inequality.

35. Tariff Rates and Trade Volume **Charlie Morawski**

I am studying the relationship between trading volume (exports + imports), and my primary countries' tariff rates, between 2012 and 2022, using datasets from the World Bank and World Integrated Trade Solution. I hypothesize that an increase or a decrease in tariff rates will then lead to a positive correlation with the explanatory variable, country trading volume.

36. Does Government Investment in Education Affect Educational Attainment? **Josh Wright**

I am studying the relationship between educational attainment and the amount that each country spends on education. Through the use of World Bank data, I hypothesize that there is a positive correlation for those countries that spend more on education in the amount of people that achieve a certain level of education. I will be controlling this study with data like the income level of a country, gender, employment, and region.

37. How does education affect employment in the U.S.?

Kyle Mahon

I am studying the relationship between employment and education in the U.S. using data from the U.S. Census Bureau from 2019 to 2023.

3:30 to 4:30 p.m.
Blair Hall 115

Panel C - Women's Studies Senior Presentations

Moderator:
Heather Wright

38. He Is the Only Man: How Trump's Hypermasculinity Energized the Right
Erin Reichert '25

During his 2016 presidential campaign, Trump saw the political unrest of conservative white men. He capitalized on this, using a particular brand of hypermasculinity to mobilize the right. White men felt as though they had been left behind by society in the quest for progress. Trump's campaign was based around the idea of returning to a mythic past where white men were respected and honored. By creating his own brand of hypermasculinity, Trump drew on existing gender, racial, and economic tensions to win the White House in 2016.

39. What Have You Done to its Eyes?: Rosemary's Baby as a Female Gothic Masterpiece.
Reagan Simpson '25

40. Inmate First, Woman Second: A look into Women's Access to Healthcare While Incarcerated.
Jessie Himes '25

Women are the fastest growing subpopulation of inmates in the United States, with the rate of growth since 1980 being twice as high as men's. However, women are more at risk receiving poor medical care than their male counterparts.

This project aims to identify areas of incarcerated women's healthcare that need immediate attention by looking at statistics and sharing the stories of women who have spent time in prison.

41. The Portrayal of Eating Disorders, Specifically Anorexia in 'To the Bone' and 'Avengers: Endgame'
Aisha Khan '25

This essay showcases the differences between the films *To the Bone* and *Avengers: Endgame*, focusing on how each movie explores themes of pain, sacrifice, and the human experience. *To the Bone* is a drama about a young woman struggling with anorexia nervosa, while *Avengers: Endgame* is a superhero action film about the character Thor's binge eating disorder. This highlights how these stories help connect audiences that struggle with real-life issues to characters on screen, and make light of

how these body image and eating struggles differ between men and women while also connecting them with different topics discussed in the "Introduction to Women's and Gender Studies" course that Dr. Wright teaches.

3:30 to 4:30 p.m.
Blair Hall 108

Oral Presentations –Session 2

Moderator:
Kunal Chatterjee

42. AI and Academia: Comparing College Students' Perceptions of Feedback Ascribed to Human Professor, AI, and Ambiguous Sources Harper Crews '25

Rapid advancements in artificial intelligence have made generative AI increasingly capable of performing jobs typically filled by humans. As college students continue to turn to AI to aid their academic efforts, some may begin to wonder if AI is a viable alternative to human-led instruction. This study examines students' perceptions of a piece of written corrective feedback and how those perceptions differ when the student believes the feedback was provided by AI as opposed to a human professor. Further research was performed to highlight students' attitudes toward AI being used in place of human educators to perform different educational tasks.

