

WILLIAM PATERSON UNIVERSITY



**FALL 2024
HONORS
RESEARCH DAY**

Monday, December 2nd



SCHEDULE

Afternoon Senior Presentations—UC 168 A/B		
Time	Name	Honors Track
2:00	Joshua McCollum	Humanities
2:15	Adham Mustafa	Independent
2:30	Brianna Liller	Music
2:45	Austin Sidito	Music
3:00	Agustin Tecalero	Music
3:15	Eva Tobin	Music
Break		
5:00—6:00	Poster Presentations by First Year Honors Students — UC Ballrooms	
Evening Senior Presentations - UC 168 A/B		
Time	Name	Honors Track
6:15	George Ferguson	Music
6:30	Kassandra Hawkes	Clinical Psychology and Neuropsychology
6:45	Katrina Spelda	Clinical Psychology and Neuropsychology
7:00	Hannah Liss	Social Sciences
7:15	David Cundumi	Biology
7:30	Jenna Issa	Biology
7:45	Camila Vasquez	Cognitive Science

Research Day Presentations
5:00 p.m. — 6:00 p.m.
University Commons Ballrooms

Welcome	Dr. Barbara Andrew, Honors College Dean
Remarks	Dr. Joshua Powers, Provost and Senior Vice President for Academic Affairs
Presentations	First-year Honors students enrolled in Honors Research Seminars

About the Honors Research Seminars

HON 1000-001—*Questioning the Self Through Media*

Students collaboratively work on questions pertaining to identity formation, focusing on and reflecting on how media outlets and social media have covered such issues. In particular, we discuss questions about the epistemic value that information can have on identity formation, with attention to intersectional debates and ethical and aesthetic questions. The goal is to develop the necessary critical thinking skills to interpret and assess content that is “at their fingertips” and is subject to heavy social, economic, and political conditioning because of the nature of media and social media.

HON 1000-002— *The Impacts of Intersectional Oppressions*

Students researched overlapping, structural social inequities in their chosen field of study. Each student connected how structural inequities have been built and maintained, the impacts of these inequities, and tactics to rectify them.

HON 1000-003— *Justice, Equity, and Joy in Public Education*

The research topics of the students in this seminar primarily focus on exploring how Generation Z engages with social issues, education, and learning strategies. Student topics range from exploring the impact of multiliteracies on K-12 classroom communities, the perceptions of reading of Generation Z first-year students, the integration of music and visual arts in education, the influence of sports on student well-being and academic success for undergraduate students, and how teacher diversity affects literacy. Research methodologies used include: content analysis, single-subject surveys, and others.

HON 1000-004— *Social Research*

Students will be presenting research on how AI may affect their future occupation. Some students will focus on their perceived ideal scenario, some will focus on the most realistic possibility, while others will focus on dystopian possibilities.

HON 1000-005— *Writing for Wellness*

This course considers various ways of using expressive writing to successfully manage stress and anxiety, and deepen connection and communication with others. Studies have shown that regularly engaging in expressive writing garners multiple positive effects, including helping students better adjust to their first year in college. In addition to presenting research on a specific aspect of expressive writing, students will discuss their own experience engaging with the process over this semester.

HON 1000-006— *Artificial Intelligence*

Artificial Intelligence applications, especially in the forms of machine learning referred to collectively as LLMs (Large Language Models) have made huge strides in recent years, both in technical power and in public attention. Student research in Professor Mandik's section of the Honors Seminar is focused on the theme "AI and...?," in which students delve into connections between these new technologies and a separate field of their choosing. Example projects include, but aren't limited to, AI and primary-school education, AI and social justice, AI and the music business, AI and professional sports, and AI and the future of humanity.