43. Creation of Degradable Plant Pots Using Bourbon Distillation Waste Products Annie Miloser '25

Plastic plant pots contribute to microplastic pollution in soil, posing environmental concerns. This study explores the production of biodegradable plant pots using distillers' spent grains (DSG) as a sustainable alternative for plant starter pots. Alginic acid, in the presence of calcium, forms ionic cross-links that create a gel matrix capable of holding DSG in a mold. Various concentrations of alginic acid (5, 10, and 15 g/L) were tested in different ratios of alginic acid to stillage (2:1 and 1:1). The samples were dried using three methods: room temperature drying, oven drying at 80°C overnight, and freeze-drying via lyophilization. To assess mechanical properties, a three-point bend test was conducted, while additional characterization included swelling tests, density measurements using a pycnometer, and root penetration tests. The most durable samples were produced using a 2:1 ratio of 10 and 15 g/L alginic acid to stillage and dried via lyophilization, yielding the highest force at break. These optimized DSG pots were then tested for plant vitality by growing tomato plants. The results demonstrated that distillers' spent grains can be effectively upcycled into biodegradable plant pots capable of supporting healthy plant growth, offering a promising solution to reducing plastic waste in agriculture.

3:30 to 4:30 p.m.
Thomas Library

Poster Session 2

Moderator:
Kristin Cline

44. Connect youth to people to talk to when depressed or anxious

Kaetlyn Swank '27, Emily Zmuda '27, Kate Hutchinson '27

In youth experiencing depression/anxiety, how does having required support groups and mental health professional sessions compared to youth with no support system reduce mental health symptoms within 12 months.

45. Elevation Partitioning of Warblers in Rocky Mountain National Park

Benjamin Woxman '26

Niche partitioning in warblers has been studied extensively, all the way down to which warbler species likes to hang around different parts of a tree. This presentation looks at their partitioning based on elevation over the entirety of Rocky Mountain National Park.

46. Analyzing Glutamate and MTOR Pathways Using qPCR to Determine Gene Expression Changes in OCD Mouse Model **Carly Shipllett '25**

Obsessive Compulsive Disorder (OCD) is a neurological disorder that is characterized by obsessive, uncontrollable thoughts and/or repetitive compulsions due to an obsession. A previous study displayed a new potential treatment for OCD with N-acetylcysteine (NAC). The effects of RU and NAC on the gene expression of the glutamate pathway and the MTOR pathway were selected to be studied. The gene expressions of MTOR, AKT2, PIK3R1, GRM2, GRM3 and GRM5 were compared between the six mice groups using Qualitative Polymerase Chain Reaction (qPCR) to measure gene expression levels. AKT2, GRM2, and PIK3R1 expression was not influenced by RU or NAC. RU increased expression of MTOR and was treated with NAC. GRM3 had an inferenced trend of increased expression with RU and was treated with NAC, but evidence was inconclusive. RU decreased expression of GRM5 but is not treated with NAC. Research displays evidence of RU increasing MTOR expression and of NAC as a treatment for bringing MTOR expression back to normal levels.

47. The Incubation Duration of Caretta Nests Located on Cape Lookout National Seashore

Claire Sullivan '25

To evaluate the techniques applied in the field when conducting sea turtle nesting patrols in the southeast coastal region, a review of each state's guidelines and protocols was conducted. When reviewing the documents similarities and differences in field practices, skill application, and data collection methods were tracked.

48. Effects of Non-Native Shrubs on Spider Communities

Douglas McClure '26

This poster encapsulates a year-long research project, looking into the effects that common non-native shrubs (Amur Honeysuckle) and (Autumn Olive) have on spider communities within Ohio. Exploring how the shrubs affect population abundance of present Araneae (Spiders) and what other possible environmental effects determine community makeup of Araneae in a habitat that is predominantly non-native shrubs.

49. Determining Fluoride and Sulfate Content in Instant and Bagged Tea Using Ion Chromatography

Lauren Pollock '28

Tea is the second most consumed beverage globally and contains various ions, including fluoride and sulfate, which can be harmful in high concentrations. Using an ion chromatograph, the ion content can be observed in different tea samples. Including instant tea and bagged tea samples. The ion chromatograph separates ions in a mixture, solution, or sample. However, the fluoride measurements we observed were inaccurate due to interference from other ions present. Sulfate levels in instant tea samples were found to be higher than those in drinking water.

50. Music and Accuracy

Brooke Mullis '25 and Katherine Petersen '25

Music and Accuracy is research examining how a music may affect a participant's ability to concentrate based on their personality. In this study, participants answered questions about their study habits, completed a personality test, and UCancellation. While completing UCancellation, students were randomly assigned to one of two conditions. Condition one had students complete UCancellation in silence, while condition two completed their UCancellation with the song *Softly* by Thomas Day playing in the background.

51. To Cling or Not to Cling: Species-Specific Differences in Thigmotaxis of Settling Fiddler Crab Megalopae

Dimitri Gonzalez '25

Fiddler crabs are a small species of crabs that are found along the East coast of the United States. All 3 native species (*Uca pugilator*, *U. pugnax*, and *U. minax*) have similar larval history which bring them back to the estuary as megalopae.

Thigmotaxis, the ability to cling onto structure, is a behavior suspected to have a role in the three fiddler crab species' ability to select habitat. Previous studies had a disproportionate amount of *U. pugnax* cling onto cylindrical mesh collectors suggesting that *U. pugnax* uses thigmotaxis more than the other 2 species. To test for the differences in thigmotaxis among the 3 species, megalopae were placed into glass bowls with cubes of hogshair mesh up until the following ebb tide which is when they are inactive. This study examined the proportion of fiddler crab megalopae that clung to hogshair in a bowl. The purpose of the study is to see if there is a difference in thigmotactic behavior among three species.

52. Undergraduate Curriculum of LGBTQIA+ Healthcare

Sophie Eilert '28

This study focused on how and when LGBTQIA+ healthcare is taught in undergraduate nursing programs. The researchers first gathered information about existing undergraduate LGBTQIA+ healthcare curricula at various of universities and examined their strengths and weaknesses. They then conducted a study with the purpose of using patient's input to identify which topics are most important to include in a course covering LGBTQIA+ healthcare topics, and how to best incorporate them into the curriculum to provide future nurses or other healthcare providers with education to adequately and respectfully care for all patients.

**53. Students' Intent for Attending the GSEIT FIRE Week Trip
Paige Aloia '28, Andrew Hibbitts '28, and Cambryn Tom '28**

Our research question was, "Why are people going on the GSEIT F.I.R.E Week trip?" We surveyed all of the individuals going on the trip to find their purpose for going. We compiled the results from the collected data to find similarities and differences as well as the most common reasons for attending.

**54. Physical Activity Related to Quality of Life
Ty Bowman '27, Max Martindale '27, and Trent Puckett '27**

Looking at the connection between physical activity and quality of life.

Session 3

4:30 to 5:30 p.m.

2:30 to 3:30 p.m.
Blair Hall 101

Panel A– Voices of Addiction: An Exploration of Viewpoints on Addiction, Treatment, and Policy

Moderator:
Gwynne Davis

55. Alicia Gulasa '28

There are several different treatments for addictions. What the reason for more success rates? Treatment for addiction vital and can even be lifesaving. Diving deep into what works and does not work impacts what can be life changing. The decision of choosing a treatment program may be more important than what people think.

56. Alex McGinnis '26

Should people with a substance use disorder be responsible for the crimes they commit because of their substance use disorder? Drugs can take a grip on a person's brain and cause them to act in an illegal manner. In that case, should those persons be immune from the consequences of their actions because it was the "drugs behind the wheel" or should they be punished to the full extent of the law. This is a topic that will be explored and examined from each point of view.

57. Hanna C. Stefanik '26

Behavioral addictions have been notoriously understudied until recent years, and so far, only one has been officially recognized: gambling disorders. While gaming has been as subject of interest, it lacks the depth of study that substance use disorders have been afforded. However, there lies an intersection between video gaming 'addiction' and gambling addiction in the form of loot boxes. When taking into account the similarities and connections that gambling addiction and loot box purchasing have, extreme loot box buying should be considered as a developing behavioral addiction related to gambling that will only continue to grow in prevalence.