HON 1000-001— Questioning the Self Through Media

Dr. Laura Di Summa, Associate Professor, Department of History, Philosophy, and Liberal Studies

Milan Adhikari	Kaelyn S. Gowdy	Adarsha Mishra	Kasey L. Slade
Nooruddeen K. Aljayeh,	Jenna L. Iannarella	Mu'men A. Musa	Sarah E. Watson
Noah J. Carson	Sean F. Lauterhahn	Haratio Nelson	
Aida K. Carter	Mathias J. Lostao	Godsmark I. Oshuporu	

HON 1000-002— The Impacts of Intersectional Oppressions

Dr. Elizabeth Harkins, Associate Professor, Department of Special Education, Professional Counseling, and Disability Studies; Mr. Tony Joachim, Instructional Design Librarian, David and Lorraine Cheng Library

Iyinoluwa O. Adeyemi	Richard J. Ducut	Abigail O. Ige	Emily Retuerto
Marian A. Belen	Andrei R. Dungca	Jusna Islam	Raynesli Sanchez Mena
Angeline P. Chavarria	Sana Fahmy	Thamya L. Lamarr	Viviana K. Telemaque
Joseph P. Chie	Hannah Gurango	Elias A. Moran	
Joaly H. Cruz	Emely A. Hernandez	Preston D. Nieuwenhuis	
Faith R. Diaz	Kiley R. Hines	Alyssa A. Ramirez	

HON 1000-003 — Justice, Equity, and Joy in Public Education

Mr. Neil Grimes, Education and Curriculum Materials Librarian; Mr. Gary Marks, Reference and Outreach Librarian

Praise T. Adigun	Caroline M. Eckardt	Jeneen S. Mustafa	Christie E. Valmyr
Steven E. Beco	Victoria E. Jaramillo	Janine J. Nangini	Josefine G. Vierhout
James P. Bonner	Andrew C. Kaynak	Jasmina I. Ruiz	Gianluca Vittorioso
Sarah M. Churchill	Michaela G. Kerr	Christian M. Scerbo	
Isabella M. Disano	Syndie B. Lintag	Reeyan K. Soliman	

HON 1000-004— Social Research

Dr. Jacob Felson, Associate Professor and Department Chair, Department of Sociology and Criminal Justice

Katelyn Antonoff	Eliona Gerbeshi	Bibek Neupane	Bikash Rauniyar
Emily R. Bellofatto	Esmeralda Grande Hernandez	Dilara Pak	Baker Y. Saifan
Aidan P. Cannon	Janie M. Henderson	Christian E. Pena	Rajiv Sharma
Soleil J. Casseus	Adam Janouk	Isabelle Pimentel	Sofia B. Sheeks-Russell
Kelley R. Connor	Elisa Latifi	Teah D. Polyakov	Ashley Yepes
Julia G. Dennehy	Tabitha Nestor	Ameer M. Rabboh	

HON 1000-005— Writing for Wellness

Dr. Martha Witt, Professor, Department of Language, Literature, Culture, and Writing

Ethan D. Bromley	Matthew C. Goldman	Sean E. McCoy	Sally Shupe
Grace A. Cascio	Julyssa J. Hernandez	Julia M. Menn	Sophia F. Taccetta
Damian M. Castaneda-Chamberlain	Chloe R. Jessen	Maya Mirkova Livni	Isabella L. Vargas
Roberto D. Cisneros	Matthew D. Jinks	Christine A. Nicolas	Marley A. Vaught
Justin D. Colan	Eli L. Leder	Lauren N. Rennie	Susana A. Veras
Geormaya A. Davis	Nathaniel D. Lewis	Schneider, Nicholas G.	
William R. Gifford	Nicholas Licera	Michaela Shin	

HON 1000-006— Artificial Intelligence

Dr. Peter Mandik, Professor, Department of History, Philosophy, and Liberal Studies

Mohammed I. Arham	Erin C. Collins	Rylie S. Nagle	Leilani R. Pinder
Jessica F. Bangura	Evan Gongora	Daniel C. O'Donnell	Kevin M. Takizala
Saimya Bush	Emilia C. Innocenti	Phoebe M. Paddock	Artur O. Toporivskyy
Sofia G. Chebookjian	Michael A. Mihalitsianos	Adrian E. Pena	Kenzo R. Yalong

SENIOR PRESENTERS *(listed in alphabetical order)*



DAVID CUNDUMI

Honors Track: Biology

Major: Biology

Thesis Title: "Honeybee Gut Microbiome"