**2:30 to 3:30 p.m.
Blair Hall 201**

Panel B - Economics and Finance

**Moderator :
Gabe Courey**

58. The Influence of Patent Applications on Global Migration Trends

Gazelle Rudakubana '25

I study the relationship between patent applications and net migration using World Bank data from 2008 through 2016. I analyze both developed and developing countries across Europe, North America, Central America, and Africa. I hypothesize that higher levels of innovation, reflected through patent activity, attract more migrants. My findings suggest that patent applications and a country's development status are strong predictors of migration inflows, while other economic factors such as labor force participation and foreign direct investment are less influential.

59. Natural Disasters and Housing Prices in the US

Max Benincasa

This research looks into the relationship between different types of natural disasters and the impact they have on state housing prices using data from the United States Census Bureau, Federal Emergency Management Agency (FEMA) National Centers for Environmental Information (NCEI), and The Federal Reserve Bank of St. Louis. The data spans from 2010-2020 on a state-to-state level, which will allow me to observe the impacts different types of natural disasters (geological, meteorological, hydrological) have on state housing prices.

60. Minimum Wage and US Employment Rates

Zach Busby

My study looks at the relationship between minimum wage and employment rate across all states using data from the United States Census Bureau and the Federal Reserve Bank of St. Louis Economic Data. The data in this study covers the years 2021-2023. I hypothesize that states with lower minimum wages will have higher rates of employment due to lower labor costs for employers.

61. Working from Home and Female Employment Rates

Taylor Bender

I am studying the relationship between remote work and female employment rates using state level data from the American Community Survey during the years 2021 through 2023. My hypothesis is that states with higher work-from-home rates will also have higher female employment rates. By analyzing this data, I am attempting to gain insights on how remote work opportunities may influence women's participation in the labor force.

62. The importance of an advanced degree for a higher family median income

Ryan L. Miller

This research examines the correlation between advanced educational attainment and median household income, highlighting the financial advantages of pursuing higher education. I use data from the United States Census Bureau and find that individuals over 52 who have attained higher levels of education tend to earn a greater median household income compared to those with only a high school diploma or less. Factors such as percentages of parents in the labor force, one's race, location, internet access and insurance coverage play a role in advanced education ability.

63. National Ease of Doing Business ad Average Income

Aidan Kruse

How can the ease of doing business affect the GDP of a person? Looking at World Bank observations from 2015 to 2019, I collected 100 variables from over 20 countries to test this. I came to the conclusion that the less regulation on business positively correlates to GDP per person through my regression models.

4:30 to 5:30 p.m.

Oral Presentations – Session 3

Blair 115

**Moderator Cathy
Waggoner**

64. My Witt in Washington Experience **Emma Gearhart '26**

I will be discussing my experience participating in Witt in Washington. This will include everything from my internship with the United States Marshals Service, day to day, classes, networking experiences, my adjustment to city life, the friends I made, and my overall great experience.

65. Internship with Athletics **Javaughn Neal '25**

I will be talking about my experience with my internship with the athletic department and how I have learned over the time that I have been working with them for this semester.

4:30 to 5:30 p.m.

Oral Presentations – Session3

Blair 108

Moderator :
Jessica Johnson

66. The Effects of Exercise on College Students' Mental Health and GPA
Mazie Reece'25

Exercise is one of the most beneficial things for everyone to partake in, regardless of age. There are various forms of exercise people can participate in. At the end of the day, it is all about moving your body. College students tend to face transition hardships when coming to university, including mental health troubles and a change in schoolwork load. This presentation researches and explores if students who participate in physical activity present with better mental health and grade point averages. If this trend is true, then exercise could be an appropriate recommendation for students struggling during their college years.

67. Demographics of Local Spotted Turtle Populations
Neil Boyles Fall '25

Spotted turtles are a small wetland associated aquatic turtle that are threatened in Ohio. Here in Clark County, we have the southernmost populations found in Ohio and as a result they have gone mostly unstudied. To protect these threatened populations, we must understand them. The first step to this is a demographic analysis where I analyzed the size, sex ratios, and age class ratios of two local populations. My analysis will allow managers to make informed decisions regarding the future protection of these threatened populations.

68. Southwestern Ohio Spotted Turtle (*Clemmys guttata*) Habitat Preferences
Shayne Harris '25

There are currently several small, fragmented populations throughout southwest Ohio, however the species is up for listing as endangered in Ohio. There are efforts to introduce more spotted turtles throughout Ohio to supplement their small populations. I used geospatial information to identify the ecological characteristics of the current locations of spotted turtles in southwest Ohio within Clark, Champaign, and Green counties. Then, I compared these characteristics to wetlands in the same region that do not have spotted turtles to identify areas with suitable habitat characteristics. The wetlands identified from

my findings can be studied further to determine locations that will have the highest success of spotted turtle introductions.

4:30 to 5:30 p.m.

Poster Session 3

Thomas Library

Moderator:
Greyson Sanders

69. City Skylines and Birdlines: A Latitudinal Comparison of Bird Species in Urban Environments
Kelsey Ragan '25

My study examines the diversity of bird species in four U.S. cities—Indianapolis, Columbus, Pittsburgh, and Philadelphia—located at similar latitudes. Observations are conducted on the first day of each month during the breeding season (June, July, August) and winter season (December, January, February), with data collected from multiple stations within a 50-mile radius of each city center. The project aims to compare the seasonal variations in bird populations and investigate how latitudinal location may influence urban avian diversity, providing insights into ecological and environmental factors affecting bird species distribution.

70. Do the Nerite Shimmy: Reactions of Two Tropical Intertidal Snails to Simulated Wave Inundation
Dylan Rice '25

Nerites are tropical intertidal snails that attach to rocks. To avoid desiccation, they move only to feed, relocate, or hydrate, or when it is wet. Four-toothed nerites *Nerita versicolor* live higher in the intertidal than checkered nerites *Nerita tessellata*, and therefore receive less wave action than checkered nerites. We examined reactions of these snails to varying saturation levels simulating wave action. We applied different amounts of water (none, mist, squirt, and 350ml dump) to ~100 snails and scored their reactions (none [0], raise [1], shimmy [2], half-turn [3], and walk [4]) over 30-second intervals. We hypothesized that four-toothed nerites would respond more to the simulated wave stimulus than checkered nerites due to their higher intertidal position. Our results supported this hypothesis: for all water treatments, four-toothed nerites had a higher mean movement score (0.94) than checkered nerites (0.84).

71. Storm Water Runoff in Springfield

Wyatt Poling '25

I am looking at the levels of storm water runoff at the Mad River in Urbana and in Saint Paris Pike to see how the levels runoff have changed over time.

72. Learning Assistant Perspectives: The Case of the first Learning Assistant Coteaching Team

Jade Paumi '28 and Riley Boyles '28

With the recent launching of a Learning Assistant (LA) program at Wittenberg University, Spring 2025 semester has its first assigned learning assistant in MATH 201. This research project aims to study the perspective of two key individuals to understand their perspective in teaching a course using active learning, collaborating to coteach lessons, understand the helpfulness of weekly meetings, and overall help provide perspective for future courses that could utilize LAs. The project team is conducting a key case stud with the two individuals through a series of classes and weekly meeting observations using post-event interviews to understand the unique, particular perspective.

73. Wyoming Wolf Populations

Grace Kennedy '25

Taking a look of the land of Yellowstone (elevation, slope and aspect) and where we see the wolf packs that reside there (in the protected land). Then looking at non protected land (elevation, slope and aspect) and comparing the two to see if Yellowstone is the more favorable land for wolves.

74. What's Love Got to Do with It?

Jazmyn Gaines-Burns '25 and Anna Engler

Please come past our presentation to learn more about the stages of love through the philosophical perspective of Diotima, a figure in Socrates's Symposium. Learn and reflect on your own navigation through what you know love to be and tell us how you feel about the presented levels.