Thesis Advisors: Dr. Emily Monroe & Dr. Martin Kendall

The honeybee (*Apis mellifera*) is one of our most important pollinators, making honeybee health a critical area of research. The gut microbiome in honeybees potentially maintains overall good health in the face of various stressors that may be encountered. The honeybee gut microbiome is very simple. Nine taxonomic groups account for most of the bacteria. This limited number of bacterial types should allow us to effectively and economically track the community structure of the microbiome. In this study, specific primers for *Lactobacillus*, *Bifidobacteria*, *Snodgrassella alvi*, *Frischella perrara*, and *Gilliamella apicola*, the most abundant taxonomic groups present in the gut microbiome were analyzed to determine whether we could rapidly characterize the gut microbiome. Quantitative polymerase chain reaction (real-time PCR) was used to test the efficiency and precision of each of the primer pairs using pooled gut DNA extractions of honeybees. The optimal temperatures and protocols for qPCR measurements that yielded efficiencies of 95-105% were established, where possible, in a proof-of-concept study using 16 spring honeybees and 16 fall honeybees to find seasonal effects on the gut microbiome of *Apis mellifera*.



KASSANDRA HAWKES

Honors Track: Clinical Psychology and Neuropsychology

Major: Psychology

Minor: Sociology

Thesis Title: "Mental Health Service Utilization and Personality"

Thesis Advisor: Dr. Bruce Diamond

The following literature review examines the relationship between the Big Five personality traits—openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism—and mental health service utilization. More specifically, the review calls attention to the influence of personality traits on an individual's likelihood of seeking out and engaging in mental health services. Consistent trends are identified, including openness' and neuroticism's positive associations with mental health service utilization. This positive association is due to neurotic individuals' heightened perception of vulnerability, open individuals' active coping styles, and more. Findings for extraversion and agreeableness suggest that there is a complex interaction between the personality traits themselves, as well as other variables such as stigma and coping style. Conscientiousness had mixed effects on mental health service utilization, where attitudes and intentions towards help-seeking contradicted the actual service use. This review also addresses key limitations that exist in the current research. The limitations addressed include generalizability issues, a lack of longitudinal data, and personality's effect on mental health service use varying across therapy types. These limitations support the notion that further research is needed before causal conclusions are made. Considering personality differences in mental health services could improve the effectiveness of treatment, and give room for preventative interventions. In sum, this literature review contributes to expanding understanding of personality's role in mental health service utilization and provides a unique opportunity for personalized approaches to mental health care.



GEORGE FERGUSON

Honors Track: Music

Major: Music Education

Minor: Mathematics

Thesis Title: "Cognitive Development with Music Involvement"

Thesis Advisor: Dr. Christopher Herbert

The purpose of this project is to compare the cognitive development of students for those who are involved in music, and those who are not. The study includes various statistics on mathematical achievement and standardized testing, along with comparisons of cognitive development and behavioral tendencies related to involvement in music. There will also be descriptions of the development of the brain and aptitude of young individuals. Although the research doesn't definitively explain every aspect of adolescent cognitive development, it offers valuable insights into how engagement with music may influence cognitive growth during this critical phase.



JENNA ISSA

Honors Track: Biology

Major: Biology

Thesis Title: "Feeding Response of Free Flying Honeybees to Neonicotinoids"

Thesis Advisors: Dr. Emily Monroe & Dr. David Gilley

Neonicotinoids are a commonly used class of insecticides that have been shown to have detrimental effects on the neurological systems of beneficial insects such as honeybees and to negatively impact colony survival. This study aims to determine how exposure to neonicotinoids affects the honeybees' feeding patterns, specifically in free-flying honeybees in contrast to a previous lab study with caged bees. We selected the neonicotinoid imidacloprid to use in our study at concentrations of 1 microliter, 10 microliters and 100 microliters. We conducted simultaneous-choice experiments using forager bees trained to sugar-water feeders, offering the honeybees a 20% sucrose solution containing one of the three concentrations of imidacloprid at a time and an uncontaminated control. No significant difference was found between the test and control solutions in the amount of solution consumed, regardless of imidacloprid concentration. Therefore, at the concentrations we chose for and with our sample size of free flying honeybees, our results suggest that imidacloprid has no meaningful effect on honeybee forager feeding decisions. The discrepancy of these results with the findings of previous studies suggests that free-flying foragers may behave differently than caged bees or that the size of the effect detected in previous lab studies was too small to be detected in this field study. Further research on how insecticides impact the foraging decisions of honeybees in field and agricultural settings should be a priority.