75. Cessation of Young Adults Who Use Tobacco and Nicotine Products

Megan DeHart '27, Sofia Didone '27, Maddy Krasnow '27, and Rachel Noschang '27

In young adults who use tobacco/nicotine, does counseling decrease the use of tobacco/nicotine within 6 months of treatment?

76. Stop and Smell the Lavender

**Gabriela Gonzalez '26, Madi Horton '25,
Estefanny Gonzalez '26, and Diana Vander Velde '27**

We will be putting students in a lavender permeated room, and some others in a control room, to see if their reaction times to *go no go* tests are slowed down by the exposure to the lance with essential oil.

77. The Effect of Poverty Simulations on the Change in Attitude Towards Poverty and the Potential Willingness to Donate

Cameron Sarah Stevovich '25

The poster provides a brief overview of my honors thesis on Poverty Simulations. This analysis provides key insights into my research analyzing changes in attitude towards poverty and a potential willingness to donate. By collecting pre- and post-surveys, a change in behavior, attitude, and potential willingness to donate before and after the simulation can be shown based on the data. It is one thing to help mitigate poverty in society, but it is another to rethink the issue as a whole to better understand it.

78. Does Aggression Priming Reduce Inhibition?

Lanie Mersch '26 and Jess Neuerer '25

In this study, we presented participants with either a picture slideshow of neutral primes (nature and office supplies) or aggressive primes (weapons mixed in with nature and office supplies). Participants then completed a Lexical Decision Task as a manipulation check. Participants then completed Stop-Signal task to measure response inhibition. Trait impulsiveness and trait aggression was controlled for.

79. The Impact of Food Insecurity on Working Memory in Mice **Krenna Rahr '28 and Alexa Kiblinger '28**

Food insecurity is a growing issue globally. Food insecurity correlated with reduced cognitive function in humans. Mice models allow us to establish a cause-and-effect relationship between food insecurity and cognitive functioning. Here we manipulated food insecurity in lab mice to determine the impacts on working memory. This allowed us to establish the causal influence of food availability on cognitive performance. This research could be important in the development of food related public policy.

80. An Evaluation of Techniques Applied During Sea Turtle Nesting Patrols across the United States Southeast Coastline Claire Sullivan '25

Cape Lookout National Shoreline is a common area for marine turtles to nest in North Carolina. This study focuses on how Loggerhead (*Caretta caretta*) in situ nest incubation duration has changed over time from 2007 to 2023. Understanding the changes in incubation leads to the further question of estimating the sex ratio for marine sea turtles. The sex of marine turtles is determined by temperature; to estimate the sex ratio of sea turtles, both incubation duration and temperatures are applied. Regarding the temperature-dependent sex determination of Loggerheads, we analyze the changes in incubation duration on a seasonal and annual scale and how they correlate to annual and seasonal temperature changes. Nesting season begins in May and concludes in August. To account for seasonal temperature increases, data were divided into half-months. We hypothesize that as the nesting season progresses and the temperatures increase, the incubation duration of a clutch will decrease. July's first half month (1H) recorded the lowest averages in incubation duration (59.94 ± 5.641 days and 54.66 ± 3.478 days, respectively) for 2007-2009 as well as 2023. After assessing changes in half-months from 2007 to 2009 and 2023, an assessment of the annual changes from 2007 to 2009 and 2023 is made. Here, we show an average decrease in incubation duration from 2007-2009 to 2023 by 3.828 ± 2.39 days. Understanding the correlation between incubation duration and temperature and how they change both seasonally and annually may contribute to the understanding of the changing sex ratios for Loggerhead clutches that inhabit the Cape Lookout National Shoreline. Further questions on how sea turtles are affected by climate may involve changes in arrival time for nesting mothers.

2:30 – 6:00 p.m.