SENIOR PRESENTERS *(continued...)*



BRIANNA LILLER

Honors Track: Music

Major: Music Education

Title: *“Performance Anxiety in a Fixed Versus Growth Mindset”*

Thesis Advisor: Dr. Christopher Herbert

This music honors project explores the difference between performance anxiety in a fixed mindset versus a growth mindset. Via my piano performances throughout the last eighteen years, I will explore my fixed mindset during my childhood, explaining how it affected my performances. I will also provide background on the research in this area of study. Subsequently, I will investigate how I adopted a growth mindset and what effect that has had on my performances. The project will include videos of my performances that illustrate my mindset switch during the past several years. These videos will include virtual auditions for college alongside competition videos from Italy. Ultimately, this project aims to highlight the impact of performance anxiety in a mindset through personal growth.



HANNAH LISS

Honors Track: Social Sciences

Major: Psychology

Thesis Title: *“Using or Abusing: Empathy and Stigma Towards Overdose”*

Thesis Advisor: Dr. Danielle Wallace

The number of opioid overdose deaths more than tripled from 1999 to 2022, with deaths rising from under 20,000 in the early 2000s to over 80,000 in recent years (NDA, 2024). In particular, fentanyl has played a significant role in accidental overdose deaths, as it was the most commonly involved opioid, accounting for 74.6% of overdose deaths (CDC, 2024). Findings in recent literature suggest varying attitudes towards individuals with substance use disorders (SUD), impacting public perceptions and willingness to assist in overdose situations. This study seeks to understand the relationship between personal experience with substances and attitudes towards overdose decedents by surveying students ages 18 to 25+ at William Paterson University. The study utilizes a modified version of the Stigma of Suicide Scale (SOSS-SF) to reflect overdose decedents and an Empathy Quotient, combined into the Cause of Death Stigma and Empathy Index. Data from this research will provide insights into the potential impact of substance use history on stigma and empathy, offering pathways for more inclusive and effective harm reduction strategies. Future research should further explore how personal exposure to drug use influences the willingness to intervene in overdose situations and assess variations in stigma based on situational or demographic factors.



JOSHUA MCCOLLUM

Honors Track: Humanities

Major: Music with Popular Emphasis

Thesis Title: *“Early Childhood Teaching Philosophies”*

Thesis Advisor: Dr. K Molly O’Donnell

For this Thesis Project, I look at the US Early Childhood Educational System and then explain my own Teaching Philosophy. This includes looking at the history of the system through the work of some of the most influential figures like Frederick Froebel and Maria Montessori who developed Early Childhood Education. Each of their styles and principles of education is thoroughly observed to consider what attributes are promising as well as those needing further work. The heart of my thesis examines the original philosophical ideas and theories of these key educational thinkers and evaluates their approaches one by one, identifying their influences on each other, along with the similarities and differences between them. Although their ideas look similar, there are many differences in their approaches, and it is important to understand what sets them apart and why they do what they do. In addition, I include research on their effectiveness in preparing current young children for Kindergarten. Overall, this thesis looks at the history of Education, takes the best from the past, and looks at my very own teaching Philosophy.



ADHAM MUSTAFA

Honors Track: Independent

Major: Biology

Thesis Title: *“Understanding the Gaps of Physical Activity Barriers and Facilitators Across Diverse Populations”*

Thesis Advisors: Dr. Barbara Andrew & Dr. Jason Wicke

Defined by the World Health Organization (WHO), health involves the physical, mental, and social well-being, with physical activity being a key modulator in maintaining and improving health outcomes. Despite the recognition of health’s broad components, disparities in global health persists, especially in low- and middle-income countries. In such populations, heart disease, diabetes, and certain cancers are more prominent due to the insufficient access to healthcare and limited awareness of practices available. With the data presented by the WHO, there has been global inactivity rates with 27.5% of adults in the United States and 81% of adolescents worldwide not engaging in sufficient physical activity. Addressing challenges that are key factors in promoting inactivity in individuals requires comprehensive strategies that remove barriers to physical activity and promote facilitators to improve health outcomes. Physical health is a key component to reducing the risks of chronic diseases and enhancing life quality, achieved through proper exercise, nutrition, and rest. Fitness components such as cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition contribute to achieving optimal physical health, which will promote longevity and reduce disease risks.



AUSTIN SIDITO

Honors Track: Music

Major: Music Education

Thesis Title: *“Fach it!: The Transition from Baritone to Tenor”*

Thesis Advisor: Dr. Christopher Herbert

With the ever changing understanding of vocal development for young singers, finding the correct fit in a voice part is a major element of one's singing journey. A common occurrence when entering a collegiate vocal career for low voices is that many baritones will make the switch to singing tenor when certain vocal qualities are revealed. Over the summer of 2023, I personally made this change to tenor and faced many physical and psychological challenges relating to this transition. In this thesis, varying information related to baritone-to-tenor fach switching is provided, including personal anecdotes, educational research, and interviews. Many elements of pedagogy are discussed, including register blending/integration exercises, vowel modification, breath control, vocal tension release, and patience. These technical interventions address attributes specific to a baritone, such as darkened tone and idiosyncratic vowel choices over the tessitura. Many suggestions of early repertoire are also considered, including Vainement ma bien aumée by Lalo and selections from the Schirmer 24 Italian Songs and Arias collection. This information is crucial if you desire to change fachs to avoid serious vocal injury.



AGUSTIN TECALERO

Honors Track: Music

Major: Music Education

Thesis Title: *“Comparative Analysis of Conductors’ Performances of Beethoven’s Third Symphony”*

Thesis Advisor: Dr. Christopher Herbert

This project is a comparative analysis of four different conductors’ performances of the fourth movement of Beethoven’s Third Symphony. Based on video recordings of various performances, the study analyzes conductors’ technique for dynamics, tempo, expressive elements, and gesture. The overall finding of the study is that conductors do not exactly follow the musical score – the exact markings that Beethoven wrote. Furthermore, every conductor’s performance is different and no two conductors interpret a piece the same way, leaving an endless possibility of unique interpretations for a single piece.



KATRINA SPELDA

Honors Track: Clinical Psychology and Neuropsychology

Major: Psychology

Minor: Speech-Language Pathology

Thesis Title: *“Neurofeedback as a Treatment for Learning Disabilities”*

Thesis Advisor: Dr. Bruce Diamond

Learning disabilities are neurodevelopmental disorders that cause struggles with the learning and application of listening, speaking, reading, writing, and/or math skills. Children with learning disorders often struggle with processing speed, phonological awareness, executive functioning, working memory, and attention. These struggles make it hard for the student to learn and maintain academic skills. Children with learning disabilities require intervention and support in order to succeed academically and later in life. However, there are mixed results on the effectiveness of the current interventions. Neurofeedback is an intervention that helps people gain control over and change their brain wave activity. It does this through operant conditioning through the use of audio and/or visual reinforcement. The reinforcement is given based on a person’s EEG activity. This allows people to change their atypical brain wave activity. Neurofeedback has been shown to effectively treat attention deficit/hyperactivity disorder, obsessive compulsive disorder, depression, alcoholism, and epilepsy. There have been some studies done that examine the effects of neurofeedback on people with learning disabilities. This study examines these previous studies and has found that neurofeedback generally has a positive effect on the working memory, processing speed, attention, reading skills, and handwriting skills of children with learning disabilities. How the findings of this study can be applied and the areas of further research that are needed in this area are discussed.



Save the Date!