Art Senior Theses

Ann Miller and Thompson Galleries

Koch Hall

81. Abigail Eckman '25

My 2D animatic, in 2 minutes and 38 seconds, illustrates a meaningful allegory of understanding oneself and finding belonging through a lens of fantasy. This main character, while exploring the space around her and meeting new allies, learns how to reconcile with growth and change through this multi-faceted work.

82. Sydney Striker '25

My thesis explores memory, experience, and imagination through playful yet jarring contrasts. Unique and trivial moments become narratives, unsettled by intrusive thoughts. Personal images are reframed to reveal how the unexpected—both delightful and disruptive—resurfaces and reshapes our recollection of the past.

83. Maddy Rose '25

Scenes from a Love Story is a collection of colored pencil and pastel drawings that celebrate ordinary moments in my relationship. It emphasizes the importance of cherishing small, shared experiences, like meals together, and reveals how humor and emotional connection shape intimacy, transforming the mundane into the extraordinary.

84. Noelle Underwood '25

I have always wanted my art to mean something, so the goal of my work is to show people what the ocean can look like we work to protect it from global warming. I am creating a set of ceramic works that depicts the beauty of the ocean if we keep it safe, in hopes that I can inspire people to put in a helping hand to keep our sea life healthy against the harmful effects of global warming.

85. Miles Amadi '25

My senior thesis explores the realm of “Forever Young” through photography and small sample music. I am drawn to the design of Moments, People, Faith, and how it has made up the love through my younger life through college and how I will use it beyond. This documentary work shows every part of how each phase of love comes to play in the life of a young black man.

86. Hanna Haddix '25

Loss is hard, especially when it's someone closest to you. This exhibit showcases my exploration through grief after the sudden and tragic passing of a dear friend. Let this be a reminder of how short life can be and to always tell your people that you love them--you never know when it'll be the last.

87. Ashley James '25

In the garden highlights the beauty of flora that is in some way dangerous to humans as well as examining their relationships to foraged and cultivated food sources. This is done through brushwork underglaze on carved low fire ceramic works, stylistically borrowing from the botanical illustrative tradition.

88. Liv Hamilton '25

In Balloon Sculptures, I create moments of joy, peace, and carefree happiness. Through sculpting and glazing realistic ceramic balloons, I evoke emotions rather than tell stories, using vibrant colors and fun designs. My work aims to spark smiles and offer a brief escape, leaving viewers with a sense of hope and positivity.

89. Annelise Colaizzi '25

I had taken up sewing in high school, as I was interested in creating a stuffed animal like what another class was doing. I love making characters, and I saw making plushies of them as bringing them to life. These plush creatures aren't just objects on shelves, but new friends.

90. Jack Boone '25

The title of my piece is Attention Span. In short, my piece is meant to highlight digital media addiction. It's a two - part series; the first part showing digital distraction, and the second part showing fun activities that do not require any digital media.

91. Gabby Conaway '26

Symposium Logo

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Sip's Coffee Bar

Sip's Coffee Bar is a student-operated coffee shop located in Thomas Library. At Sip's, coffee products and pastries are sourced from locally owned businesses like Boston Stoker in Dayton and D. Sweets in Springfield.



Hours of Operation

Monday 8:00am - 8:00pm

Tuesday 8:00am - 8:00pm

Wednesday 8:00am - 8:00pm

Thursday 8:00am - 8:00pm

Friday 8:00am - 4:00pm

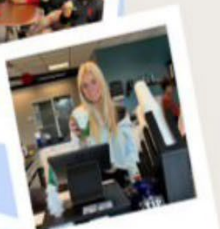
Saturday CLOSED

Sunday 12:00pm - 4:00pm

For more info, contact:

President Maci Pierson
piersonm@pierson.edu

Manager Joslin Mefford
meffordj@wittenberg.edu



**"Cross Connections
Mocha"**
Salted caramel white
mocha latte

Our website:



@sips.coffeebar



Post Office Box 720
Springfield, OH 45501-0720