**Spring 2025 Honors
Research Week**

April 21—25, 2025

**Showcasing the work of over
100 Honors College Seniors!**

**The full schedule and the details
will be available in the spring.**



EVA TOBIN

Honors Track: Music

Major: Classical Music

Thesis Title: “Children’s Musicals: From Screen, To Stage, To Classroom”

Thesis Advisor: Dr. Christopher Herbert

Arranging music for children is a task that is often overlooked because it requires putting some advanced qualifications aside, and arranging music through the lens of young learners. In this study, I analyzed selected music from three Disney musicals in three different versions: the animated film score, the Broadway adaptation, and the Broadway Junior score. I compared the three versions based on durations, keys, ranges, chorus formats, and lyrics. I also took note of musical differences between the three versions, including variations in pitches and rhythms. Overall, the film scores feature catchy melodies that aren’t too complicated for audiences to sing along to, and the music portrays the emotions to fit the scene and bring the story to life. The Broadway versions often include more difficult musical material to captivate live audiences, while occasionally offering a smaller difference, such as a new key, pitch, or rhythm. When it comes to Broadway Junior, the goal of the arrangers is to modify the music to make the music accessible for children of all levels. Studying the progression of the score from the film, to Broadway, to Broadway Junior is the best way to understand the method music arrangers follow. When presenting my findings, I highlight the passages of music that are effectively arranged for beginners and other passages that I find too challenging for musically untrained children. The threshold for what is considered manageable or too difficult for child performers is based on my experience working at summer camp where I was the music director for productions including The Lion King, The Little Mermaid, and Beauty and the Beast.



CAMILA VASQUEZ

Honors Track: Cognitive Science

Major: Psychology and Criminology and Criminal Justice

Thesis Title: “Researching the Perseveration Skills of Language in Bilingual College Students”

Thesis Advisors: Dr. Amy Learmonth and Dr. Michael Gordon

This research explores how bilingual college students conserve and improve their proficiency in multiple languages, focusing on their unique skills and strategies to sustain bilingualism in an academic environment. Using survey data, the study goes into how these students navigate and develop their linguistic abilities, offering a closer look at bilingualism’s role in personal growth and academic success. The research highlights how bilingualism may enrich students’ educational experiences, including impacts on cognitive flexibility, cultural understanding, and self-expression. Through this project, I aim to expand the knowledge of bilingualism in college settings, offering insights that may shape educational approaches that support linguistic diversity and the cultivation of language skills among young adults.



About the Honors College at William Paterson...

In the University Honors College, students explore new ideas and engage in intellectual and creative collaborations with outstanding professors in a community that brings together students’ academic, residential, social, and cultural experiences. The Honors College offers a rigorous curriculum with a challenging array of courses, seminars, and co-curricular activities, along with faculty and staff mentors who offer support throughout a student’s college career.

WILLIAM PATERSON UNIVERSITY HONORS COLLEGE

Barbara Andrew

Dean

Elizabeth Harkins

Honors College Fellow

Jan Pinkston

Associate Director

Kourtney Scipio

Graduate Assistant

Helenah Comia and Madison Knueppel

Office Interns

Madison Knueppel, Angie Marcucilli, Jason Peralta,

Rory Stansfield, Camila Vasquez, Owen Walter,

and Sarah Weissberg

Honors Peer Leaders

— HONORS COLLEGE TRACK DIRECTORS —

Dr. Barbara Andrew

Independent

Dr. K. Molly O’Donnell

Humanities

Dr. Bruce Diamond

Clinical Psychology and Neuropsychology

Dr. Emily Monroe

Biology

Dr. Christopher Herbert

Music

Dr. Marianne Sullivan

Global Public Health

Dr. Michael Gordon

(Interim) Cognitive Science

Dr. Danielle Wallace

Social Sciences

Dr. John Malindretos

Business

Dr. Martha Witt

Performing and Literary Arts

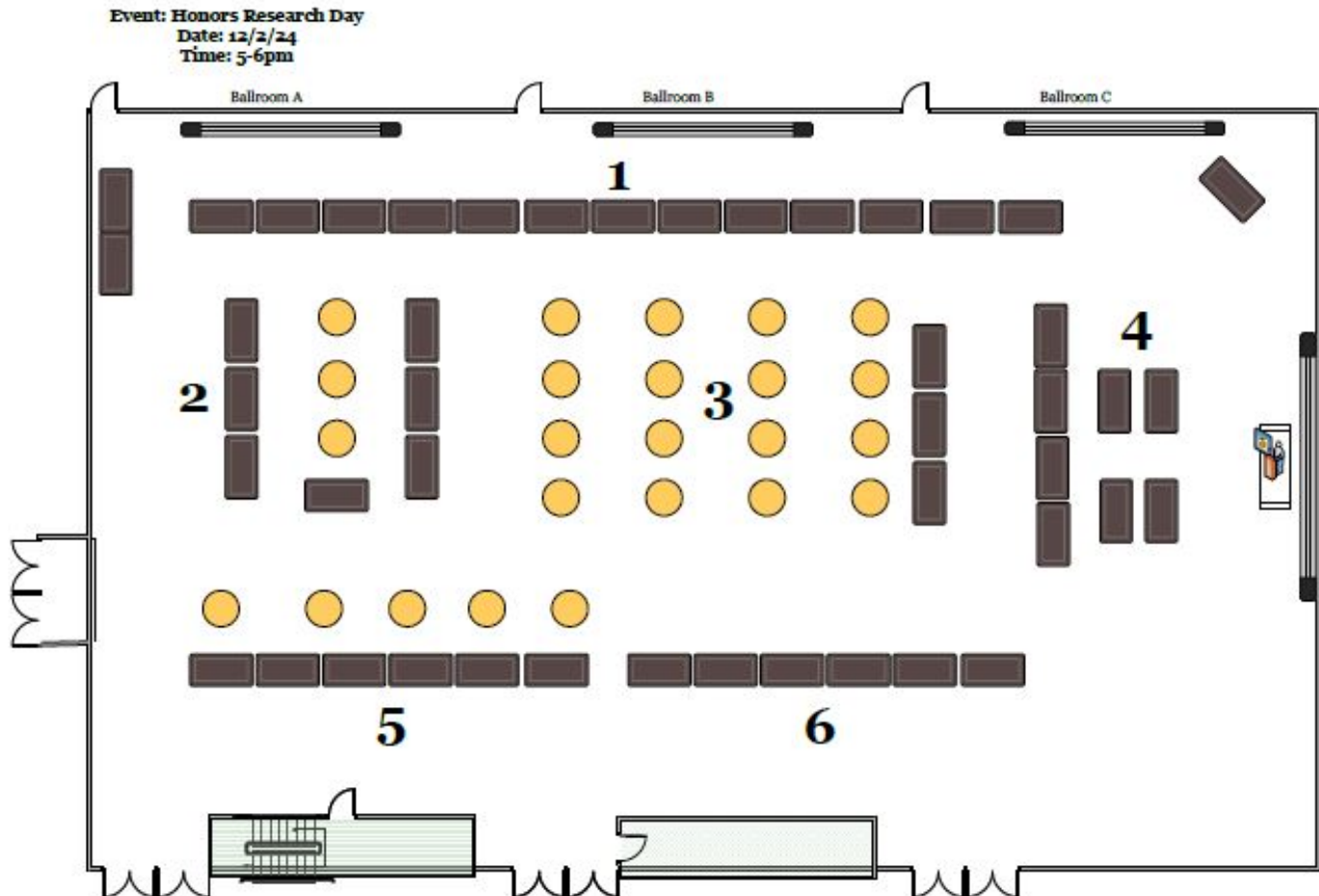
Dr. Jill Nocella

Nursing

Honors 1000 Seminar Presentations

5:00—6:00 p.m.

University Commons Ballrooms



Section 1—*The Impacts of Intersectional Oppressions*

Section 2—*Questioning the Self Through Media*

Section 3—*Writing for Wellness*

Section 4—*Social Research*

Section 5—*Artificial Intelligence*

Section 6—*Justice, Equity, and Joy in Public Education*